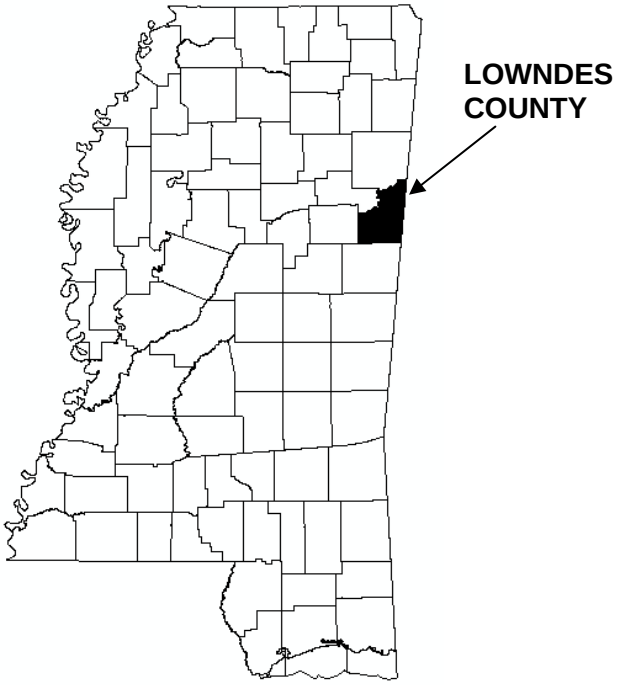
FLOOD INSURANCE STUDY

LOWNDES COUNTY, MISSISSIPPI
AND INCORPORATED AREAS

Community Name	Community Number
ARTESIA, TOWN OF	280310
CALEDOINIA, TOWN OF	280347
COLUMBUS, CITY OF	280108
CRAWFORD, TOWN OF*	280346
LOWNDES COUNTY (UNINCORPORATED AREAS)	280193

* Non-floodprone community



PRELIMINARY

SEP 30 2009

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
28087CV000A

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 Date: September 7, 1998

First Revised Countywide FIS Revision Date: To Be Determined

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FLOOD INSURANCE STUDY
LOWNDES COUNTY, MISSISSIPPI AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and updates information on the existence and severity of flood hazards in the geographic area of Lowndes County, including the Towns of Artesia, Caledonia and Crawford, the City of Columbus, and the unincorporated areas of Lowndes County (referred to collectively herein as Lowndes County). The 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 and to assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the NFIP are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

Please note the Town of Crawford has no mapped special flood hazard areas.

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

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.

This study was prepared to include incorporated communities within Lowndes County into a countywide-format FIS. Information on the authority and acknowledgments for each jurisdiction included in this countywide FIS, as compiled from their previously printed FIS report narratives, is shown below.

Lowndes County (unincorporated areas):	The hydrologic and hydraulic analyses for the FIS report dated May 4, 1989, were prepared by the U.S. Army Corps of Engineers (USACE), Mobile District, for the Federal Emergency Management Agency (FEMA), under Inter-Agency Agreement No. EMW-E-1153, Project Order No. 1. That work was completed in February 1985. For the September 28, 1990, revision, the hydrologic and hydraulic analyses were taken from the previously printed FIS for the unincorporated areas of Lowndes County (FEMA, 1989). For the July 16, 1996, revision, the hydrologic and hydraulic analyses were prepared by Braswell Engineering, Inc., for FEMA, under Contract No. EMW-93-C-4147. That work was completed on January 10, 1994.

City of Columbus: The hydrologic and hydraulic analyses for the FIS report dated May 4, 1989, were prepared by the USACE, Mobile District, for FEMA, under Inter-Agency Agreement No. EMW-E-1153, Project Order No. 1. That work was completed in February 1985. For the September 28, 1990, revision, the hydrologic and hydraulic analyses were taken from the previously printed FIS for the City of Columbus (FEMA, 1989). For the July 16, 1996, revision, the hydrologic and hydraulic analyses were prepared by Braswell Engineering, Inc., for FEMA, under Contract no. EMW-93-C-4147. This work was completed on January 10, 1994.

For the September 7, 1998 countywide study, the updated hydrologic and hydraulic analyses for Luxapalila Creek in Lowndes County and incorporated areas were prepared by the USACE, Mobile District. This work was completed February 13, 1997.

The hydrologic and hydraulic analyses for this study were performed by AECOM, under Contract No. EMA-2006-CA-5617. This study was completed May 2009.

Base map information shown on this Flood Insurance Rate Map (FIRM) was provided in digital format by Mississippi Department of Environmental Quality (MDEQ) and Mississippi Emergency Management Agency (MEMA).

The coordinate system used for the production of DFIRM is Mississippi State Plane East (FIPS 2301), reference to the North American Datum of 1983 and the GRS80. Distance units were measured in United States (U.S.) feet.

1.3 Coordination

An initial Consultation Coordination Officers (CCO) meeting is held with representatives from FEMA, the State of Mississippi, the communities, 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 communities, and the study contractor to review the results of the study. A summary of CCO meeting dates for previous studies is found in Table 1.

Table 1. Summary of Previous Consultation Coordination Officers Meetings

Community	FIS Date	Meeting Dates
Lowndes (Unincorporated Areas)	May 4, 1989 September 28, 1990 July 16, 1996	May 10, 1983 December 6, 1986 December 14, 1995
City of Columbus	May 4, 1989 September 28, 1990 July 16, 1996	May 10, 1983 December 6, 1986 December 14, 1995
Lowndes Countywide	September 7, 1998	December 11, 1996 January 29, 1998

For this countywide FIS, the Project Scoping Meeting was held on April 5, 2006 in Aberdeen, MS. Attendees for these meetings included representatives from the Mississippi Emergency Management Agency, Mississippi Department of Environmental Quality, Monroe County, FEMA, 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 Lowndes County, Mississippi, including the incorporated communities listed in Section 1.1.

All or portions of the flooding sources to be newly studied by detailed methods are listed in Table 2. "Limits of New Detailed Study" All or portions of the flooding sources to be studied by redelineated methods are listed in Table 3. "Limits of Detailed Study."

Table 2. Limits of New Detailed Study

Flooding Source	Limits of New Detailed Study
Tombigbee River	From the Mississippi/Alabama State boundary to the Stennis Lock and Dam
Tombigbee River Split Flow	From the confluence with Tombigbee River to the convergence from Tombigbee River

Table 3. Limits of Detailed Study

Flooding Source	Limits of Detailed Study
Black Creek	From the confluence with Luxapalila Creek to upstream of McCullough Road
Catalpa Creek	From 360 feet downstream of US Highway 82 to approximately 1.0 mile upstream of Old Highway 82
Catalpa Creek Tributary	From the confluence with Catalpa Creek to Alt US 45
Ellis Creek	From approximately 1500 feet downstream of Nashville Ferry Road to approximately 2.5 miles upstream of State Highway 69
Ellis Creek Tributary	From the confluence with Ellis Creek to approximately 1.1 miles upstream of the confluence with Ellis Creek
Greens Creek	From the confluence with Tombigbee River to 0.8 mile upstream of New Hope Road
Luxapalila Creek	From the confluence with Tombigbee River to the Mississippi/Alabama State boundary

Flooding Source	Limits of Detailed Study
Luxapalila Creek Tributary	From the confluence with Luxapalila Creek to approximately 1950 feet upstream of MS Highway 50
McCrary Creek	From the confluence with Luxapalila Creek to the Mississippi/Alabama State boundary
Magby Creek	From the confluence with Luxapalila Creek to the Mississippi/Alabama State boundary
Moore Creek	From the confluence with Tombigbee River to approximately 50 feet upstream of Blue Cut Road
Oak Slush Creek	From the confluence with Tombigbee River to approximately 50 feet upstream of Younger Road
Oak Slush Creek Tributary	From the confluence with Oak Slush Creek to approximately 0.5 mile upstream of West Point Road
Tibbee Creek	From the confluence with Tombigbee River to the confluence with Catalpa Creek
Tombigbee River	From Stennis Lock and Dam to the Lowndes/Monroe County boundary
Tombigbee River Tributary No. 1	From approximately 300 feet downstream of Nashville Ferry Road to approximately 0.6 mile upstream of Burlington Northern Railroad
Tombigbee River Tributary No. 2	From Columbus and Greenville Railway to approximately 1150 feet upstream of Deer Run
Vernon Branch	From the confluence with McCrary Creek to approximately 50 feet upstream of Mert Rickman Road
Yellow Creek	From the confluence with Luxapalila Creek to approximately 1.2 miles upstream of the confluence of Cooper Creek

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 and Lowndes County.

2.2 Community Description

Lowndes County is in east-central Mississippi, and has a total land area of 517 square miles. It completely surrounds the City of Columbus, the county seat. It is bordered by Clay and Monroe Counties on the north and Noxubee County on the south; Lamar and Pickins Counties, Alabama, on the east; and Oktibbeha County, Mississippi, on the west. Lowndes County's 2006 population was 59,284 (U.S. Census Bureau, 2009).

The Tombigbee River and Luxapalila Creek are the principal watercourses in the county. The Tombigbee River divides the county approximately in half. The western half of the county is prairie land, and is dominated by agricultural operations, while the eastern half is characterized by gently rolling to hilly, forested terrain. Lowndes County is predominantly rural, with agriculture and forests accounting for more than 85 percent of the land use.

The Tombigbee River flows south from the northern county boundary and forms the western county boundary for approximately 13 miles, then flows southeast to where it exits the county at the extreme southeast corner. Luxapalila Creek, a major tributary to the Tombigbee River, flows southwest across the east-central portion of the county to its confluence with the Tombigbee River immediately south of the City of Columbus. Tibbee Creek enters the county in the west-central area and joins the Tombigbee River just upstream of the City of Columbus. Catalpa Creek and Catalpa Creek Tributary are located in the extreme western portion of the county, near the Town of Mayhew. Oak Slush Creek and Oak Slush Creek Tributary are southwest of the Tombigbee River. Oak Slush Creek flows into the Tombigbee River immediately north of the U.S. Route 82 bypass at Columbus. Ellis Creek, Greens Creek, McCrary Creek, and Vernon Branch are small tributaries located in east-central Lowndes County in the vicinity of the City of Columbus, and flow either south or west to confluences with the Tombigbee River or Luxapalila Creek.

Although the majority of floodplains in Lowndes County are relatively undeveloped, extensive commercial and residential development has occurred in the floodplains of the Tombigbee River, Luxapalila Creek, and other smaller streams in the vicinity of the City of Columbus.

The principal influences determining the climate of the county are its sub-tropical latitude, the huge land mass to the north, its proximity to the warm waters of the Gulf of Mexico, and the prevailing southerly winds. The county has an annual precipitation average of approximately 51 inches of rainfall and has a mean annual temperature of 64 degrees Fahrenheit (Lowndes County Development Association, 1967).

The physiography of the land in eastern Mississippi is dominated by the fertile Tombigbee Terraces and the Black Prairie Belt. The productivity of the soil accounts for the importance of the City of Columbus, which has historically been a commercial center. The City of Columbus, in central Lowndes County, is served by US Routes 45 and 82, State Route 12, the Illinois Central Railroad, Norfolk Southern Railway, and the Burlington Northern Railroad.

2.3 Principal Flood Problems

Flooding of the Tombigbee River and resulting backwater effects on its tributaries account for the principal flood problems in Lowndes County. Notable floods occurred in April 1982, which estimated to be greater than a 100-year flood event, and March 1973, which was estimated to have a 50-year recurrence interval (U.S. Department of the Interior, DOI, 1892-1975). The smaller streams in Lowndes County also experience flooding independent of the Tombigbee River, usually because of intense seasonal rains, particularly thunderstorms.

Factors contributing to flooding are bridges, culverts, and streams sections that have inadequate capacities or are subject to constriction due to debris collection or siltation.

The City of Columbus is on the east bank of the Tombigbee River just above its confluence with Luxapalila Creek. Most of the central business district is located on high ground between the Old Tombigbee River on the west and Luxapalila Creek on the east. Expanding development in recent years has resulted in numerous residential, commercial, and industrial developments that have encroached on the floodplains.

2.4 Flood Protection Measures

In 1971, construction was completed on a 150-ft bottom width channel along the lower 2.1 miles of Luxapalila Creek. The excavated material was deposited on the adjacent overbanks. The USACE has also completed relocation work on two railroad bridges, and the City of Columbus has completed relocation work on four highway bridges.

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-, l00-, 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 l0-, 50-, 100-, and 500-year floods, have a l0-, 2-, 1-, and 0.2-percent-annual-chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the l00 year flood (1-percent chance of annual exceedence) 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 the peak discharge-frequency relationship for each flooding source studied in detail affecting the county.

Precountywide Analysis

The discharge frequencies for the Tombigbee River were based on frequency curves from the stream gages at the Cities of Aberdeen, Mississippi, and Columbus. The frequency curves for these gages have been updated since they were published in the Tennessee-Tombigbee Waterway Design memoranda (USACE, 1970). These memoranda included the March 1973 flood, which was the flood of record for this reach of river. The curves have also been adjusted for the effects of the navigation project using data from the HEC-1 runoff model, which was developed for another study by the USACE (USACE, 1984). The flows between the Aberdeen and Columbus gage were combined with coincidental flows from Luxapalila Creek to obtain flows in the river just below their confluence. From this point, the flows attenuate downstream to the Cochrane gage. The HEC-1 runoff model that was used to estimate the hydrologic effects of the navigation project was also used to estimate the attenuation downstream to Aliceville Lock and Dam. The flows between the point below Luxapalila Creek and Aliceville Lock and Dam were prorated by river mile.

Discharge frequencies for Magby Creek and Black Creek were computed using a regional study (Water Resources Council, WRC, 1967).

A log-Pearson Type III analysis of flood records at the U.S. Geological Survey (USGS) Catalpa Creek gages was used to obtain frequency discharges for that streams' HEC-2 model (WRC, 1967; DOI, 1963-1975; USACE, 1991).

For all streams studied in the county, excluding Luxapalila Creek, peak discharges were calculated using equations developed in a regional flood frequency report (DOI, 1976)

Equations were developed from analyses of statewide synthetic and actual stream gage records that relate peak frequency discharges to basin characteristics.

Peak discharges for Moore Creek were determined using updated USGS regional regression equations (U.S. Department of Commerce, DOC, 1991). Adjustments for urbanization were made using methods presented in USGS regional regression equations. Adjustments for urbanization were made using methods presented in USGS Water Supply Paper 2207 (DOC, 1983). The three-parameter urbanization equations were used. Drainage basin areas were delineated and planimetered from topographic maps (DOI, 1987).

Discharges for Ellis Creek Tributary were computed using the same methodology. New discharges were computed for Ellis Creek Tributary to account for significant reduction in flow upstream of a branch.

September 7, 1998 Countywide Analysis

A log-Pearson Type III analysis of flood records at the USGS Luxapalila Creek gages was used to obtain frequency discharges for that stream's HEC-2 model. Discharge frequencies for all ungaged locations were determined using regression equations found in USGS Water-Resources Investigations Report (WRI) 91-4037 (DOC, 1991). The results of the regression equations were then weighted to be associated with the gage analysis.

This Revision

For the Tombigbee River between the Mississippi/Alabama state boundary and the Stennis Lock and dam, an updated gage analysis was used. There are 5 USGS stream gages in the vicinity of the studied reach of the Tombigbee River. Two of these stream gages, Tombigbee River at Aberdeen Lock and Dam (USGS 02437100) and Tombigbee River at Aberdeen (USGS 02437500) differ in drainage area by only 6% and have periods of record that are contiguous. As a result, the peak flow record at these 2 gages were combined, as described below, and used together for frequency analysis. Two other gages, Tombigbee River at Stennis Lock and Dam (USGS 02441390) and Tombigbee River at Columbus (USGS 02441500) differ in drainage area by less than 1% have overlapping periods of record. Because of the similar drainage areas and the overlapping periods of record, only the peak flow record at Tombigbee River at Columbus was used for frequency analysis. The fifth gage, Tombigbee River at Bevill Lock and Dam near Pickensville (USGS 02444160) has a relatively short peak flow record compared to the other gage record used for frequency analysis; however, because the record length is 27 years, it was deemed sufficient to conduct frequency analysis.

Flood frequency analysis was conducted according to the guidelines and methods described in Bulletin 17B (Interagency Advisory Committee on Water Data, 1982) and using the regional skew values described in USGS Water Resources Investigations Report (WRIR) 91-4037, "Flood Characteristics of Mississippi Streams" (Landers, Mark N. and Wilson, K. Van. 1991). Because the drainage area differs only slightly and the period of record at the gages don not overlap and are nearly contiguous (skipping on 1984 in the combined record) the peak flow records from gages 02437100 and 02437500 were

combined and analyzed as a single site. The peak flow records were combined by applying drainage area transposition to the peak flows at 02437100 in order to adjust for the difference in drainage area. The drainage area transposition was performed by applying the following equation:

$$Q1_{adj} = Q1 * [DA2/DA1]^{B};$$

Where Q1adj is the adjusted peak flow for gage 02437100; Q1 is the peak flow at gage 02437100; DA1 is drainage area at gage 02437100; DA2 is the drainage area at gage 02437500; and B is the transposition exponent. In this case, the transposition exponent, B, was chosen as the exponent used for drainage area in the USGS regression equation for Mississippi streams outside the Delta region with drainage areas greater than 800 mi.^{2}; this exponent is equal to 0.83. The adjusted peak flows were then added to the record for gage 02437500, resulting in a combined period of record form 1909 to 2008.

The flood frequency analyses for the 3 gages were conducted using the USGS PKFQWin program (Flynn, K.M., 2006). The analyses were performed using the weighted skew option described in Bulletin 17B; the values for regional skew and mean square error of the regional skew were selected according to guidance provided in WRIR 91-4307. Annual chance discharges for locations on Tombigbee River between the gage locations were determined using drainage area interpolation.

For all the streams studied in this county by methods other than detail study, peak discharges were calculated using equations developed in a regional flood frequency report (USACE, 2005). Equations were developed from analyses of statewide synthetic and actual stream gage records that relate peak frequency discharges to basin characteristics.

A summary of the drainage area-peak discharge relationships for the portion of the streams studied by detailed methods is shown in Table 4, "Summary of Discharges."

Table 4. Summary of Discharges - Detailed Study Streams

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (Square miles)	PEAK DISCHARGES (cfs) 10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
BLACK CREEK					
At Mouth	18.98	2,880	4,710	5,870	9,300
Just upstream of Burlington Northern Railroad	4.16	990	1,560	1,900	2,610
Just downstream of McCullough Road	2.65	910	1,410	1,700	2,370
CATALPA CREEK					
At Old Highway 82	98.2	13,663	20,720	24,001	32,320
CATALPA CREEK TRIBUTARY					
At Mouth	2.13	820	1,300	1,500	2,300
At U.S. Highway 82	1.10	550	800	975	1,450

FLOODING SOURCE AND LOCATION	PEAK DISCHARGES (cfs) DRAINAGE AREA (Square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
ELLIS CREEK					
At Mouth	22.26	3,665	5,981	7,312	11,887
At Railroad	20.17	3,445	5,603	6,846	11,099
At State Highway 69	17.40	3,138	5,083	6,203	10,016
ELLIS CREEK TRIBUTARY					
At Mouth	1.08	520	770	860	1,110
Just upstream of branch	0.065	360	540	600	770
GREENS CREEK					
At Mouth	7.40	1,829	2,889	3,504	5,526
At Railroad	4.90	1,410	2,200	2,661	4,419
At State Highway 69	3.16	1,069	1,647	1,985	3,058
LUXAPALILA CREEK					
At Mouth	795	35,800	50,800	56,800	69,900
Just upstream of US Route 82	762	34,800	49,200	54,900	67,300
Just downstream of the confluence of Yellow Creek	662	32,000	45,300	50,600	62,000
LUXAPALILA CREEK TRIBUTARY					
At confluence with Luxapalila Creek	5.00	1,428	2,230	2,697	4,207
MAGBY CREEK					
At Lehmber Road	*	5,085	6,372	7,009	8,232
Just upstream of Lee Stokes Road	40.81	6,000	10,000	12,000	17,900
MCCRARY CREEK					
At mouth	22.45	3,685	6,015	7,354	11,958
At confluence of Vernon Branch	9.80	2,184	3,478	4,227	6,718
At New Hope Road	7.40	1,829	2,889	3,504	5,526
MOORE CREEK					
At Mouth	4.51	1,490	2,180	2,480	3,180
At 5th Street	3.13	1,160	1,690	1,910	2,440
At US Route 82	2.65	1,060	1,550	1,750	2,220
At Railroad	2.14	920	1,350	1,510	1,910
At Blue Cut Road	1.98	910	1,340	1,500	1,900
OAK SLUSH CREEK					
At Mouth	10.30	2,253	3,594	4,370	6,955
At West Point Road	2.45	910	1,392	1,675	2,562
OAK SLUSH CREEK TRIBUTARY					
At Mouth	1.64	709	1,072	1,286	1,946
TIBEE CREEK					
At Mouth	1,100	68,327	89,146	96,344	109,889

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (Square miles)	PEAK DISCHARGES (cfs) 10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
TOMBIGBEE RIVER					
At the Noxubee/Lowndes County Boundary	*	147,700	235,600	278,700	400,200
Approximately 0.6 mile upstream of the Noxubee/Lowndes County boundary	*	124,143	179,315	204,1119	265,644
Approximately 1.9 miles downstream of Railroad	4,463	116,100	182,400	214,200	297,100
Approximately 1.4 miles downstream of Railroad	**	81,270	127,680	149,940	207,970
Approximately 0.4 miles upstream of Railroad	4,463	116,100	182,400	214,200	297,100
Just upstream of confluence of Tibee Creek	*	96,100	159,100	192,700	290,000
Just downstream of confluence of Stinson Creek	*	95,700	159,500	191,900	288,800
Just upstream of confluence of Stinson Creek	*	95,400	157,900	191,200	287,800
Just upstream of confluence of Town Creek	*	93,700	155,100	187,600	282,600
Just downstream of confluence of Buttahatchee River	*	93,600	155,000	187,400	282,300
TOMBIGBEE RIVER (Split Flow)					
At mouth	**	34,830	54,720	64,260	89,130
TOMBIGBEE RIVER TRIBUTARY NO. 1					
At mouth	5.43	1,504	2,355	2,850	4,456
At Nashville Ferry Road	3.15	1,067	1,643	1,981	3,051
TOMBIGBEE RIVER TRIBUTARY NO. 2					
At mouth	7.00	1,766	2,785	3,376	5,317
At Columbus and Greenville Railway	3.70	1,181	1,828	2,026	3,412
VERNON BRANCH					
At mouth	8.85	2,047	3,252	3,949	6,258
At New Hope Road	3.35	1,109	1,711	2,064	3,184
At US Highway 82 (upstream crossing)	1.85	762	1,156	1,388	2,107
YELLOW CREEK					
At mouth	361.20	23,970	35,700	40,500	52,000

* Prorated by drainage area ratio
**Split Flow

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.

Cross sections for the flooding sources studied by detailed methods were obtained from field surveys. All bridges, dams, and culverts were field surveyed to obtain elevation data and structural geometry. Cross sections for Luxapalila Creek were added using topographic maps (DOI, 1987). Cross sections for the Tombigbee River downstream of Stennis Lock and Dam were derived within the channel from bathymetry data collected by the USACE (USACE, 2005).

Water-surface elevations of floods of the selected recurrence intervals were computed using the USACE HEC-2 step-backwater computer program (USACE, 1991) and the USACE HEC-RAS step-backwater computer program (USACE, 2005). Starting water-surface elevations were calculated using the slope/area method or by a coincidental flow analysis in backwater areas were peak discharges occur nearly simultaneously.

Channel roughness factors (Manning's "n") for these computations were assigned on the basis of field inspection and orthophotography of floodplain areas.

For the May 4, 1989, FIS, channel "n" values ranged from 0.027 to 0.070, and the overbank "n" values ranged from 0.045 to 0.180. For the July 16, 1996 revision, for Ellis Creek Tributary, the channel "N" values ranted from 0.045 to 0.10, and the overbank "n" values ranged from 0.040 to 0.150. For Moore Creek, the channel "n" values ranged from 0.030 to 0.045, and the overbank "n" values ranged from 0.025 to 0.150. For the September 7, 1998 revision, on Luxapalila Creek the channel "n" values ranted from 0.035 to 0.18, and the overbank "n" values ranged from 0.035 to 0.99.

For this revision, the Manning's "n" values for the new detailed study done on Tombigbee River ranged from 0.05 to 0.14 for the overbanks and from 0.030 to 0.035 for the channels.

The approximate study methodology used Watershed Information SysEtem (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 (USACE, 2005) was used to determine the flood elevation at each cross-section of the modeled stream.

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

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.

All qualifying benchmarks within a given jurisdiction that are catalogued by the 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 catalogued 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, expect 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 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 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 website at www.ngs.noaa.gov.

It is important to note that temporarily 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 (TSDN) 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 used for newly created or revised FIS reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD). With the completion of the North American Vertical Datum of 1988 (NAVD), many FIS reports and FIRMs are now prepared using NAVD as the referenced vertical datum.

Flood elevations shown in this FIS report and on the FIRM are referenced to the NAVD. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. Some of the data used in this revision were taken from the prior effective FIS reports and FIRMs and adjusted to NAVD88. The datum conversion factor from NGVD29 to NAVD88 in Lowndes County is +0.09 feet.

For additional 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:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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 FIS report and FIRM for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at 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 1- and 0.2-percent-annual-chance floodplains; and 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 county. For each stream studied in detail, the 1- and 0.2-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section.

For the May 4, 1989 FIS, the boundaries were interpolated between cross sections using topographic maps at scales of 1:4,800, 1:12,000, and 1:62,500, with contour intervals of 4 feet, 5 and 10 feet, and 20 feet, respectively (Hoffman and Company, Inc., 1984; USGS, 1959-1960; USACE, 1983).

For the July 16, 1996 revision, the boundaries were interpolated between cross section using topographic maps at a scale of 1"=2,000' with a contour interval of 10 feet (USGS 1987).

For the September 7, 1998 revision, the boundaries were interpolated between cross sections, using topographic maps at a scale of 1"=400', with a contour interval of 4 feet (Hoffman and Company, Inc., 1984).

For this revision, boundaries for the Tombigbee River, the Tombigbee River Split Flow, and all streams studied by approximate methods were revised. Boundaries were interpolated between cross sections using topographic maps at scales of 1:24,000 with contour intervals of 5, 10, and 20 feet. (MARIS, 2007).

The 1-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 0.2-percent-annual chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards (Zone X). 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 and/or lack of detailed topographic data.

For the streams studied by approximate methods, only the 1-percent-annual-chance floodplain boundaries are shown on the FIRM. For this revision, the floodplain boundaries were delineated based on topographic data provided by the Mississippi Automated Resource Information System (MARIS, 2007).

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces the flood carrying capacity, increases the 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 National Flood Insurance Program, 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 were the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

Portions of the floodways for the Tombigbee River and Tibbee Creek extend beyond the county boundary.

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. A listing of stream velocities at selected cross sections is provided in Table 5. In order 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 were made without regard to flood elevations in the receiving water body. Therefore, "without floodway" elevations presented in Table 5 for certain downstream cross sections may be lower than the regulatory flood elevations in that area, which must take into account the 1-percent-annual-chance flood due to backwater from other sources.

No floodways were computed for streams studied by approximate methods. 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 base flood elevations at any point within the county.

The area between the floodway and the 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 (WSEL) of the 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.

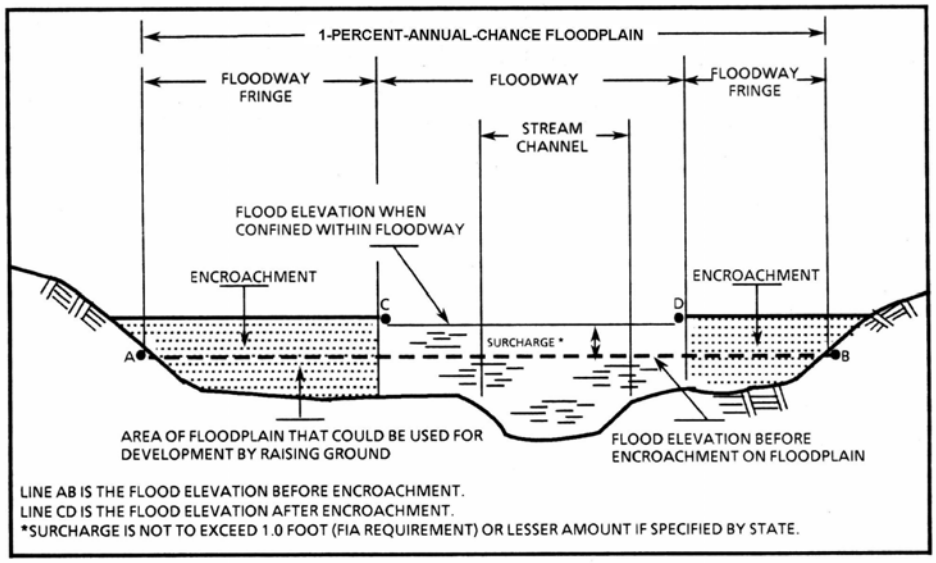

Figure 1. Floodway Schematic

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								
A	4,000	572	4,995	1.2	184.3	183.1[2]	184.1	1.0
B	5,000	189	1,371	4.3	184.3	183.8[2]	184.7	0.9
C	6,800	209	1,961	3.0	188.7	188.7	189.7	1.0
D	7,750	440	3,442	1.7	189.5	189.5	190.5	1.0
E	9,600	377	2,441	2.4	193.2	193.2	193.9	0.7
F	12,400	490	3,239	1.1	194.1	194.1	194.9	0.8
G	15,400	240	2,209	1.1	194.5	194.5	195.2	0.7
H	20,240	160	1,368	1.7	195.3	195.3	195.9	0.6
I	25,850	425	2,336	1.0	197.6	197.6	198.3	0.7
J	28,980	213	768	2.5	197.7	197.7	198.4	0.7
K	29,930	650	1,677	1.1	199.0	199.0	200.0	1.0
L	34,405	390	1,572	1.2	200.3	200.3	201.3	1.0
M	35,800	228	963	2.0	201.0	201.0	201.8	0.8
N	37,730	472	1,495	1.3	204.4	204.4	205.3	0.9
O	40,650	120	601	3.2	206.9	206.9	207.8	0.9
P	42,860	65	367	4.6	211.2	211.2	212.2	1.0
Q	45,900	94	558	3.0	217.4	217.4	218.4	1.0

[1]Feet above confluence with Luxapalila Creek

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

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

BLACK 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
CATALPA CREEK								
A	526	3,192	26,594	0.9	192.8	192.8	193.8	1.0
B	2,833	2,865	25,951	1.0	195.3	195.3	195.3	0.0
C	3,883	2,798	16,105	1.5	195.4	195.4	195.4	0.0
D	8,073	2,525	16,178	1.5	196.1	196.1	196.3	0.2

[1]Feet above limit of detailed study (limit of detailed study is approximately 360 feet downstream of U.S. Highway 82)

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

CATALPA 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
CATALPA CREEK TRIBUTARY								
A	2,032	591	1,765	0.8	195.8	193.7[2]	194.0	0.3
B	3,082	296	639	2.3	196.0	194.7[2]	195.6	0.9
C	4,402	199	507	2.3	201.0	201.0	202.0	1.0
D	5,852	55	289	4.0	205.0	205.0	206.0	1.0
E	7,602	30	184	5.3	210.8	210.8	211.8	1.0
F	8,402	52	235	4.2	214.2	214.2	215.2	1.0
G	9,152	35	180	5.4	217.6	217.6	218.4	0.8

[1]Feet above confluence with Catalpa Creek

[2]Elevation computed without consideration of flooding controlled effects from Catalpa Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

CATALPA CREEK TRIBUTARY

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
ELLIS CREEK								
A	13,989	941	4,408	1.7	167.0	167.0	167.4	0.4
B	17,289	936	4,242	1.7	173.0	173.0	173.8	0.8
C	19,850	697	3,490	2.0	178.0	178.0	178.1	0.1
D	22,350	845	3,314	2.1	184.0	184.0	185.0	1.0
E	24,250	639	3,654	1.9	189.0	189.0	189.9	0.9
F	26,500	426	2,599	2.6	193.6	193.6	194.6	1.0
G	29,002	421	2,728	2.3	200.1	200.1	200.9	0.8
H	32,402	373	2,026	3.1	203.6	203.6	204.0	0.4
I	35,152	517	2,477	2.5	211.0	211.0	211.7	0.7
J	39,652	729	2,830	2.2	220.6	220.6	221.4	0.8
K	42,452	144	1,035	6.0	228.5	228.5	229.5	1.0

[1]Feet above confluence with Tombigbee River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

ELLIS 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
ELLIS CREEK TRIBUTARY								
A	3,320	99	237	2.5	187.0	187.0[2]	188.0	1.0
B	5,070	33	134	4.5	200.2	200.2	201.2	1.0
C	5,970	17	81	7.4	205.6	205.6	206.5	0.9

[1]Feet above confluence with Ellis Creek

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

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

ELLIS CREEK TRIBUTARY

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
GREENS CREEK								
A	7,036	668	3,478	1.0	167.9	167.9	168.8	0.9
B	9,336	393	1,886	1.9	173.0	173.0	173.9	0.9
C	11,963	450	1,962	1.8	178.5	178.5	179.3	0.8
D	14,136	535	2,167	1.6	182.1	182.1	183.1	1.0
E	16,421	531	1,453	1.8	185.4	185.4	186.1	0.7
F	18,421	269	1,008	2.6	189.5	189.5	190.5	1.0
G	20,196	470	1,315	2.0	197.1	197.1	197.2	0.1
H	23,369	348	947	2.8	204.8	204.8	205.3	0.5
I	30,469	143	667	3.0	233.4	233.4	234.4	1.0
J	33,679	335	2,174	0.9	254.6	254.6	255.2	0.6
K	35,779	192	840	2.4	260.0	260.0	260.3	0.3
L	37,949	113	567	3.5	273.1	273.1	273.8	0.7

[1]Feet above confluence with Ellis Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

GREENS 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
LUXAPALILA CREEK								
A	7,500	5,080	75,082	0.8	168.2	168.2	169.2	1.0
B	9,900	3,570	43,073	1.3	168.2	168.2	169.2	1.0
C	17,744	1,072	17,628	3.2	170.6	170.6	171.4	0.8
D	22,544	425	9,378	5.9	171.8	171.8	172.7	0.9
E	31,394	981	17,107	3.1	177.6	177.6	178.4	0.8
F	43,064	5,348	42,720	1.2	183.3	183.3	184.2	0.9
G	49,344	5,762	60,033	0.9	184.8	184.8	185.7	0.9
H	56,744	4,288	39,146	1.3	186.4	186.4	187.3	0.9
I	64,884	4,132	38,233	1.4	190.1	190.1	191.0	0.9
J	74,454	4,553	37,816	1.3	194.3	194.3	195.2	0.9
K	83,744	2,500	17,968	1.1	198.0	198.0	198.9	0.9
L	91,414	3,600	17,948	1.1	202.1	202.1	203.1	1.0
M	103,474	4,436	19,269	1.0	209.9	209.9	210.8	0.9

[1]Feet above confluence with Tombigbee River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

LUXAPALILA 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
LUXAPALILA CREEK TRIBUTARY								
A	8,020	539	1,569	1.7	207.5	207.5	208.4	0.9
B	9,580	614	1,605	1.7	211.7	211.7	212.7	1.0
C	11,440	931	3,556	0.8	217.4	217.4	218.4	1.0
D	13,290	97	620	4.4	224.8	224.8	224.8	0.0

[1]Feet above confluence with Luxapalila Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

LUXAPALILA CREEK TRIBUTARY

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
MAGBY CREEK								
A	7,200	1,061	3,015	1.5	176.6	176.4[2]	177.4	1.0
B	11,560	1,143	4,181	1.4	180.1	180.1	181.1	1.0
C	21,775	1,088	4,379	1.8	192.9	192.9	193.9	1.0
D	26,850	847	4,279	1.9	199.5	199.5	200.5	1.0
E	39,600	1,613	6,868	2.0	213.5	213.5	214.4	0.9
F	47,750	1,698	7,951	1.7	222.1	222.1	223.1	1.0
G	52,560	952	6,449	2.1	226.8	226.8	227.8	1.0
H	62,600	835	7,918	1.7	236.2	236.2	237.2	1.0

[1]Feet above mouth

[2]Elevation includes flooding controlled by effects from Luxapalila Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

MAGBY 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
McCRARY CREEK								
A	4,777	630	2,644	2.8	171.7	171.7	172.4	0.7
B	11,806	271	1,158	3.7	185.9	185.9	186.9	1.0
C	14,446	457	1,676	2.5	189.9	189.9	190.3	0.4
D	17,796	1,093	4,570	0.9	196.7	196.7	197.5	0.8
E	20,471	502	1,986	2.1	205.5	205.5	206.1	0.6
F	22,111	1,200	3,658	1.2	210.0	210.0	210.3	0.3
G	27,452	407	1,529	2.3	222.1	222.1	222.2	0.1
H	29,902	179	1,007	3.5	229.7	229.7	230.2	0.5
I	33,002	422	1,743	2.0	238.7	238.7	239.6	0.9
J	37,627	228	1,126	3.1	251.3	251.3	252.0	0.7
K	42,127	253	1,189	2.9	269.5	269.5	270.3	0.8

[1]Feet above confluence with Luxapalila Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

McCRARY 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
MOORE CREEK								
A	1,628	100	628	3.9	167.8	156.6[2]	157.4	0.8
B	2,675	48	427	5.8	167.8	157.4[2]	158.3	0.9
C	3,443	59	451	4.2	167.8	159.6[2]	160.2	0.6
D	6,124	74	392	4.9	167.8	162.6[2]	162.8	0.2
E	7,174	46	294	6.5	167.8	164.0[2]	164.1	0.1
F	8,096	65	346	5.5	167.8	165.7[2]	166.0	0.3
G	10,316	56	265	6.6	171.9	171.9	171.9	0.0
H	11,750	190	480	3.6	177.2	177.2	177.8	0.6
I	13,499	51	288	5.2	183.8	183.8	183.8	0.0
J	14,519	31	213	7.0	187.1	187.1	187.3	0.2

[1]Feet above confluence with Tombigbee River Split Flow

[2]Elevation computed without consideration of backwater effects from Tombigbee River Split Flow

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

MOORE 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
OAK SLUSH CREEK								
A	10,260	396	1,929	2.3	170.0	167.9[2]	168.9	1.0
B	11,780	388	1,415	3.1	171.4	171.4	172.4	1.0
C	14,290	319	1,513	2.1	179.1	179.1	180.1	1.0
D	16,230	363	657	3.9	182.9	182.9	182.9	0.0
E	19,040	385	1,562	1.7	189.4	189.4	190.4	1.0
F	22,620	393	966	1.7	197.2	197.2	198.2	1.0
G	24,380	452	1,650	1.0	202.2	202.2	203.2	1.0

[1]Feet above confluence with Tombigbee River

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

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

OAK SLUSH 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
OAK SLUSH CREEK TRIBUTARY								
A	810	139	415	3.1	175.3	175.3	176.3	1.0
B	3,460	78	367	3.5	182.3	182.3	182.6	0.3

[1]Feet above confluence with Oak Slush Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

OAK SLUSH CREEK TRIBUTARY

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
TIBBEE CREEK								
A	15,100	4,051[2]	48,941	2.0	176.5	170.7[3]	171.7	1.0
B	24,730	8,960[2]	69,897	1.4	176.5	176.1[3]	176.8	0.7
C	30,720	6,119[2]	70,657	1.4	179.7	179.7	180.7	1.0
D	36,080	8,949[2]	123,130	0.8	180.9	180.9	181.8	0.9

[1]Feet above confluence with Tombigbee River

[2]This width extends beyond county boundary

[3]Elevation computed without consideration of backwater effects from Tombigbee River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

TIBBEE 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
TOMBIGBEE RIVER								
A	0	13,275[2]	218,032	1.3	155.0	155.0	155.9	0.9
B	21,281	6,375	90,018	2.3	156.6	156.6	157.6	1.0
C	34,258	14,100	233,128	0.9	157.7	157.7	158.6	0.9
D	44,051	11,000	195,589	1.0	158.1	158.1	158.9	0.8
E	51,436	11,600	103,058	2.0	159.0	159.0	159.8	0.8
F	57,541	3,200	42,697	4.8	159.4	159.4	160.3	0.9
G	74,722	5,600	69,432	2.9	162.8	162.8	163.6	0.8
H	81,923	5,830	88,035	2.3	164.9	164.9	165.7	0.8
I	89,399	11,850	112,731	1.9	165.7	165.7	166.4	0.7
J	94,771	6,620	55,471	2.7	166.4	166.4	167.2	0.8
K	100,422	2,460	41,192	5.2	168.4	168.4	169.1	0.7
L	113,261	1,375	40,066	5.4	171.3	171.3	172.3	1.0
M	117,441	2,800	54,874	3.9	172.8	172.8	173.8	1.0

[1]Feet above county boundary

[2] Width extends beyond county boundary

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

TOMBIGBEE RIVER

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
TOMBIGBEE RIVER								
N	22.25	9,876	91,214	2.7	175.6	175.6	176.6	1.0
O	23.28	11,396[2]	245,001	0.8	176.5	176.5	177.5	1.0
P	25.49	10,379[2]	150,149	1.3	177.8	177.8	178.8	1.0
Q	27.77	9,076[2]	119,062	1.6	179.8	179.8	180.8	1.0
R	28.34	8,801[2]	119,883	1.6	180.4	180.4	181.4	1.0
S	30.06	9,630[2]	131,493	1.5	183.7	183.7	184.7	1.0
T	30.80	5,974[2]	524,391	3.6	183.9	183.9	184.9	1.0
U	31.35	4,307[2]	46,683	4.0	184.6	184.6	185.6	1.0
V	32.39	8,551[2]	86,756	1.7	186.1	186.1	187.1	1.0

[1]Miles above state boundary

[2] Width extends beyond county boundary

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

TOMBIGBEE RIVER

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
TOMBIGBEE RIVER SPLIT FLOW								
A	0	11,850	112,702	1.9	165.7	165.7	166.4	0.7
B	2,527	950	29,162	2.2	166.5	166.5	167.3	0.8
C	6,510	610	18,398	3.5	166.6	166.6	167.4	0.8
D	9,723	404	13,437	4.8	166.9	166.9	167.7	0.8
E	11,288	450	10,541	6.1	167.1	167.1	167.8	0.7

[1]Feet above confluence with Tombigbee River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

TOMBIGBEE RIVER SPLIT FLOW

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
TOMBIGBEE RIVER TRIBUTARY NO. 1								
A	9,003	228	1,877	1.5	172.8	172.8	173.6	0.8
B	12,003	208	1,256	2.3	176.6	176.6	177.3	0.7
C	14,938	142	1,010	2.0	180.5	180.5	180.7	0.2

[1]Feet above confluence with Tombigbee River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

TOMBIGBEE RIVER TRIBUTARY 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
TOMBIGBEE RIVER TRIBUTARY NO. 2								
A	14,830	850	2,237	1.0	180.1	180.1	181.1	1.0
B	16,280	347	1,207	2.8	188.1	188.1	188.5	0.4

[1]Feet above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

TOMBIGBEE RIVER TRIBUTARY 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
VERNON BRANCH								
A	1,564	151	836	4.7	179.7	174.1[2]	174.1	0.0
B	3,814	144	638	6.2	181.3	179.7[2]	180.0	0.3
C	4,814	66	607	4.9	181.7	181.7	182.6	0.9
D	10,668	790	2,682	1.1	195.4	195.4	196.4	1.0
E	14,595	152	920	3.2	205.1	205.1	205.5	0.4
F	17,095	203	1,007	2.9	212.1	212.1	212.9	0.8
G	19,576	158	757	2.7	219.8	219.8	219.8	0.0
H	21,776	301	741	2.8	223.9	223.9	224.8	0.9
I	27,903	184	1,746	1.2	258.2	258.2	259.2	1.0
J	29,903	143	607	3.4	266.2	266.2	267.1	0.9

[1]Feet above confluence with McCrary Creek

[2]Elevation computed without consideration of flooding controlled effects from McCrary Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

VERNON BRANCH

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
YELLOW CREEK								
A	2,900	3,318	14,240	2.8	198.3	195.7[2]	196.2	0.5
B	5,550	3,218	17,702	2.3	198.8	198.8	199.0	0.2
C	8,350	3,601	19,075	2.1	201.5	201.5	201.8	0.3
D	13,020	3,893	22,203	1.8	203.6	203.6	204.4	0.8

[1]Feet above confluence with Luxapalila Creek

[2]Elevation computed without consideration of flooding controlled effects from Luxapalila Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

YELLOW 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 rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS report 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 base 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 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 zones and BFEs in conjunction with information on structures and other 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.

This countywide FIRM presents flooding information for the entire geographic area of Lowndes County, Mississippi. 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 are presented in Table 6, “Community Map History.”

COMMUNTIY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATES	FIRM EFFECTIVE DATES	FIRM REVISIONS DATES
Artesia, Town of	September 7, 1998		September 7, 1998	
Caledonia, Town of	September 7, 1998		September 7, 1998	
Columbus, City of	June 7, 1974	January 16, 1976	July 13, 1976	June 16, 1978 August 7, 1979 November 5, 1982 November 15, 1989 September 28, 1990 July 16, 1996 September 7, 1998
Crawford, Town of *	September 7, 1998		September 7, 1998	
Lowndes County Unincorporated Areas	February 7, 1975	November 4, 1977	November 15, 1979	May 4, 1989 September 28, 1990 July 16, 1996 September 7, 1998

*Non-floodprone community

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

FISs have been previously prepared for Lowndes County, Mississippi (FEMA, 1998). FIS reports have been published or are currently in progress for Noxubee, Oktibbeha, Clay, and Monroe Counties, Mississippi; and Pickens and Lamar Counties, Alabama. The Lowndes County study is in agreement with these studies.

Information pertaining to revised and unrevised flood hazards for each jurisdiction within Lowndes County has been compiled into this FIS. Therefore, this FIS supersedes all previously printed FIS reports, FIRMs, and\or FBFMs for all the incorporated and unincorporated jurisdictions within Lowndes 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 study can be obtained by contacting FEMA Region IV, Federal Insurance and Mitigation Administration, Koger Center – Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, Georgia, 30341.

9.0 BIBLIOGRAPHY AND REFERENCES

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ELEVATION IN FEET (NAVD)

160 165 170 175 180 185 190 195 200 205

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH LUXAPALILA CREEK

0 2,000 4,000 6,000 8,000 10,000 12,000 14,000 16,000 18,000 20,000 22,000

CONFLUENCE WITH LUXAPALILA CREEK

FLOODING CONTROLLED BY LUXAPALILA CREEK

1% ANNUAL CHANCE BACKWATER EFFECTS FROM LUXAPALILA CREEK

RAILROAD

BLACK CREEK RD

SMITH RD S

RAILROAD

JESS LYON RD

A B C D E F G H I

LEGEND

0.2% ANNUAL CHANCE FLOOD

1% ANNUAL CHANCE FLOOD

2% ANNUAL CHANCE FLOOD

10% ANNUAL CHANCE FLOOD

STREAM BED

CROSS SECTION LOCATION

FEDERAL EMERGENCY MANAGEMENT AGENCY

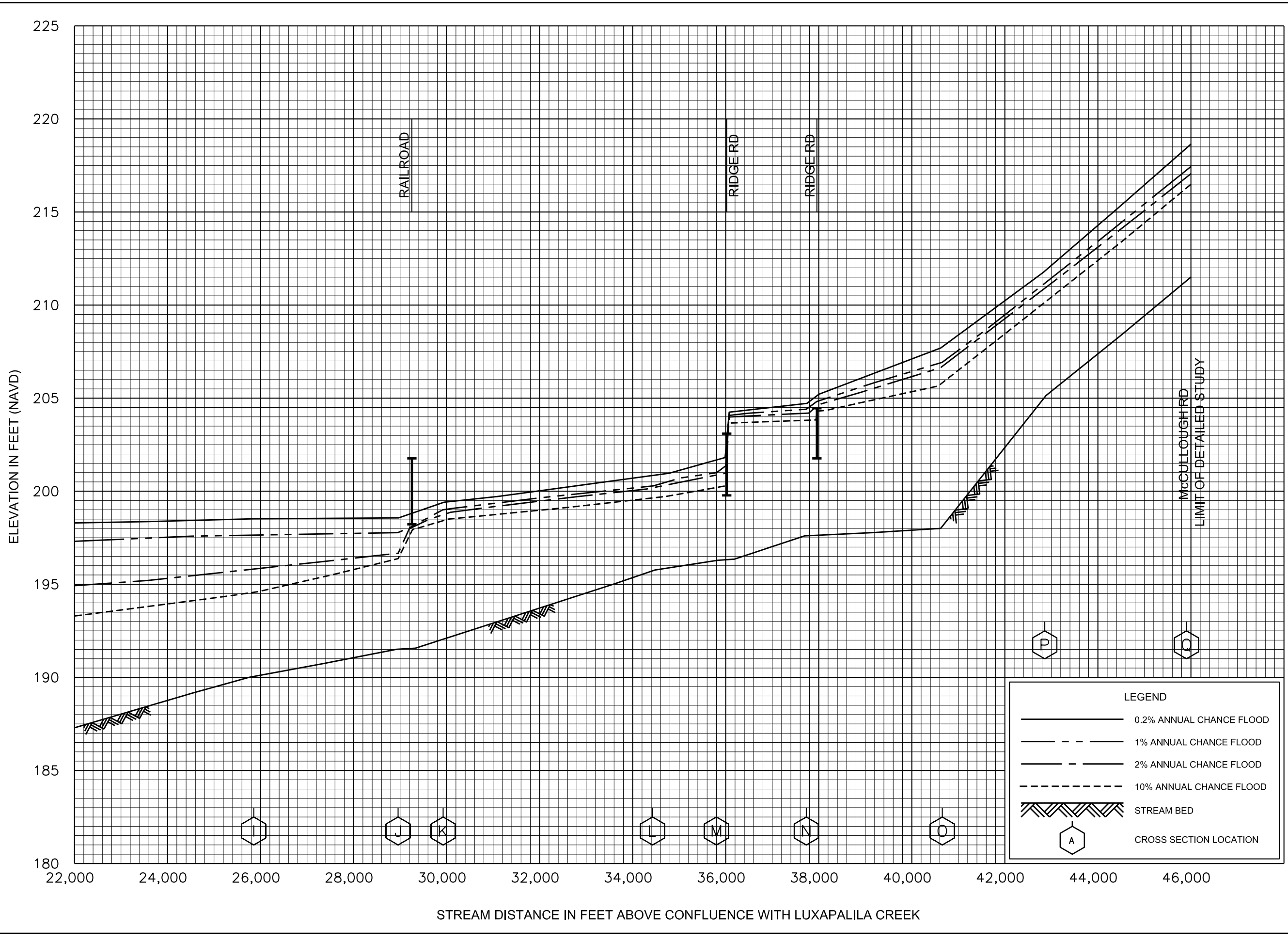
LOWNDES COUNTY, MS

AND INCORPORATED AREAS

FLOOD PROFILES

BLACK CREEK

01P



FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

02P

ELEVATION IN FEET (NAVD)

165 170 175 180 185 190 195 200 205 210

0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500

STREAM DISTANCE IN FEET ABOVE LIMIT OF DETAILED STUDY
(LIMIT OF DETAILED STUDY IS 360 FEET DOWNSTREAM OF U.S. HIGHWAY 82)

LIMIT OF DETAILED STUDY

U.S HIGHWAY 82
U.S HIGHWAY 82

MS HIGHWAY 82

CONFLUENCE OF
CATALPA CREEK TRIBUTARY

A

B

C

LEGEND

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

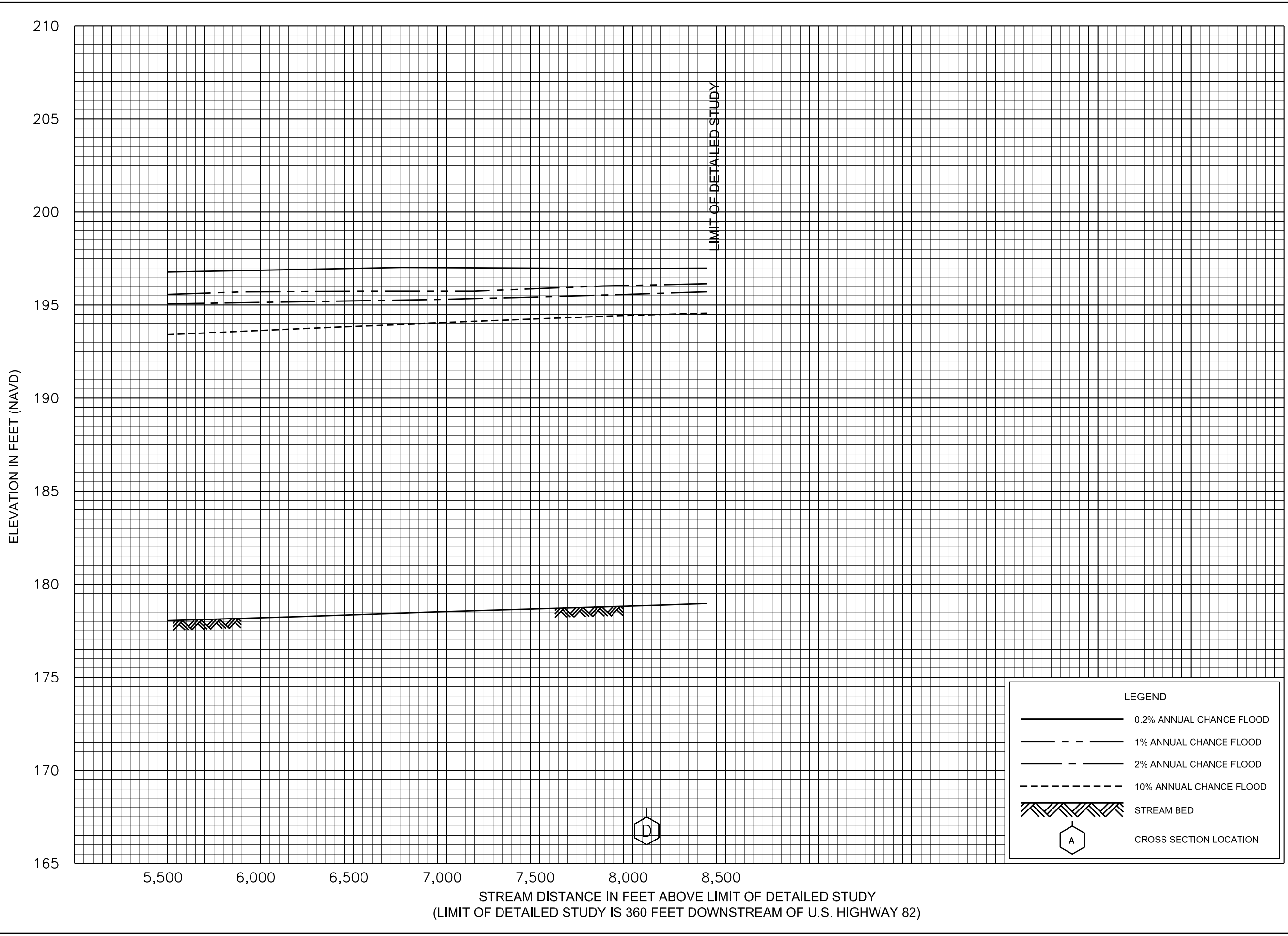
FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

CATALPA CREEK

03P



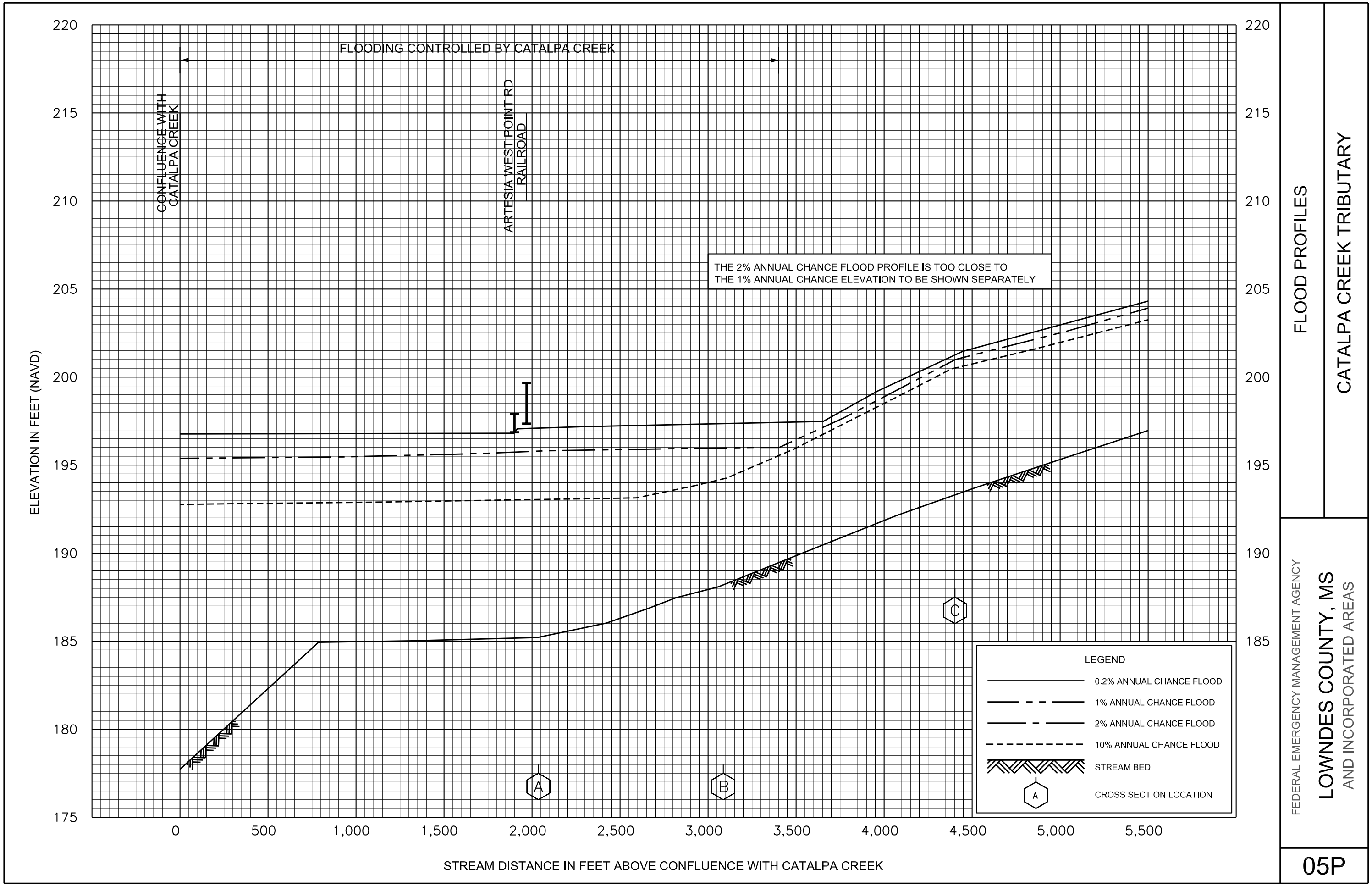
FLOOD PROFILES

CATALPA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

04P



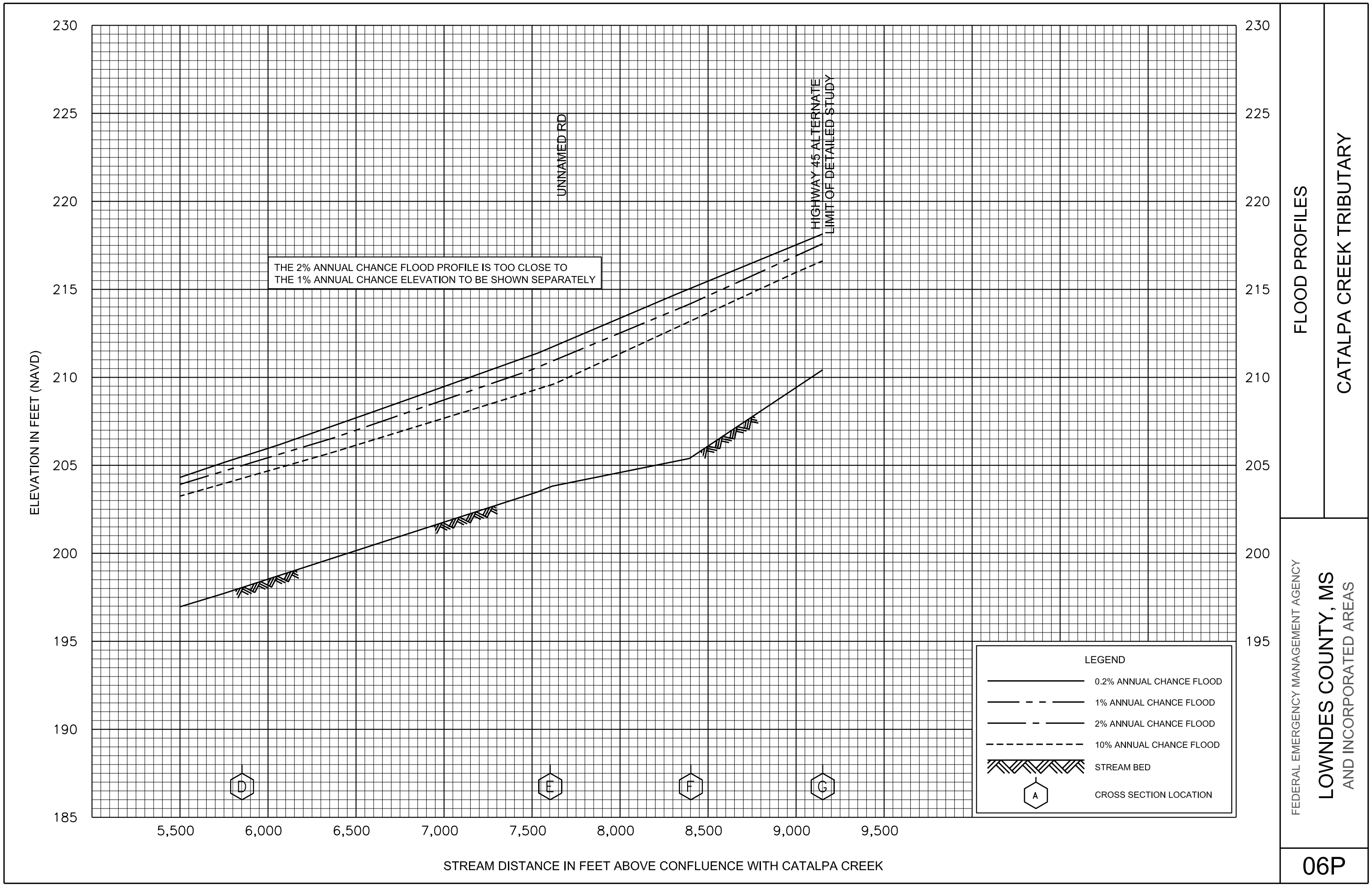
FLOOD PROFILES

CATALPA CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

05P



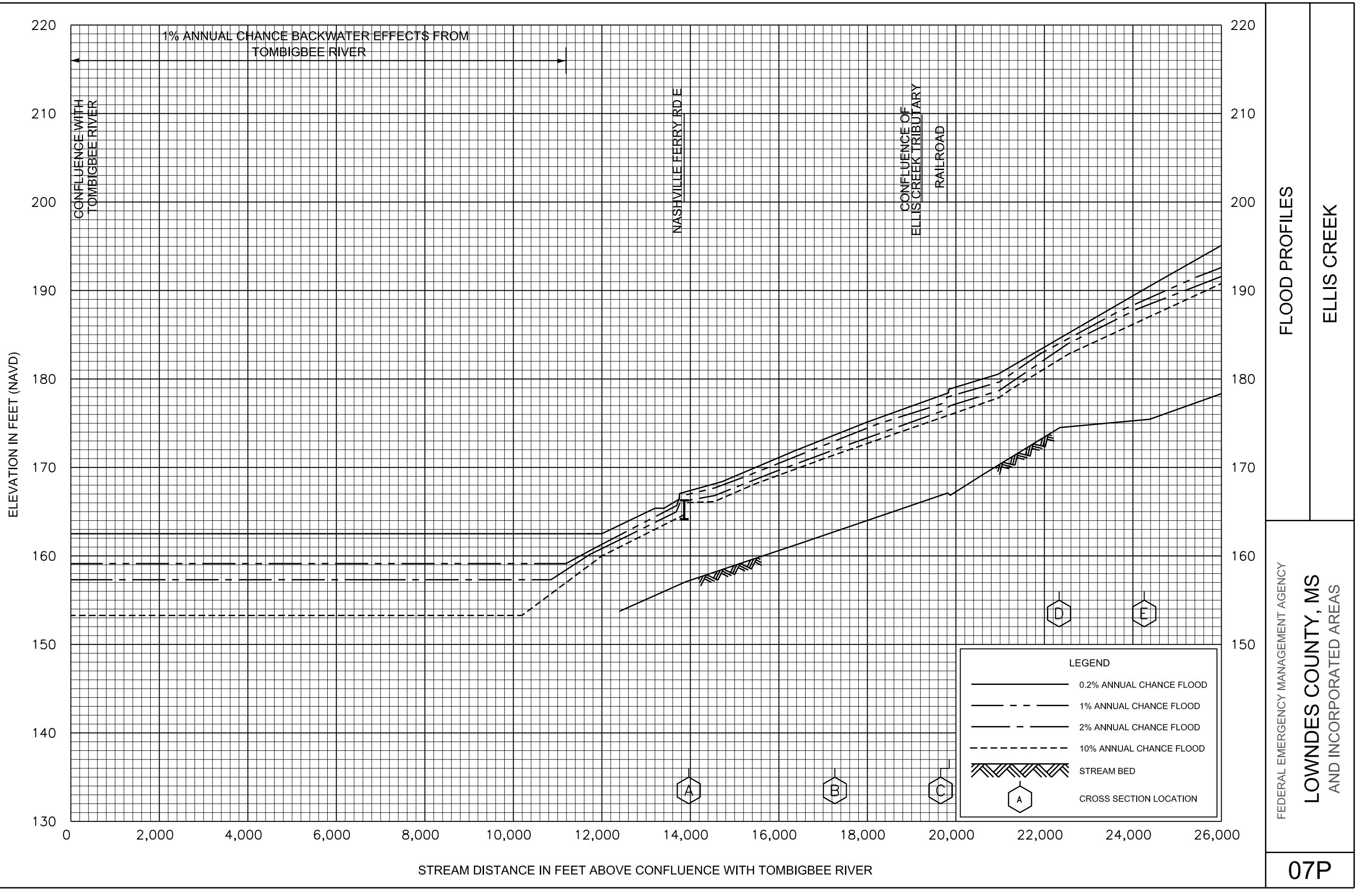
FLOOD PROFILES

CATALPA CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

06P



FLOOD PROFILES

ELLIS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

07P

FLOOD PROFILES

ELLIS CREEK

ELEVATION IN FEET (NAVD)

250
240
230
220
210
200
190
180
170
160

MS HIGHWAY 69

LIMIT OF DETAILED STUDY

F G H I J K

26,000 28,000 30,000 32,000 34,000 36,000 38,000 40,000 42,000 44,000

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TOMBIGBEE RIVER

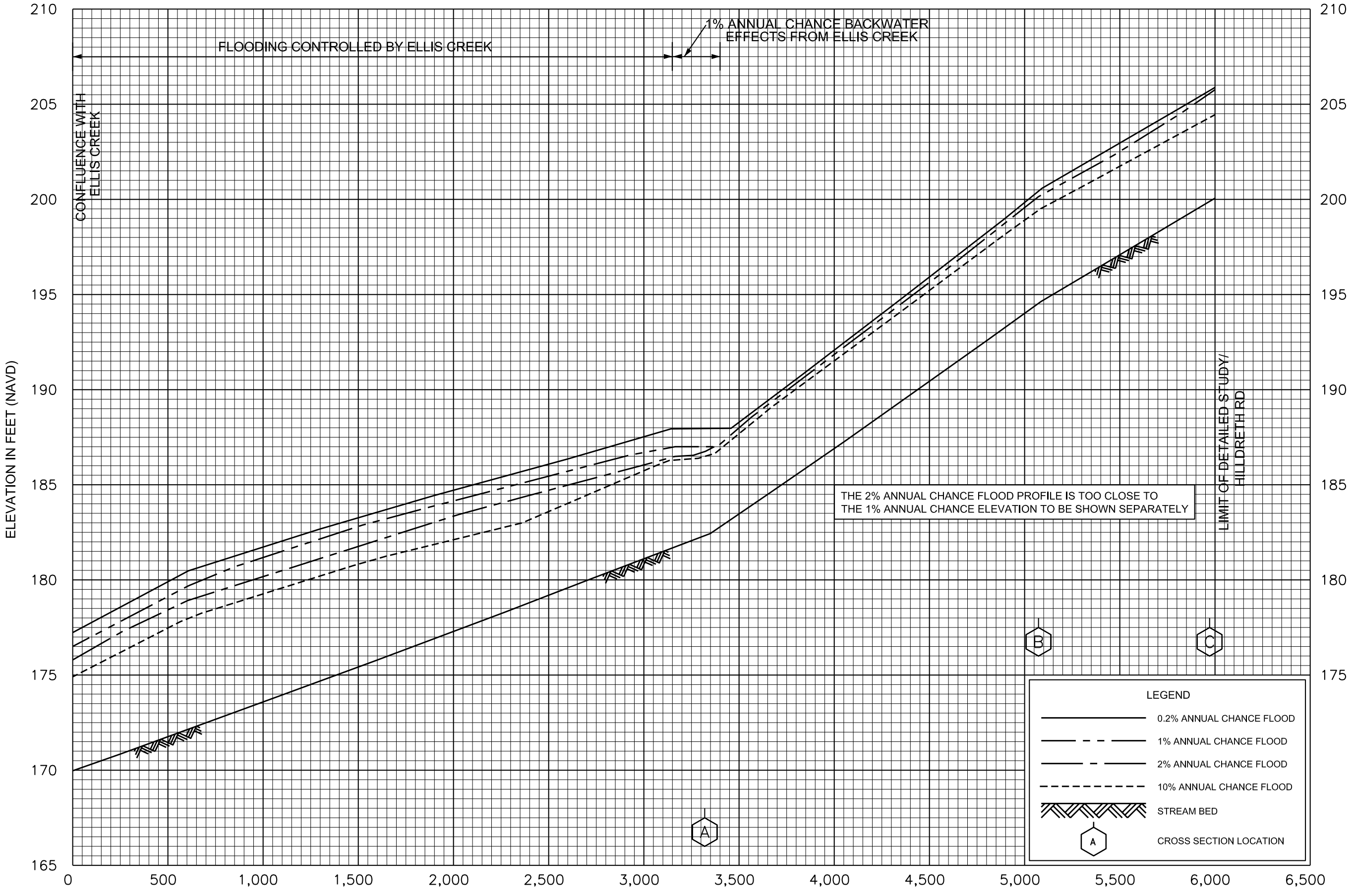
LEGEND

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

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

08P



FLOOD PROFILES

ELLIS CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

09P

1% ANNUAL CHANCE BACKWATER EFFECTS FROM TOMBIGBEE RIVER

DOWNSTREAM FLOOD ELEVATIONS CONTROLLED BY TOMBIGBEE RIVER

NASHVILLE FERRY RD E

ELEVATION IN FEET (NAVD)

220
210
200
190
180
170
160
150
140
130

4,000 5,000 6,000 7,000 8,000 9,000 10,000 11,000 12,000 13,000 14,000 15,000

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TOMBIGBEE RIVER

A B C D

LEGEND

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

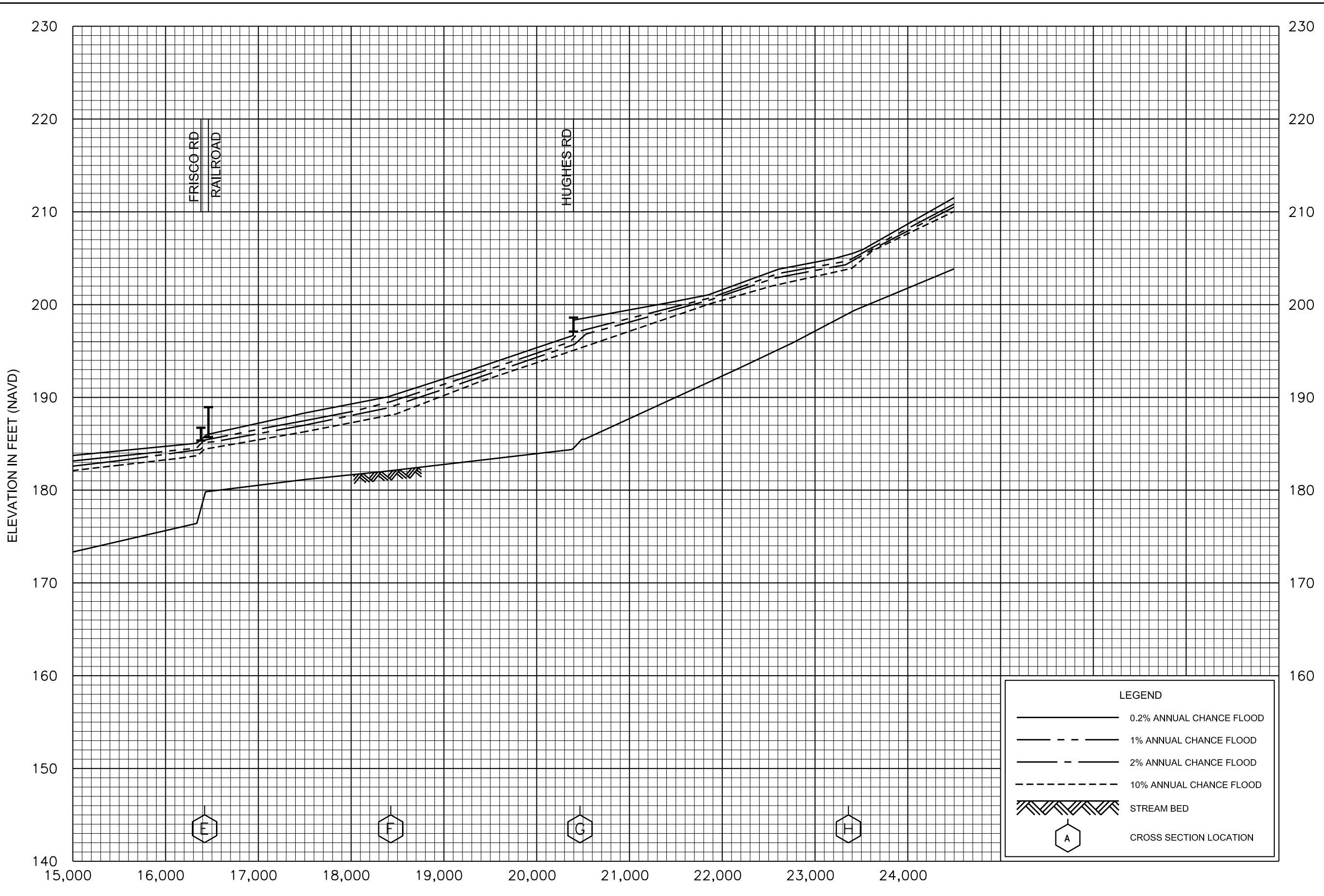
FLOOD PROFILES

GREENS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

10P

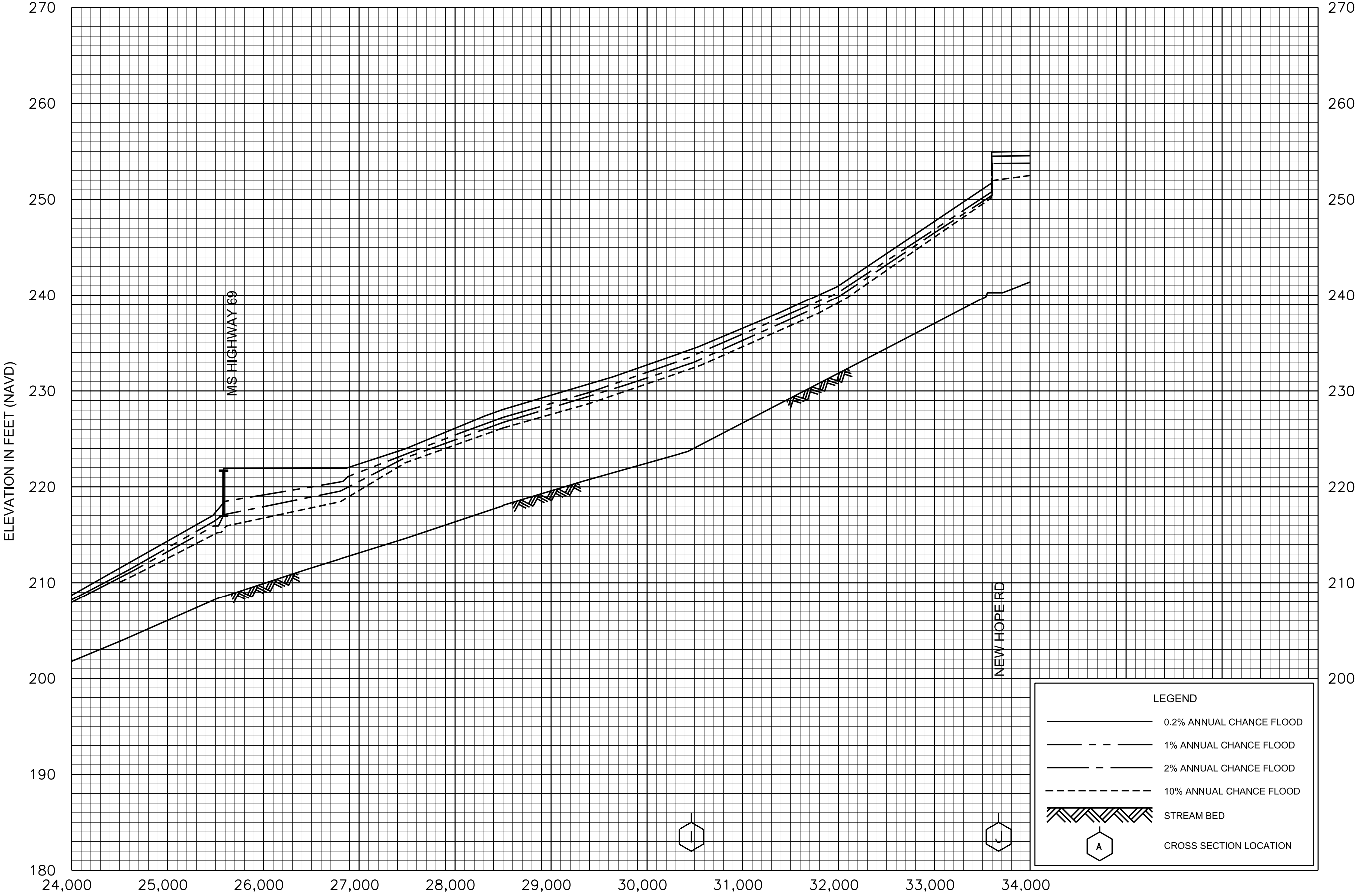


FLOOD PROFILES

GREENS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS



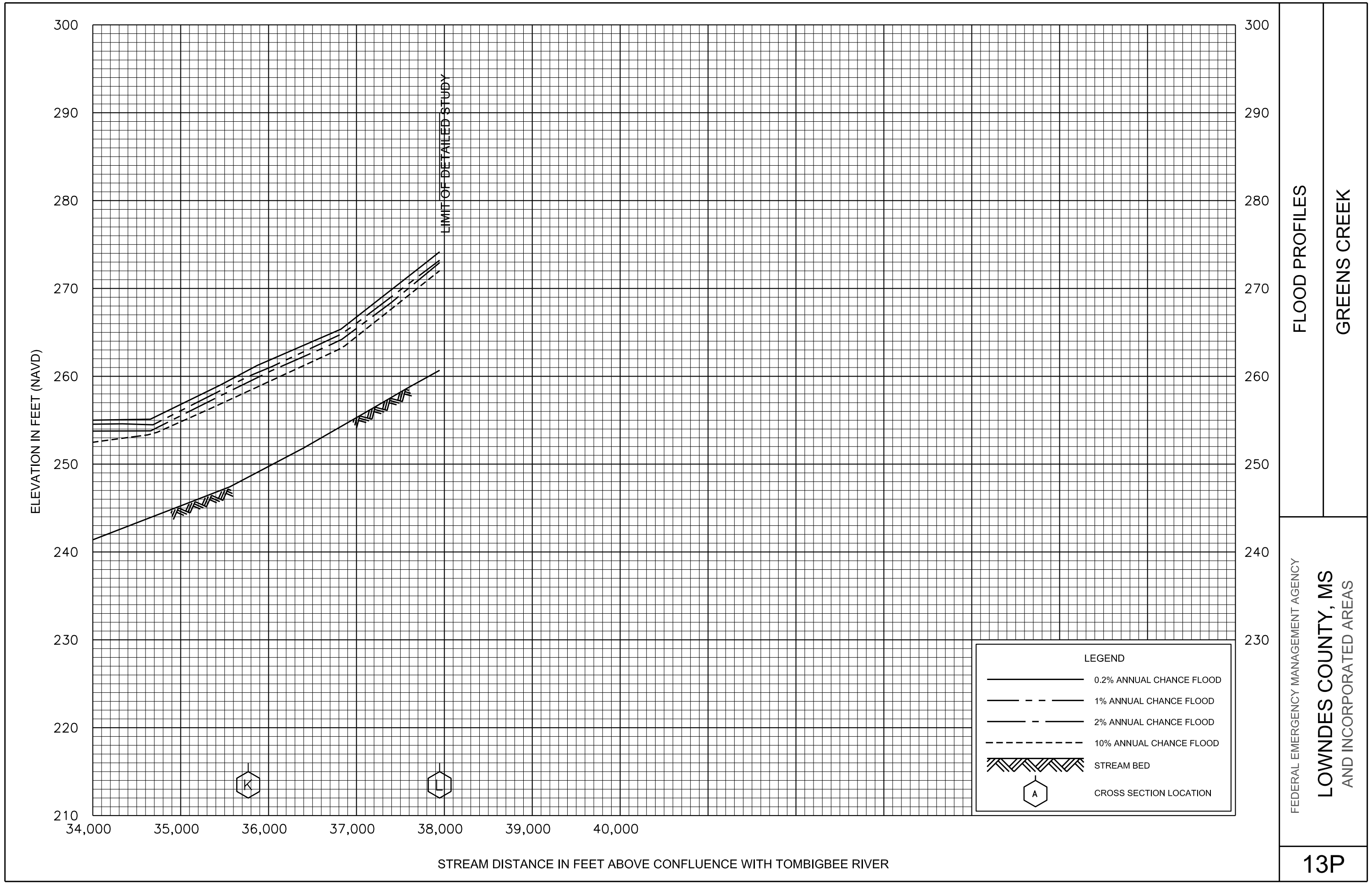
FLOOD PROFILES

GREENS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

12P



FLOOD PROFILES

GREENS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

13P

ELEVATION IN FEET (NAVD)

100 110 120 130 140 150 160 170 180 190

0 2,000 4,000 6,000 8,000 10,000 12,000 14,000 16,000 18,000 20,000 22,000 24,000 26,000

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TOMBIGBEE RIVER

CONFLUENCE WITH TOMBIGBEE RIVER

A

B

RAILROAD

S PICKENSVILLE RD

CONFLUENCE OF McCRARY CREEK

C

RAILROAD

AIRLINE RD

D

ALABAMA ST

CONFLUENCE OF MAGBY CREEK

LEGEND

0.2% ANNUAL CHANCE FLOOD

1% ANNUAL CHANCE FLOOD

2% ANNUAL CHANCE FLOOD

10% ANNUAL CHANCE FLOOD

STREAM BED

A CROSS SECTION LOCATION

120 130 140 150 160 170 180 190

14P

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS

AND INCORPORATED AREAS

FLOOD PROFILES

LUXAPALILA CREEK

15P

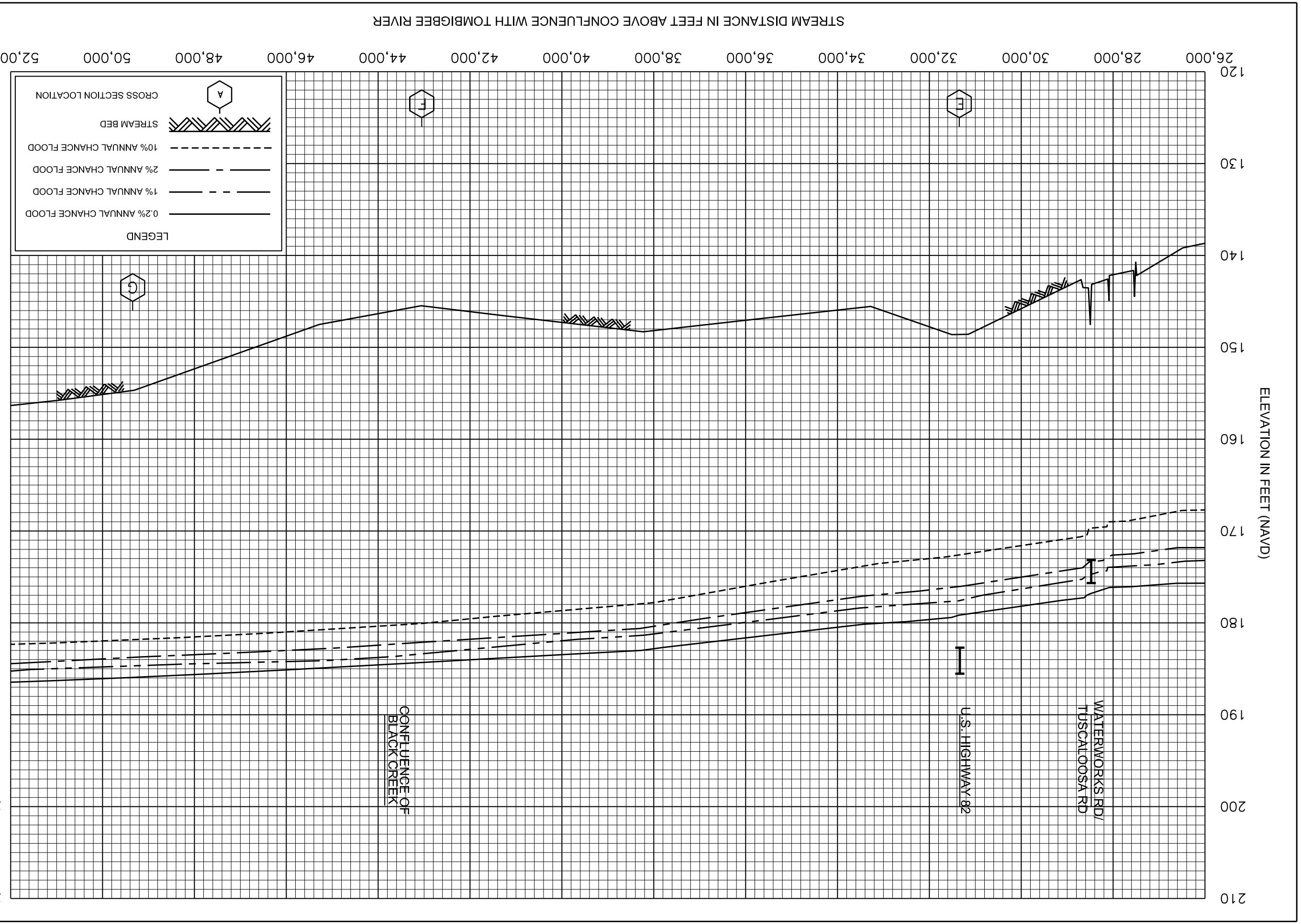
FEDERAL EMERGENCY MANAGEMENT AGENCY

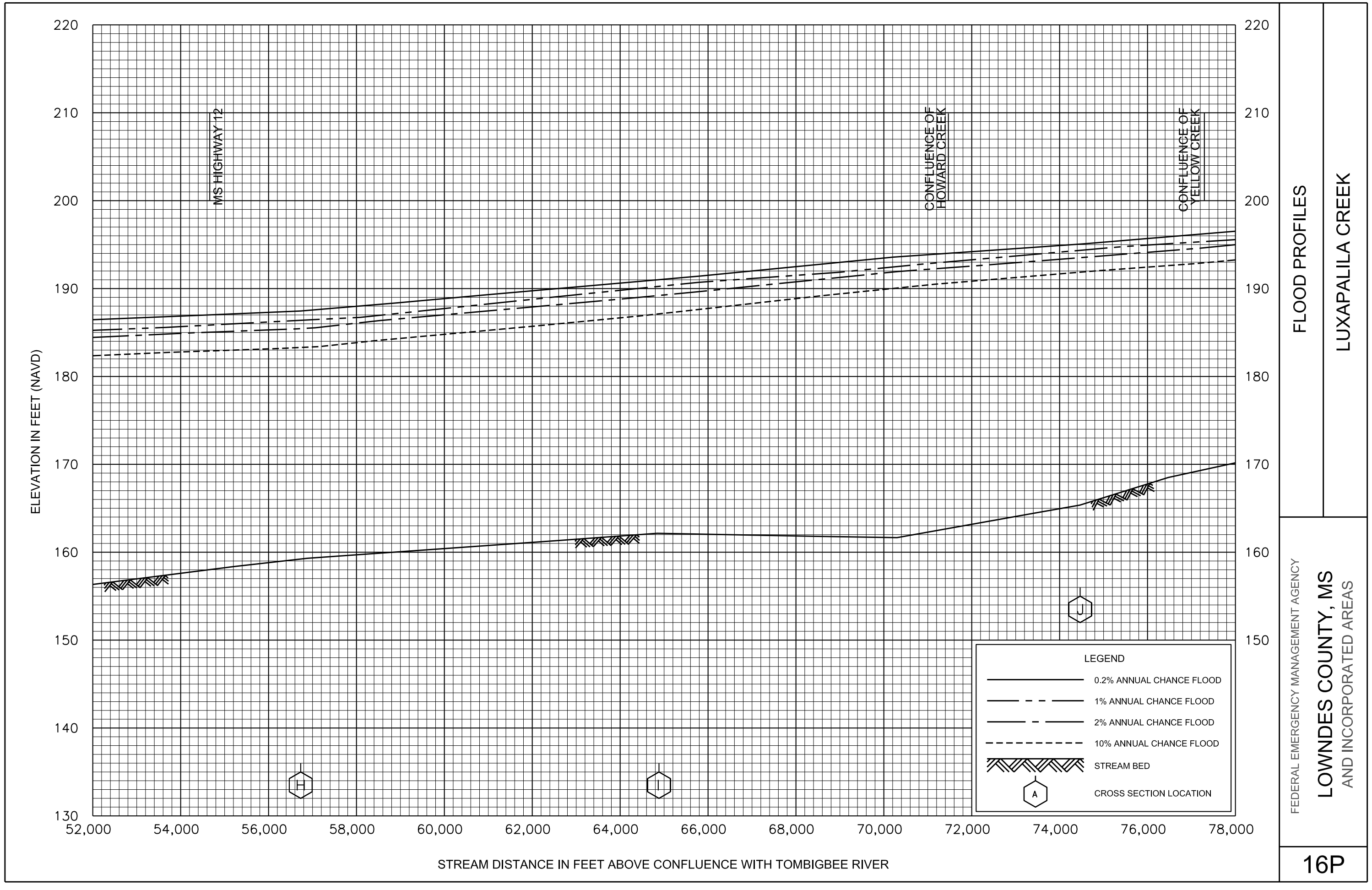
LOWNDES COUNTY, MS

AND INCORPORATED AREAS

FLOOD PROFILES

LUXAPALILA CREEK





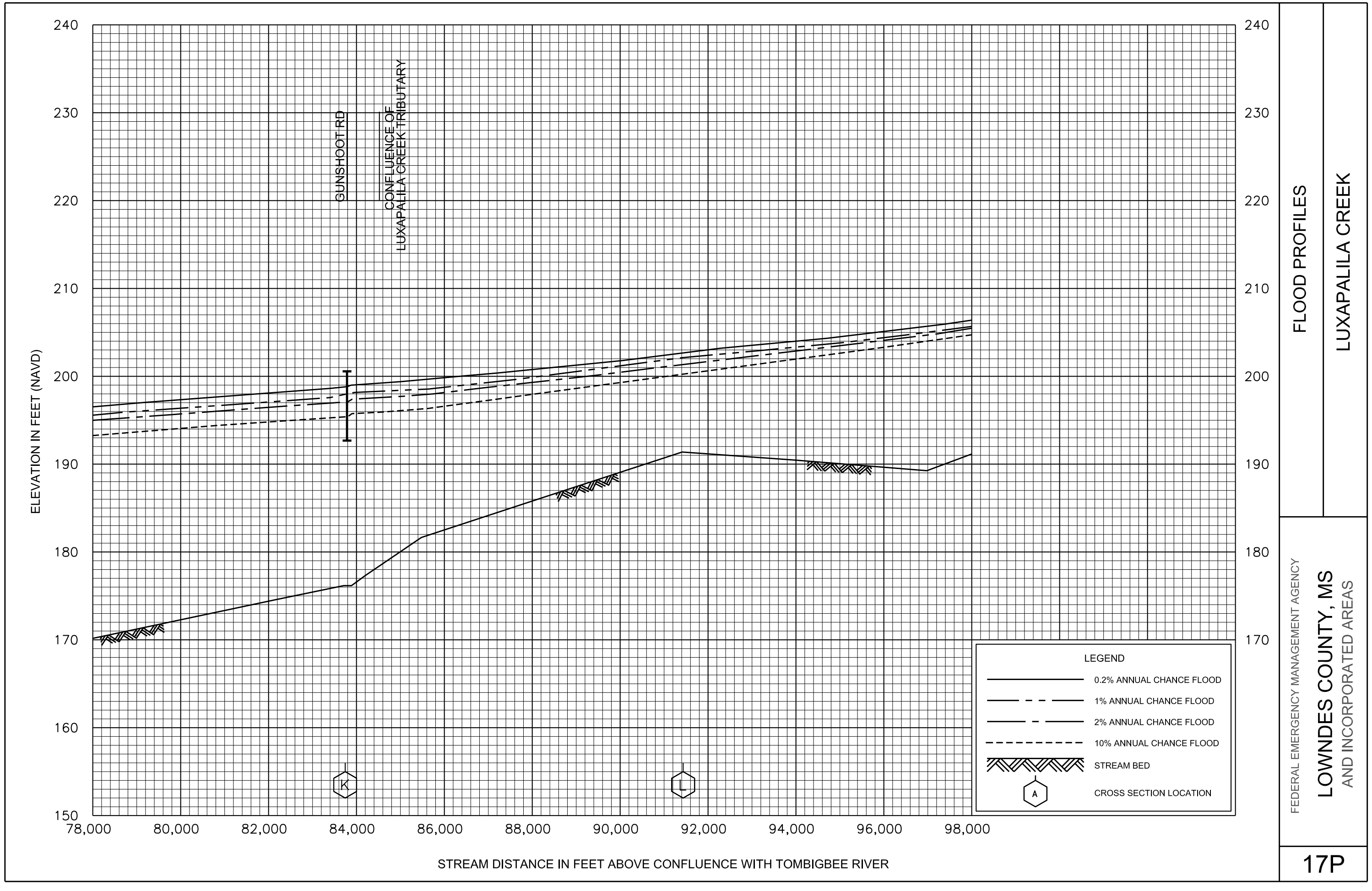
FLOOD PROFILES

LUXAPALILA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

16P



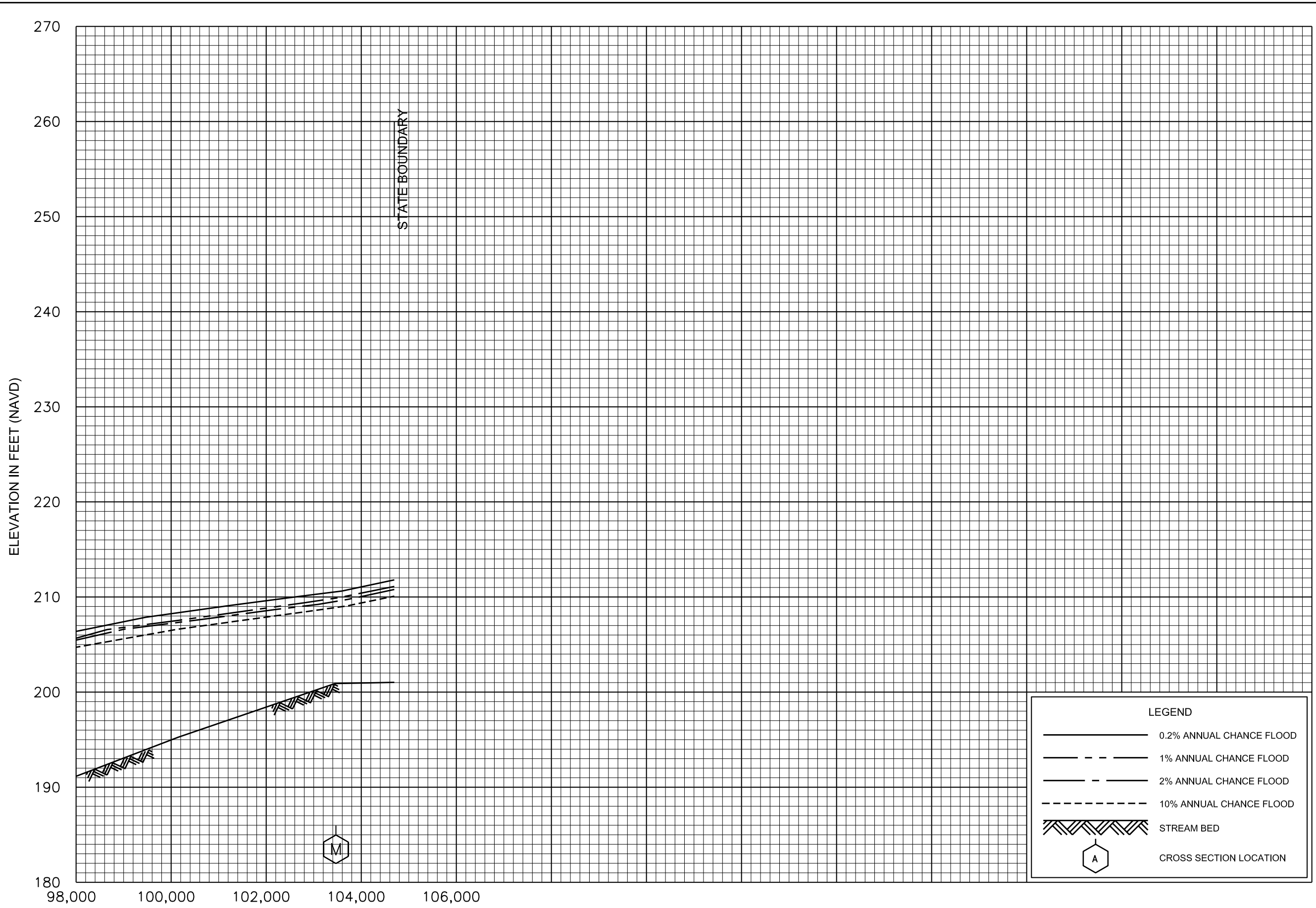
FLOOD PROFILES

LUXAPALILA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

17P



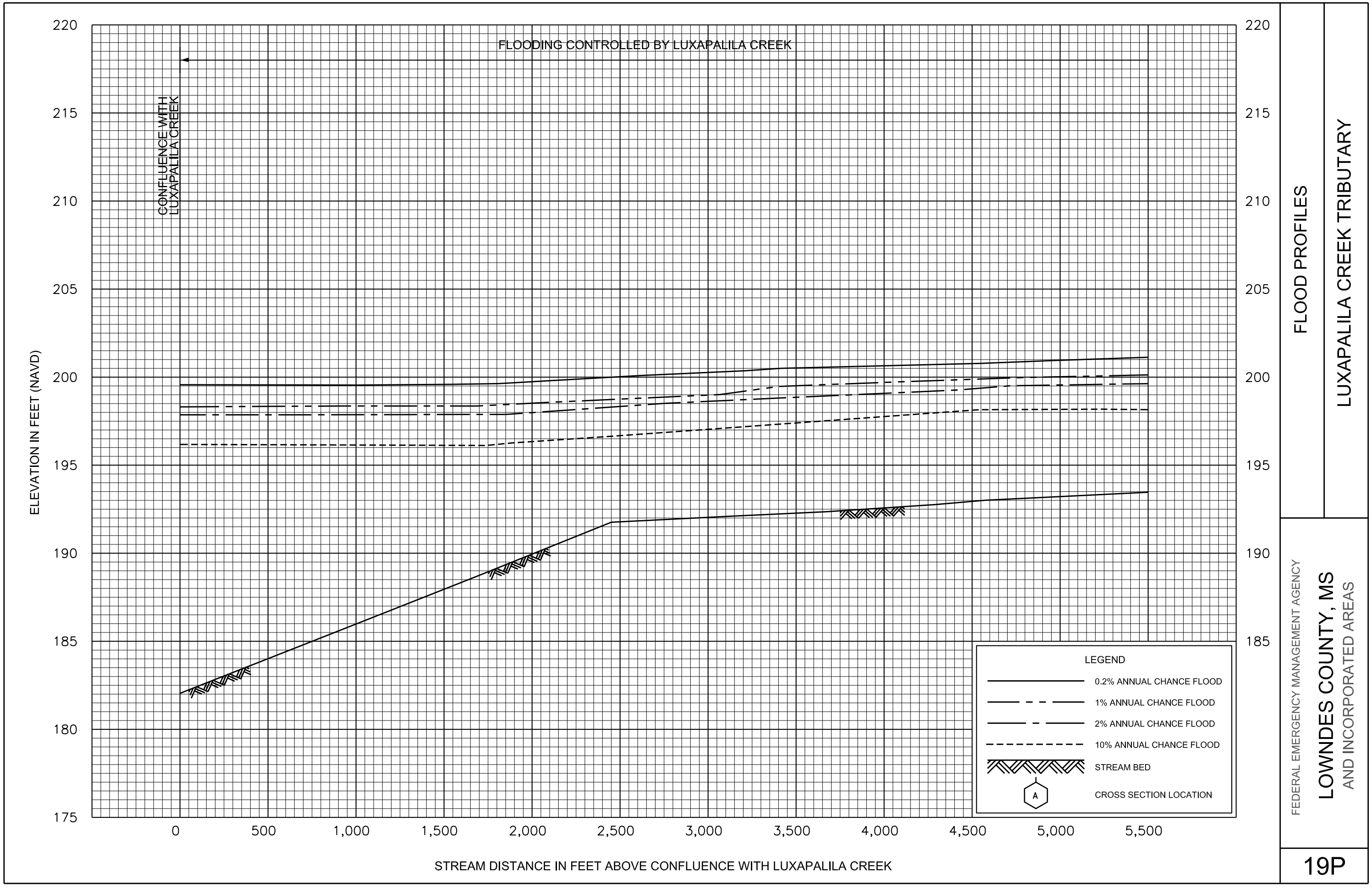
FLOOD PROFILES

LUXAPALILA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

18P



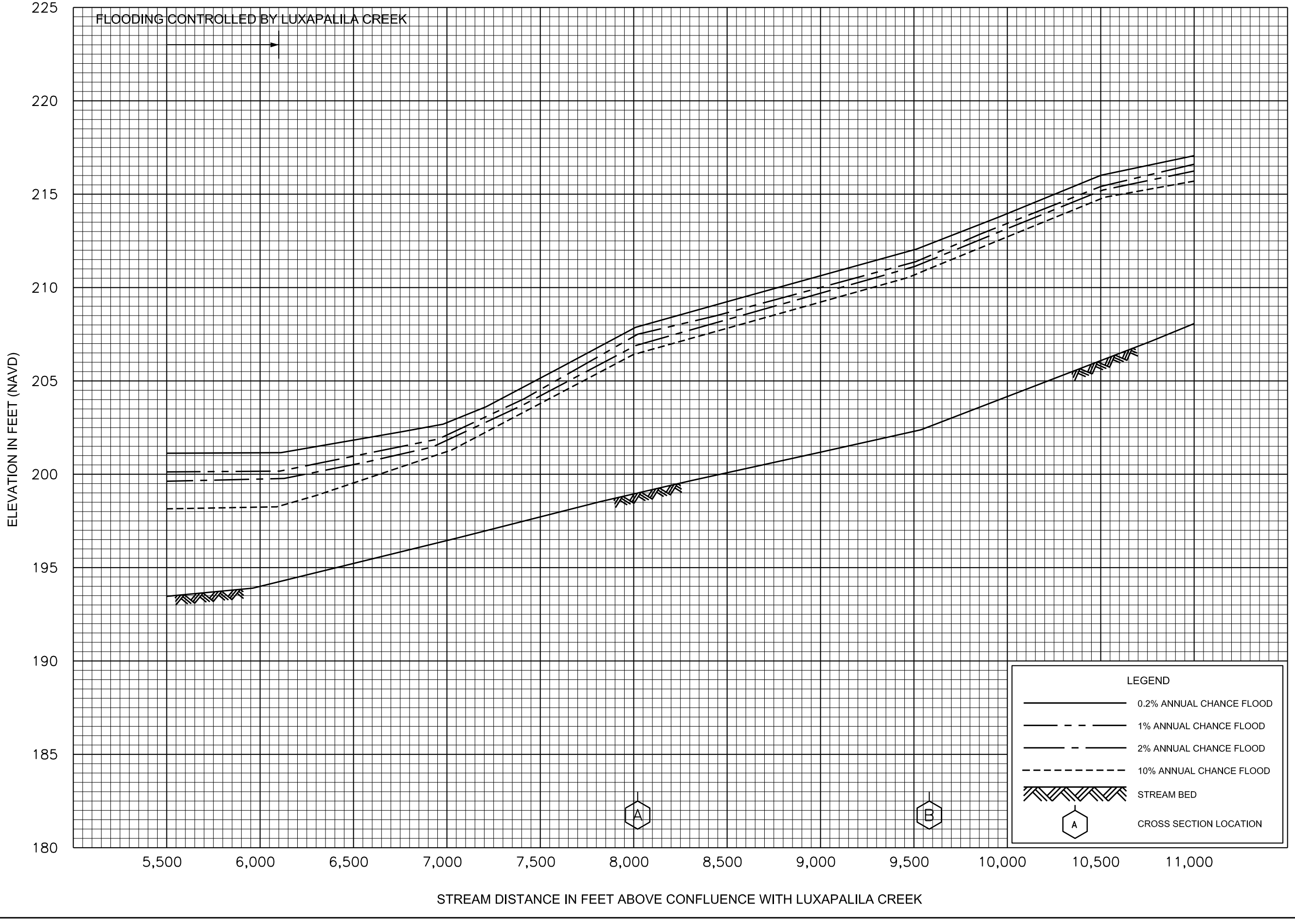
FLOOD PROFILES

LUXAPALILA CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

19P

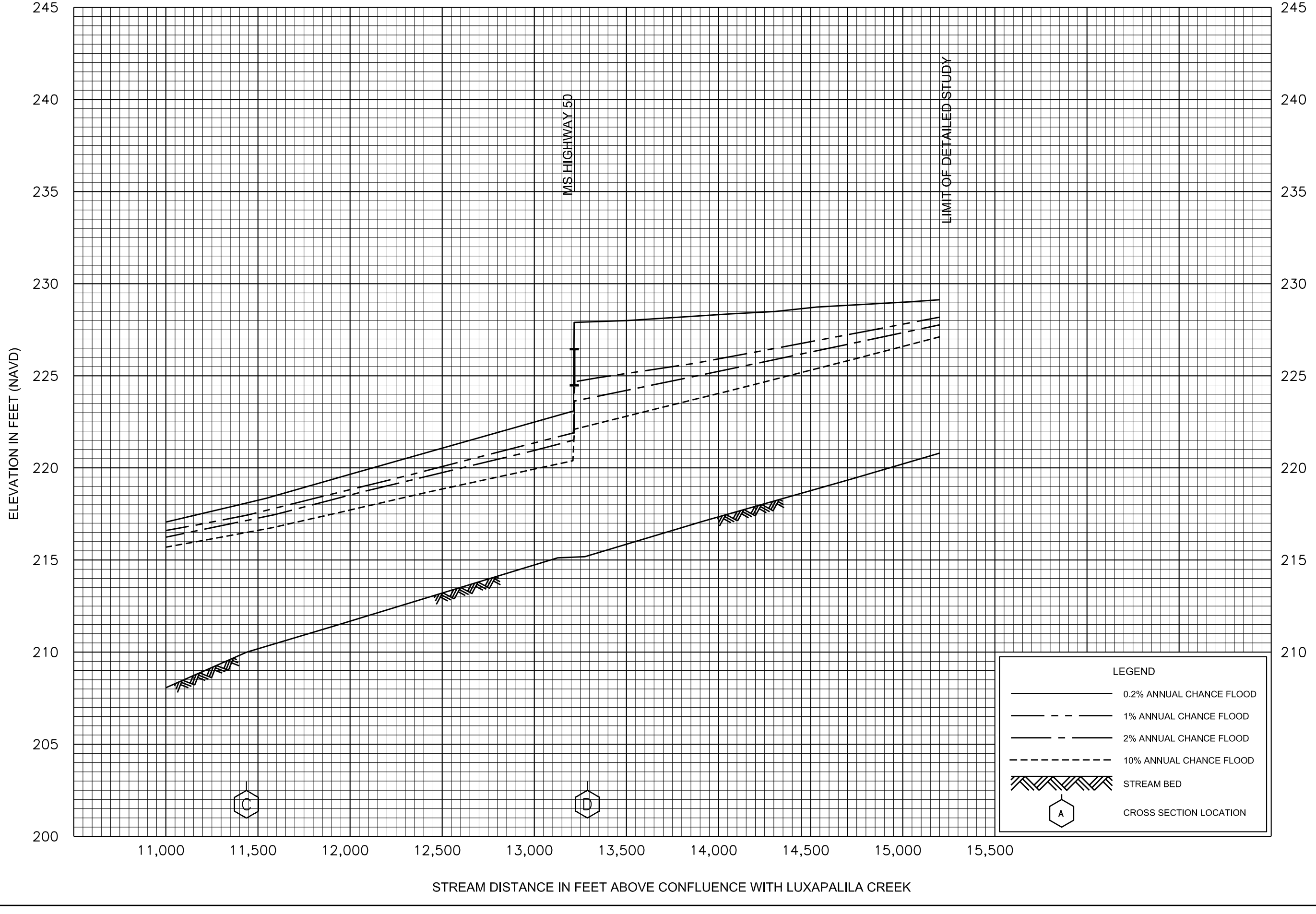


FLOOD PROFILES

LUXAPALILA CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

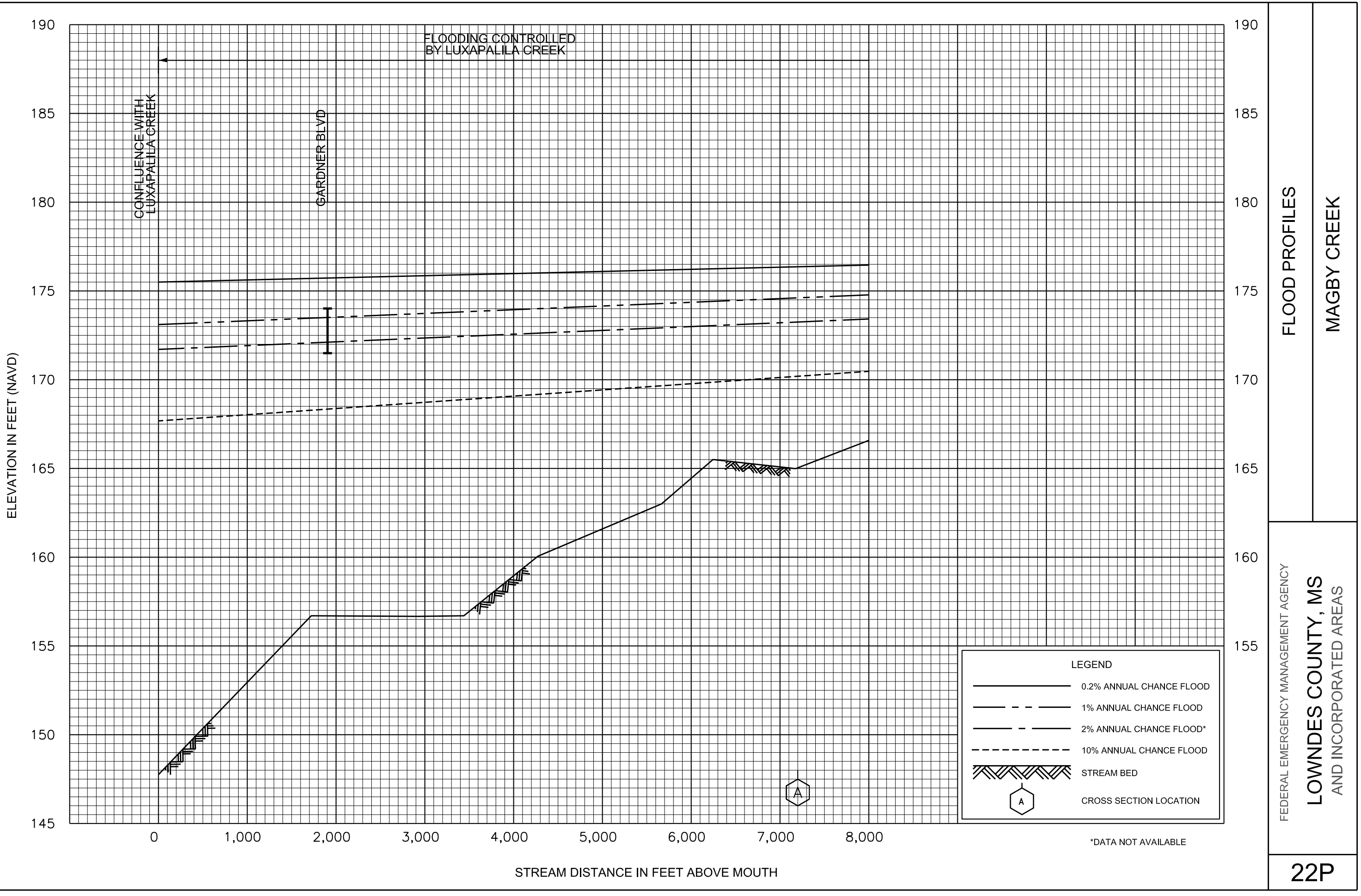


FLOOD PROFILES

LUXAPALILA CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS



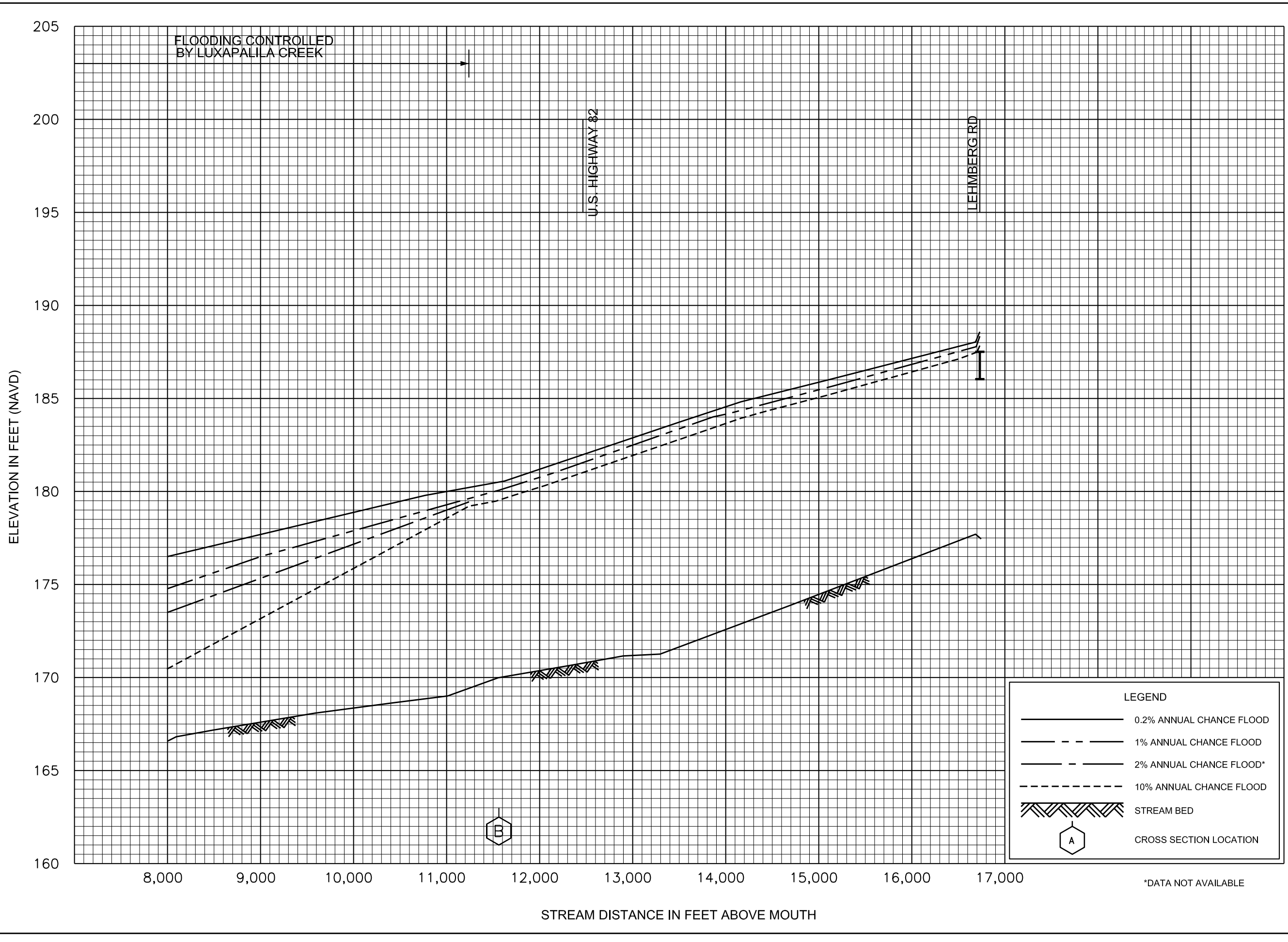
FLOOD PROFILES

MAGBY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

22P



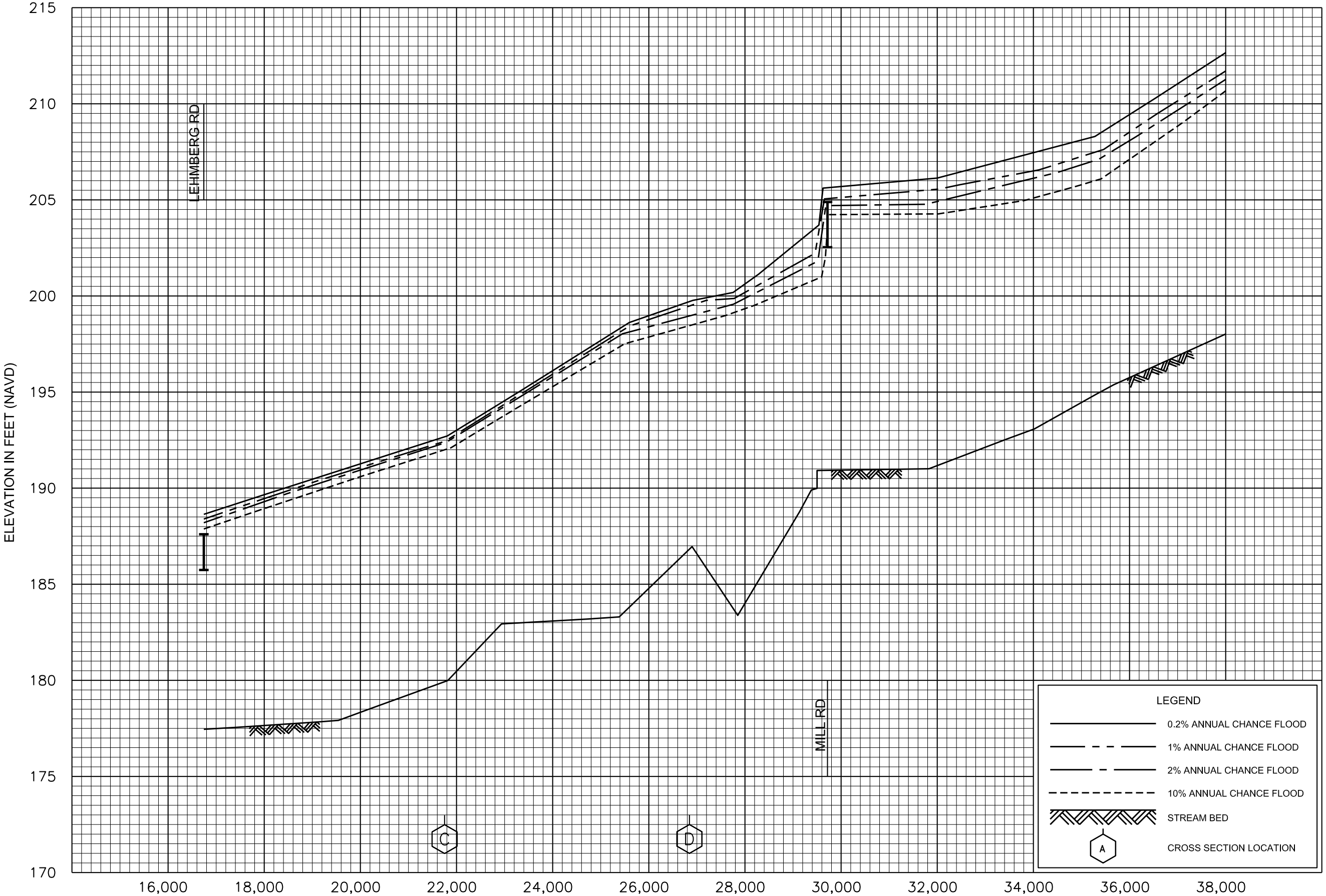
FLOOD PROFILES

MAGBY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

23P

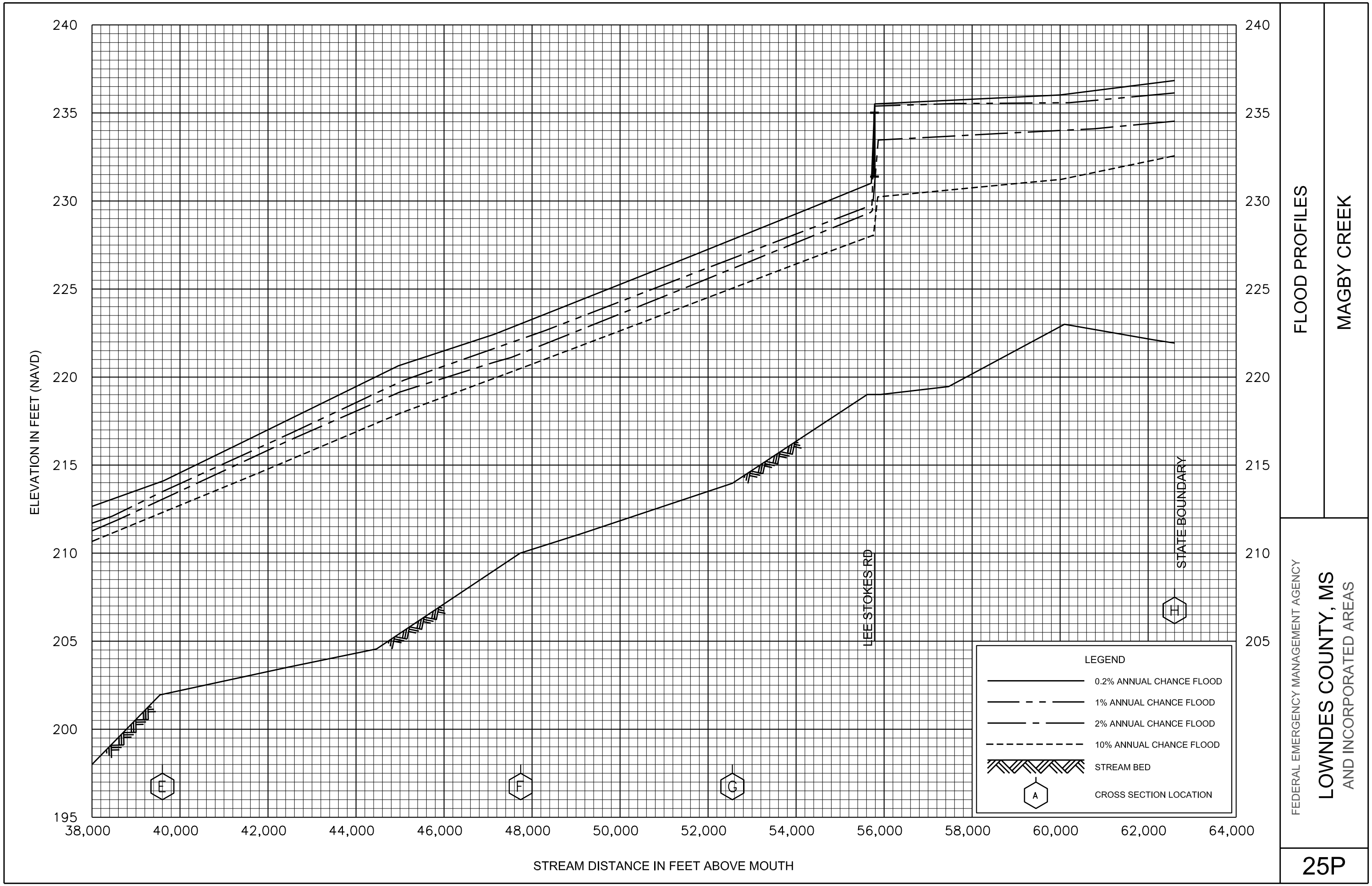


FLOOD PROFILES

MAGBY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

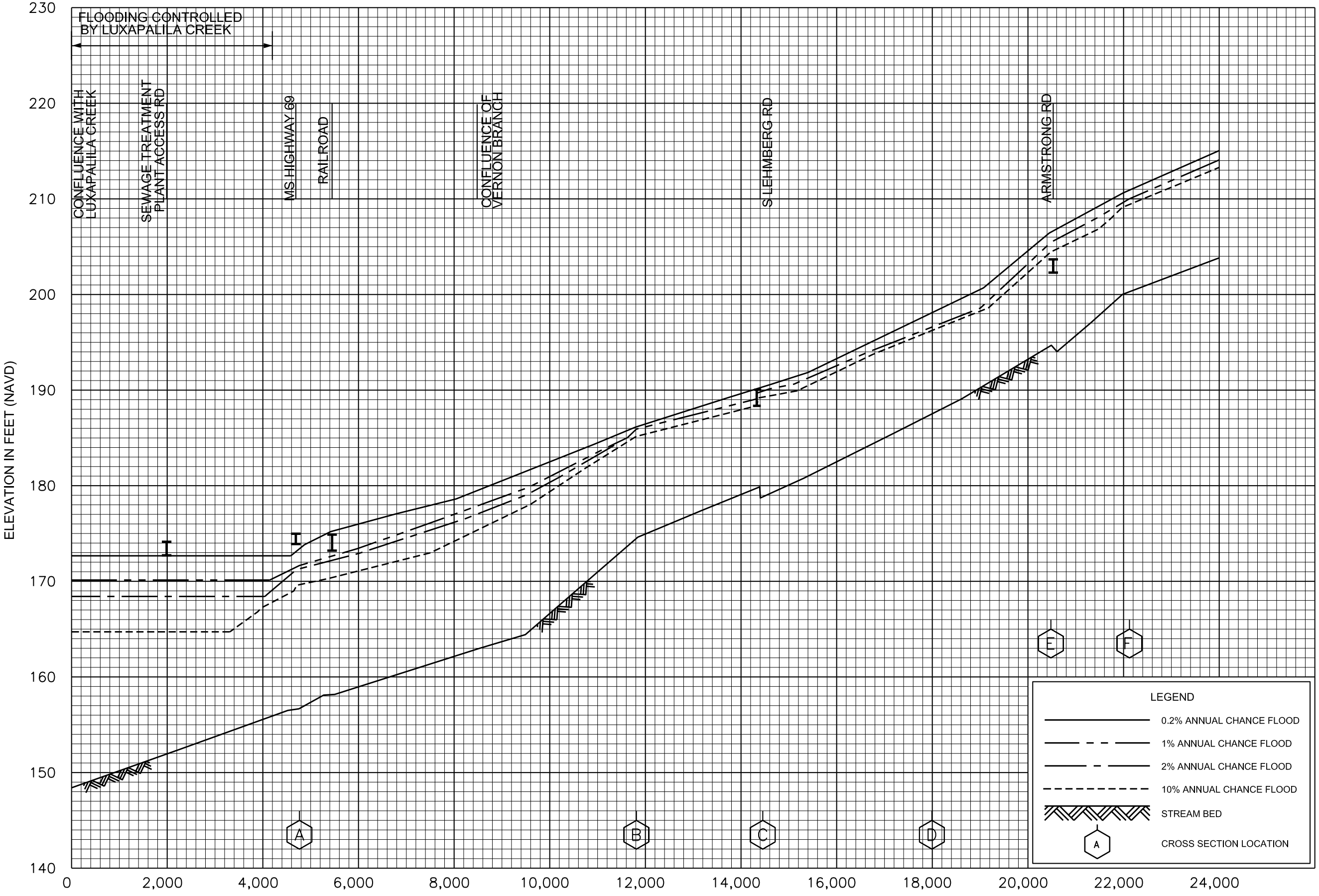


FLOOD PROFILES

MAGBY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS



FLOOD PROFILES

McCRARY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

26P

ELEVATION IN FEET (NAVD)

200 210 220 230 240 250 260 270 280 290

24,000 26,000 28,000 30,000 32,000 34,000 36,000 38,000 40,000 42,000 44,000

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH LUXAPALILA CREEK

RAILROAD

NEW HOPE RD

RAILROAD

BEERSHEBA RD

STATE BOUNDARY

G H I J K

LEGEND

0.2% ANNUAL CHANCE FLOOD

1% ANNUAL CHANCE FLOOD

2% ANNUAL CHANCE FLOOD

10% ANNUAL CHANCE FLOOD

STREAM BED

A CROSS SECTION LOCATION

220 230 240 250 260 270 280 290

27P

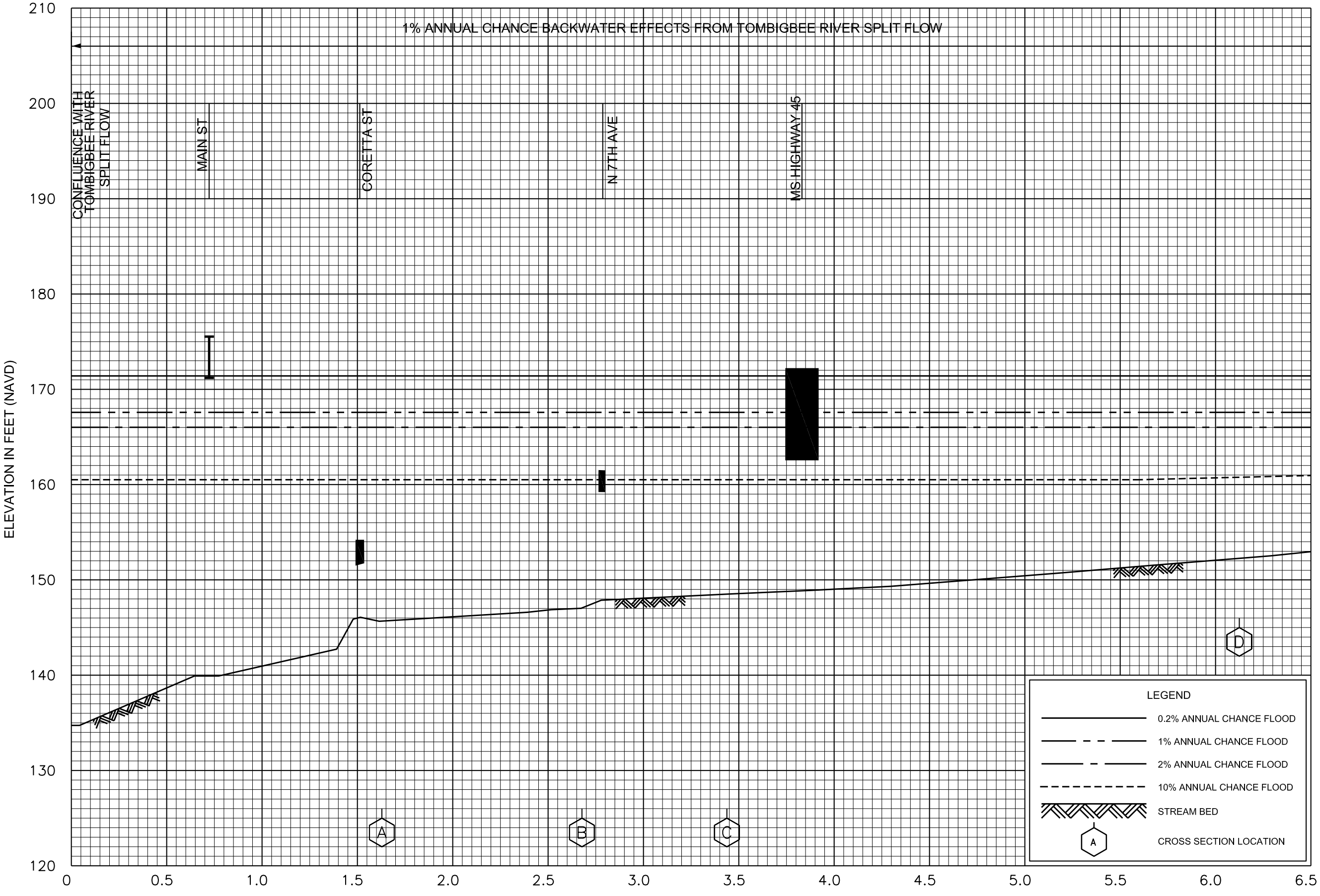
FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS

AND INCORPORATED AREAS

FLOOD PROFILES

McCRARY CREEK



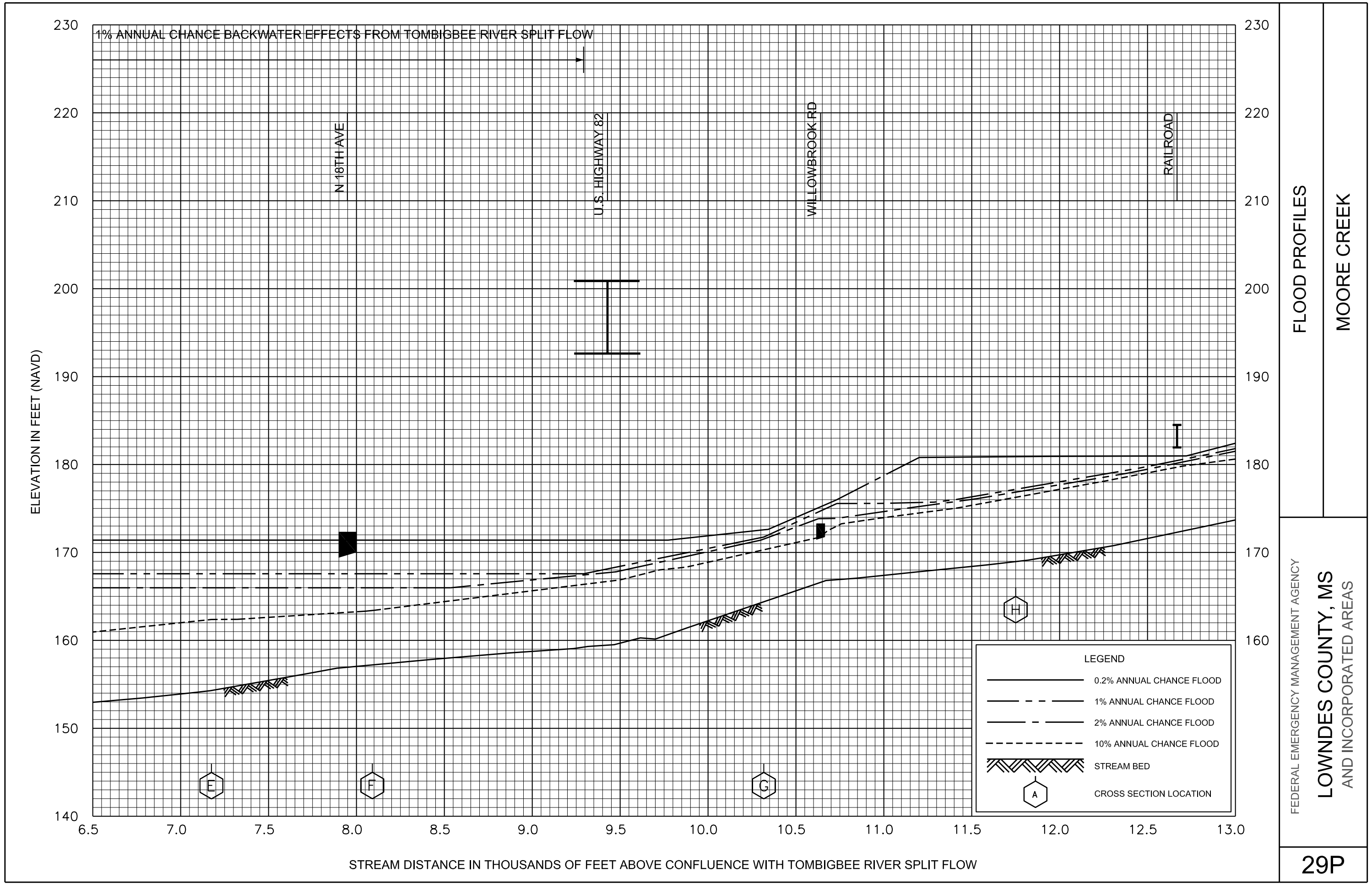
FLOOD PROFILES

MOORE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

28P



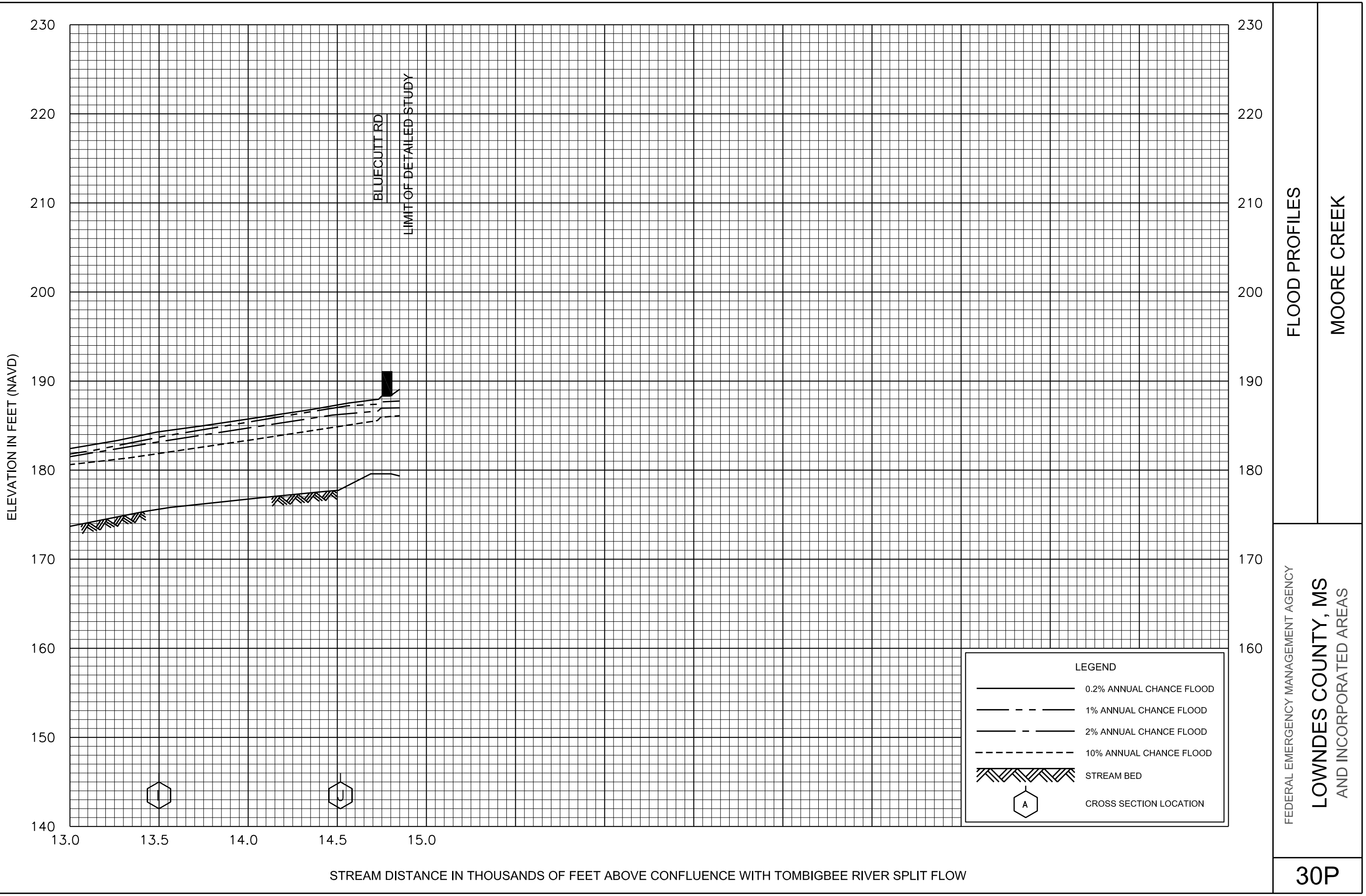
FLOOD PROFILES

MOORE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

29P

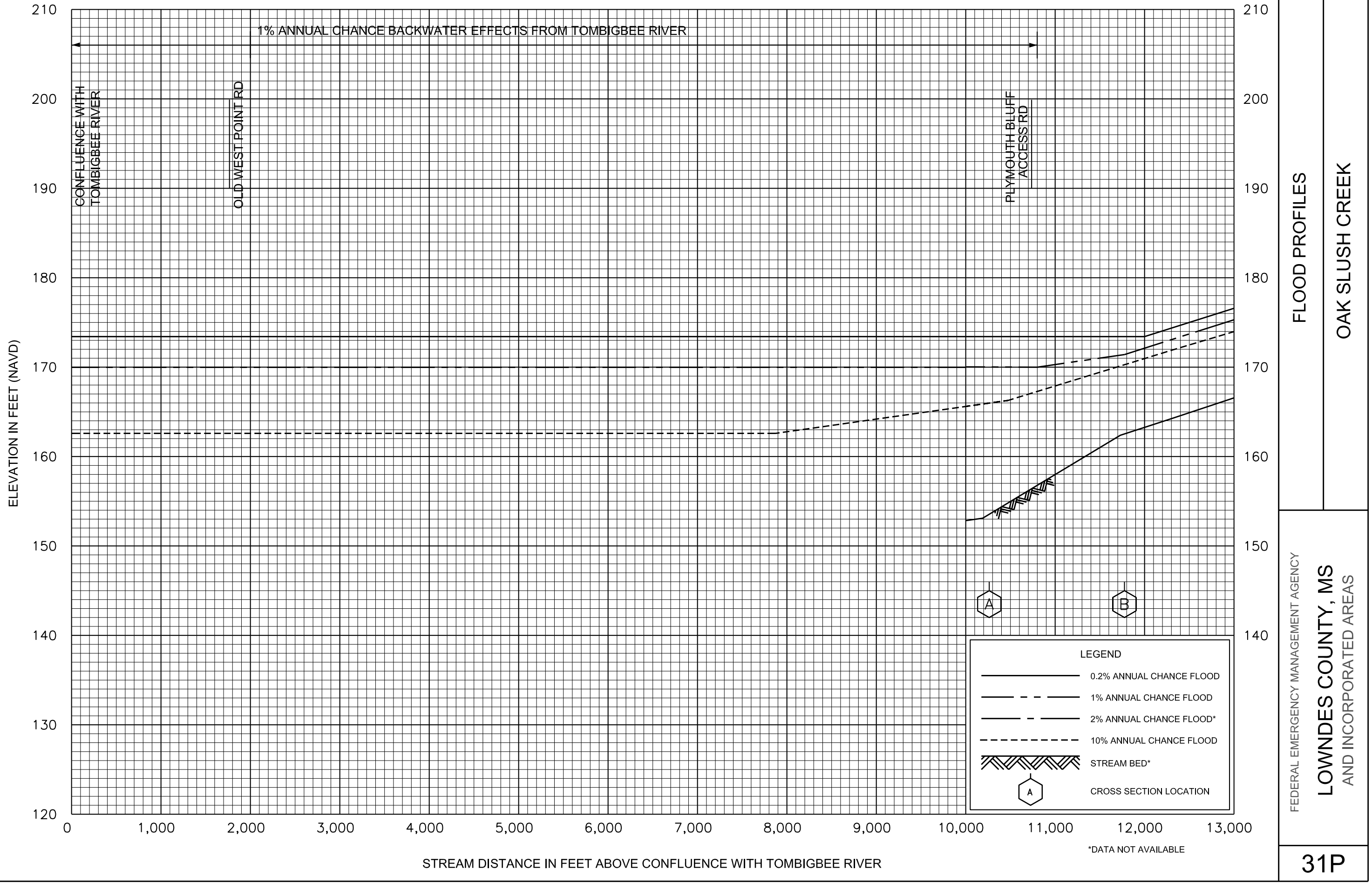


FLOOD PROFILES

MOORE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS



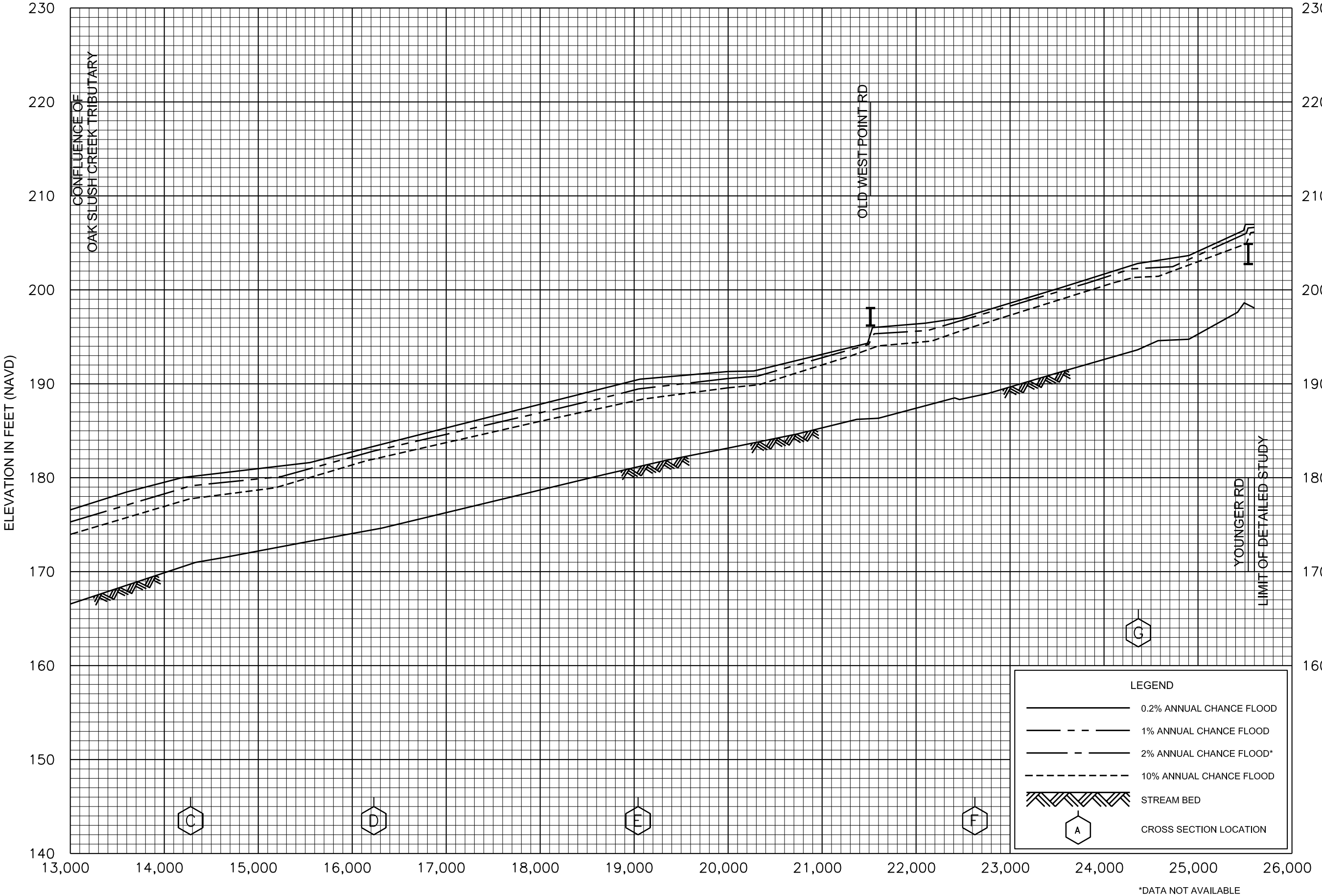
FLOOD PROFILES

OAK SLUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

31P

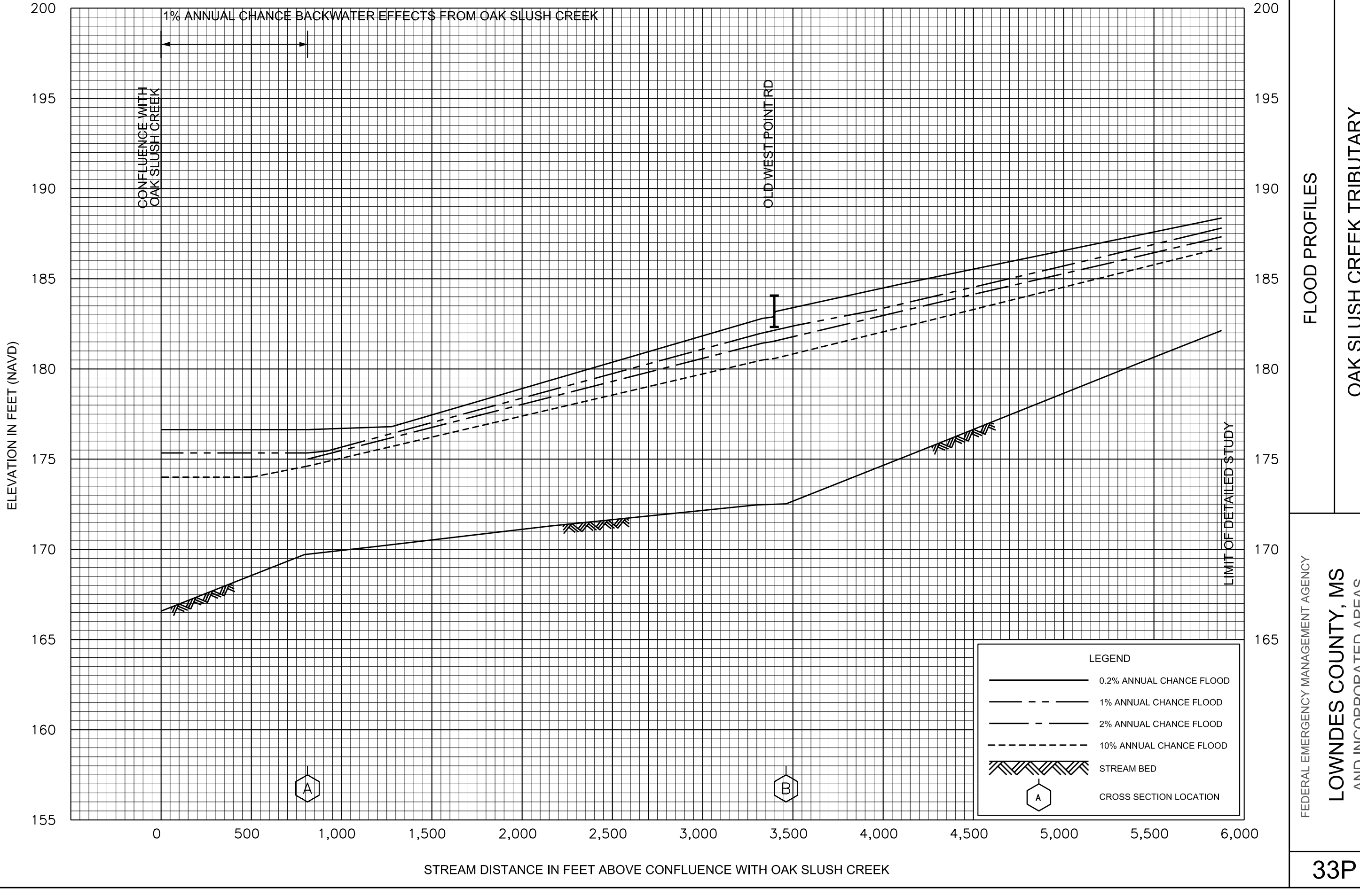


FLOOD PROFILES

OAK SLUSH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS



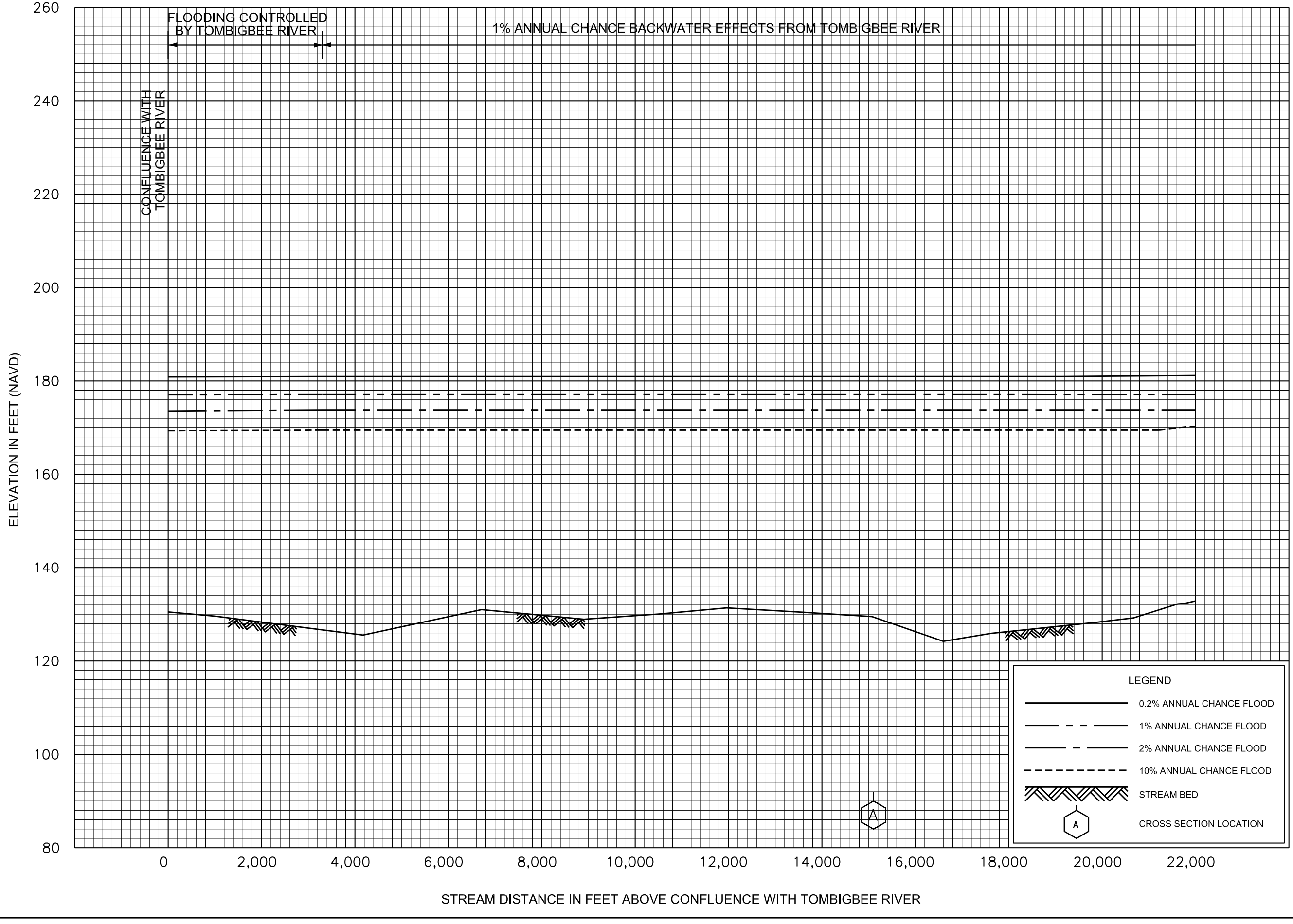
FLOOD PROFILES

OAK SLUSH CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

33P

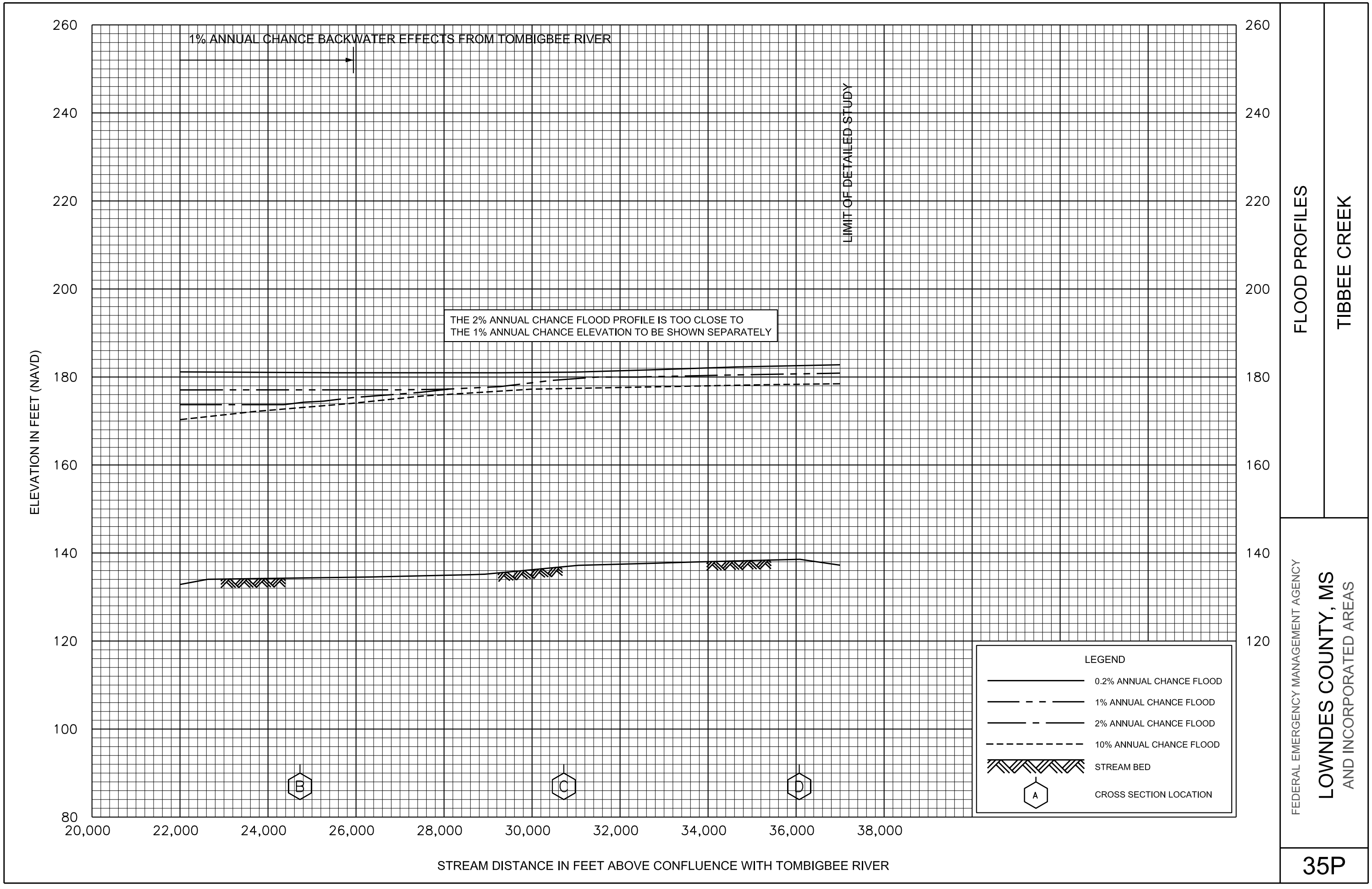


FLOOD PROFILES

TIBBEE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS



FLOOD PROFILES

TIBBEE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

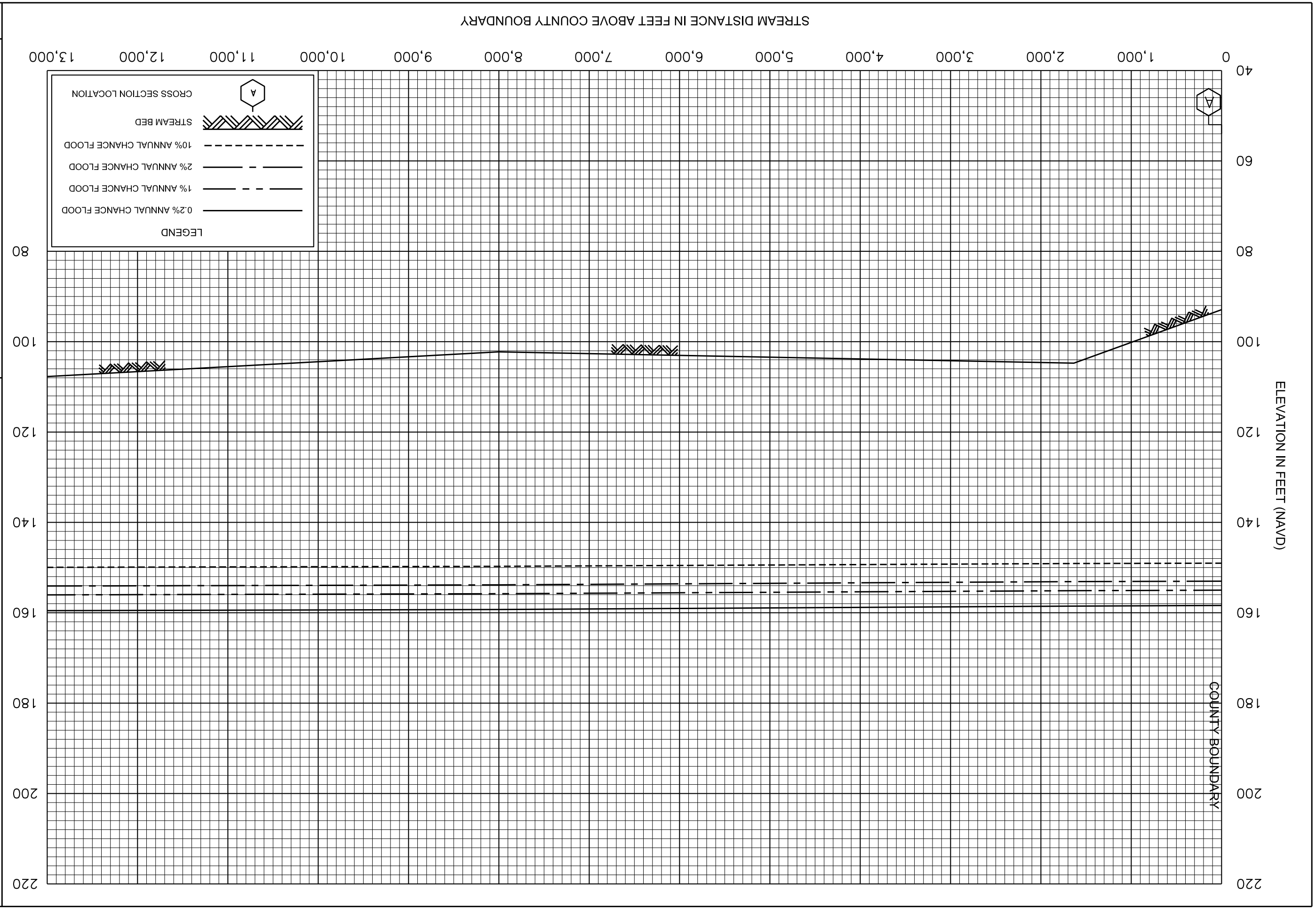
35P

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER



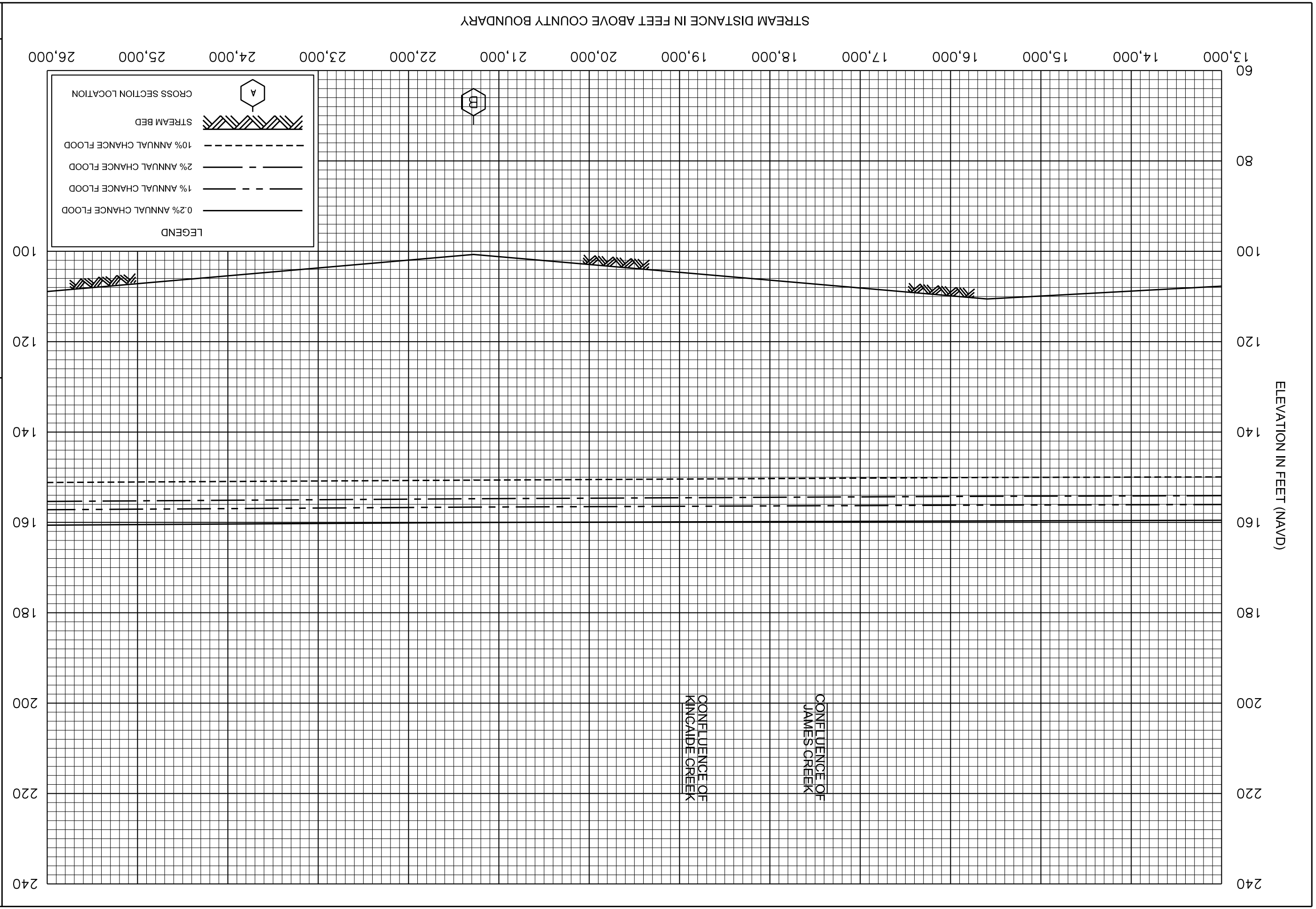
FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER

37P



38P

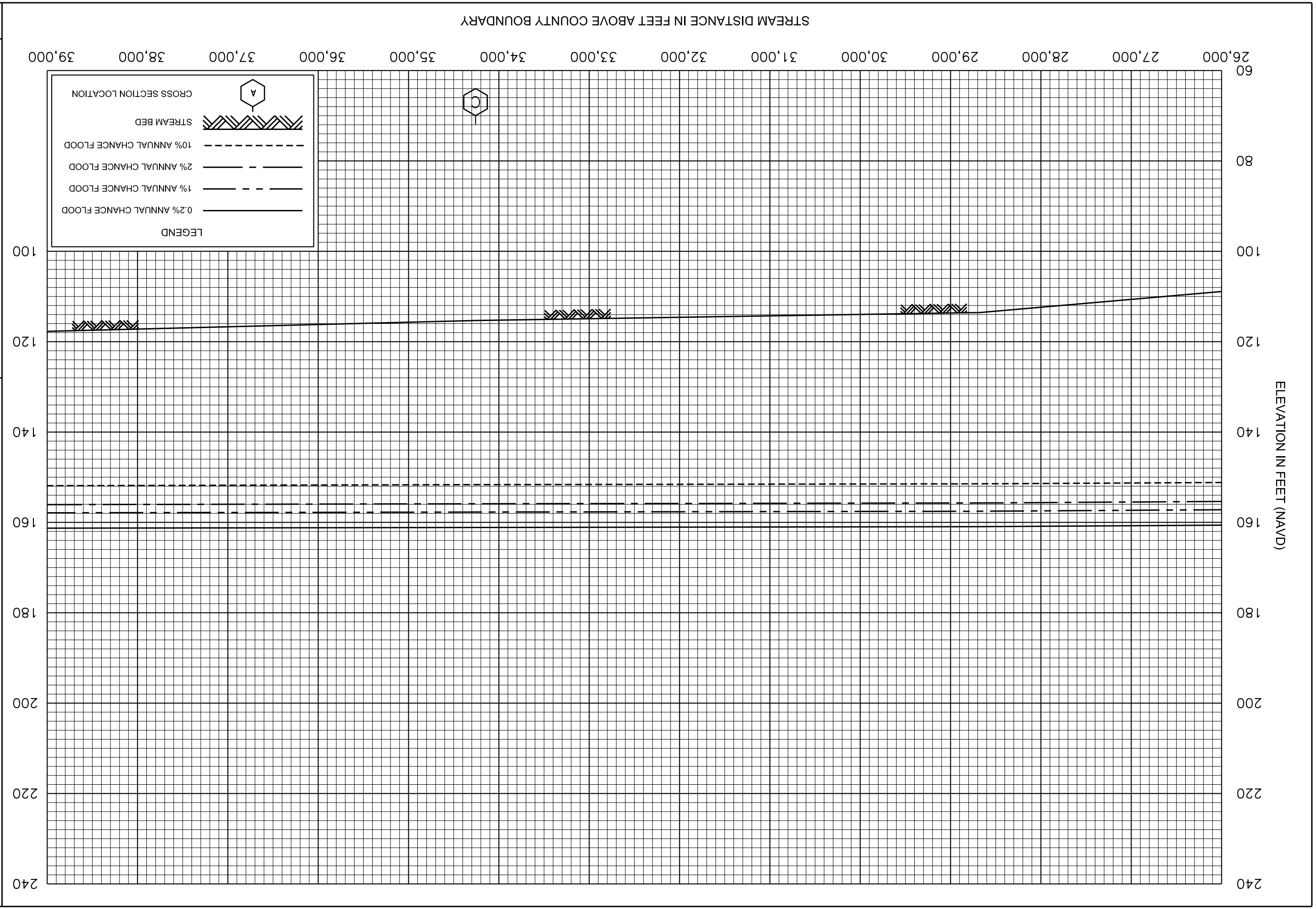
FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS

AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER



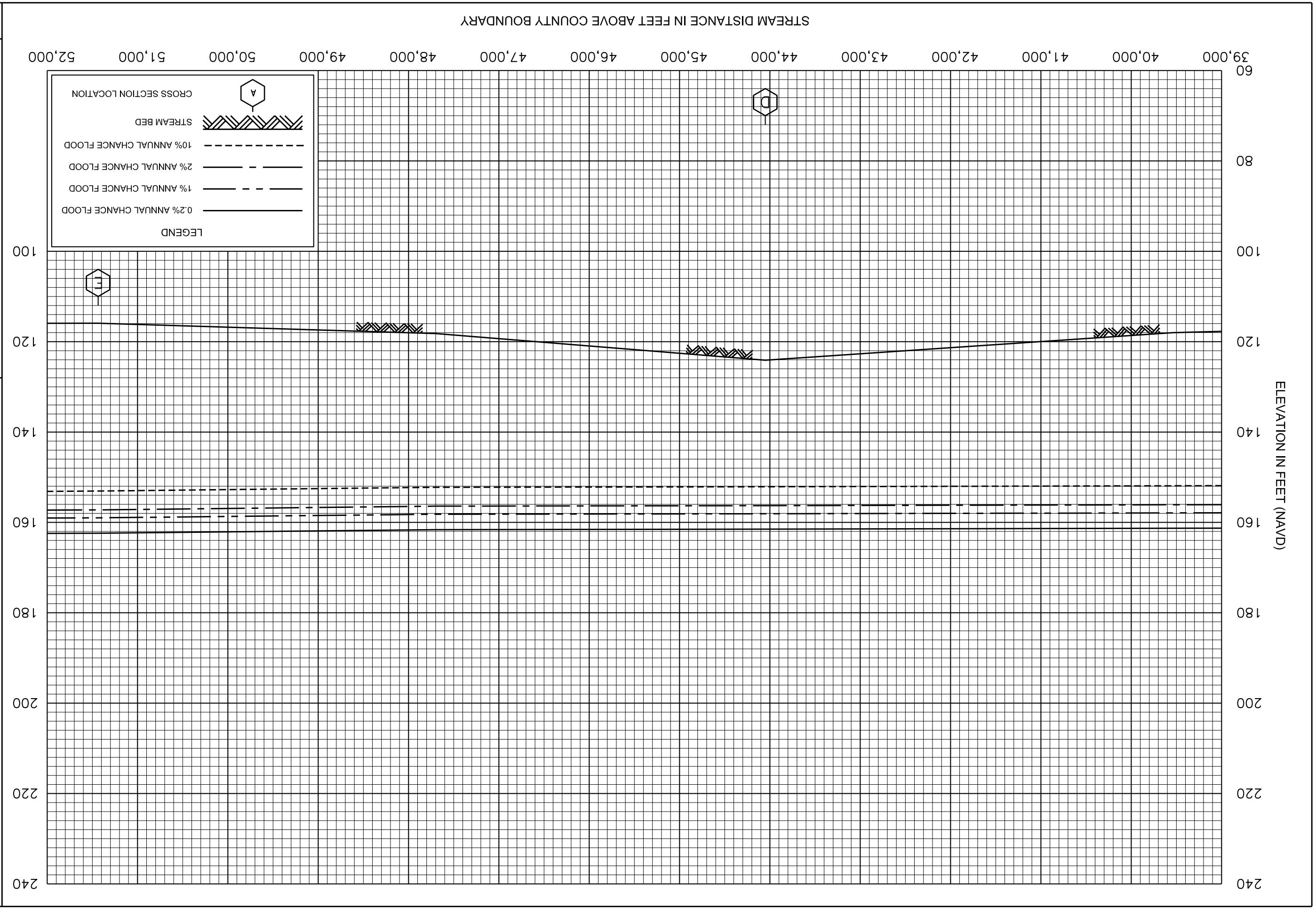
FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS

AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER

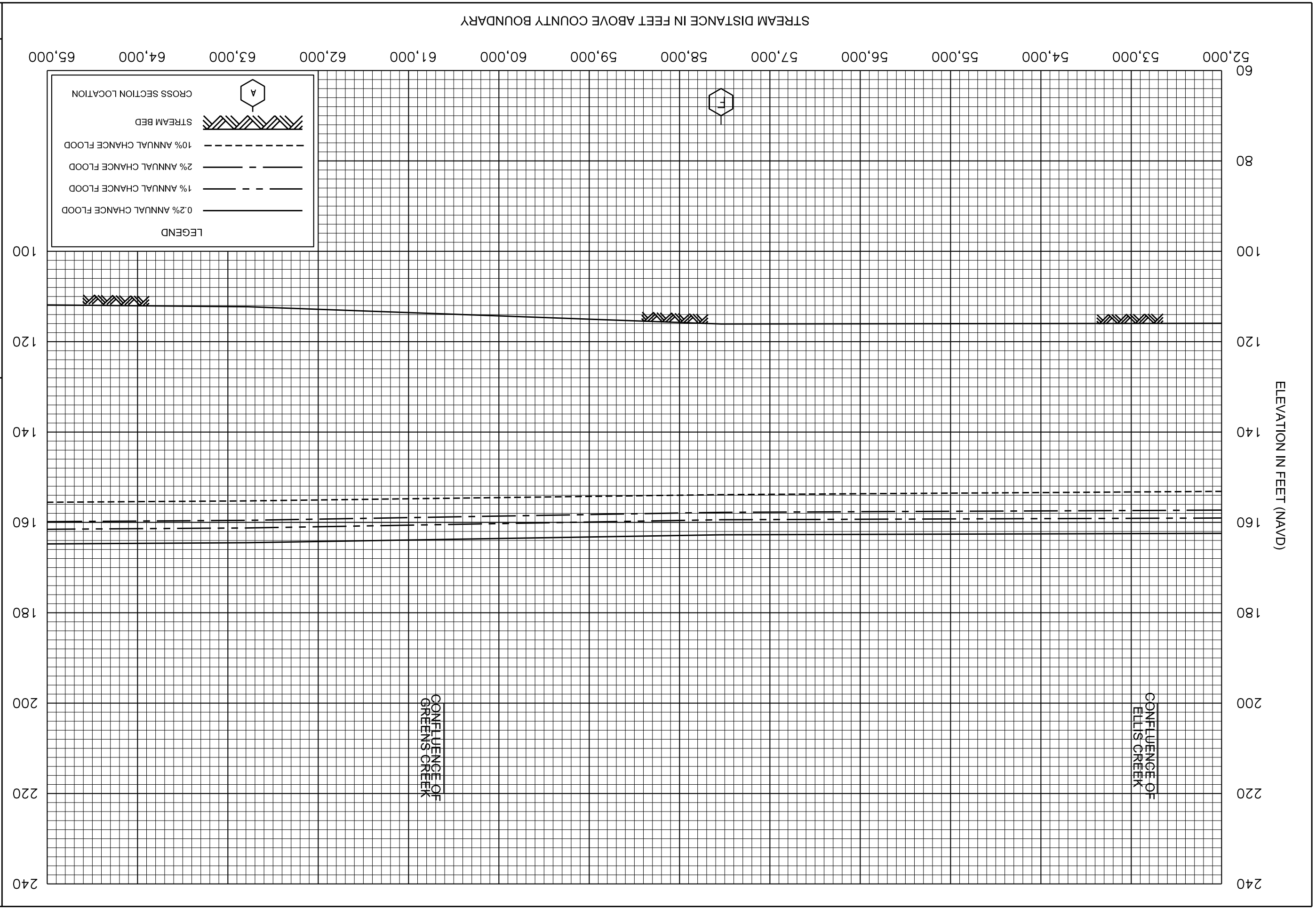


FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER

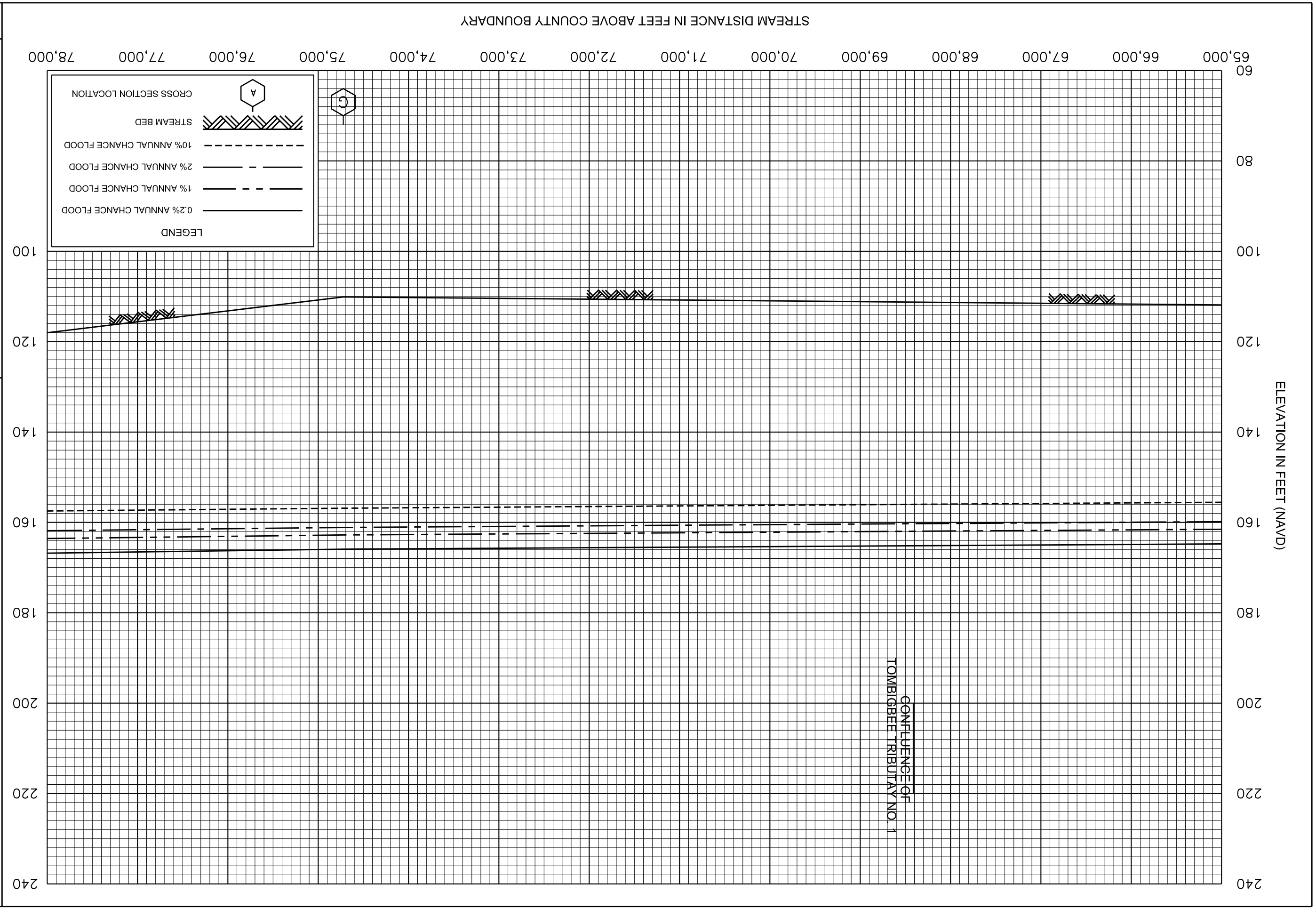


FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER

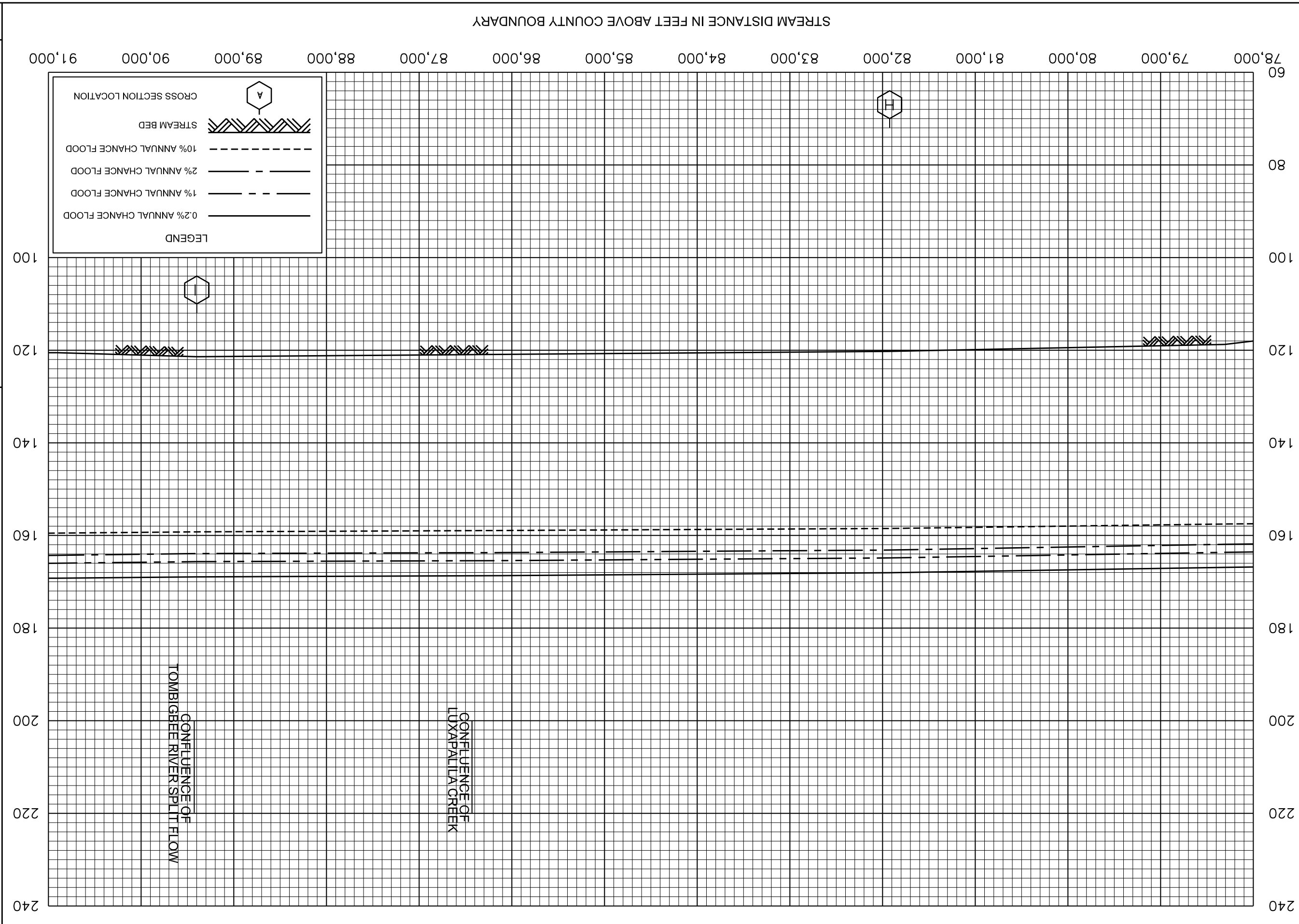


FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER

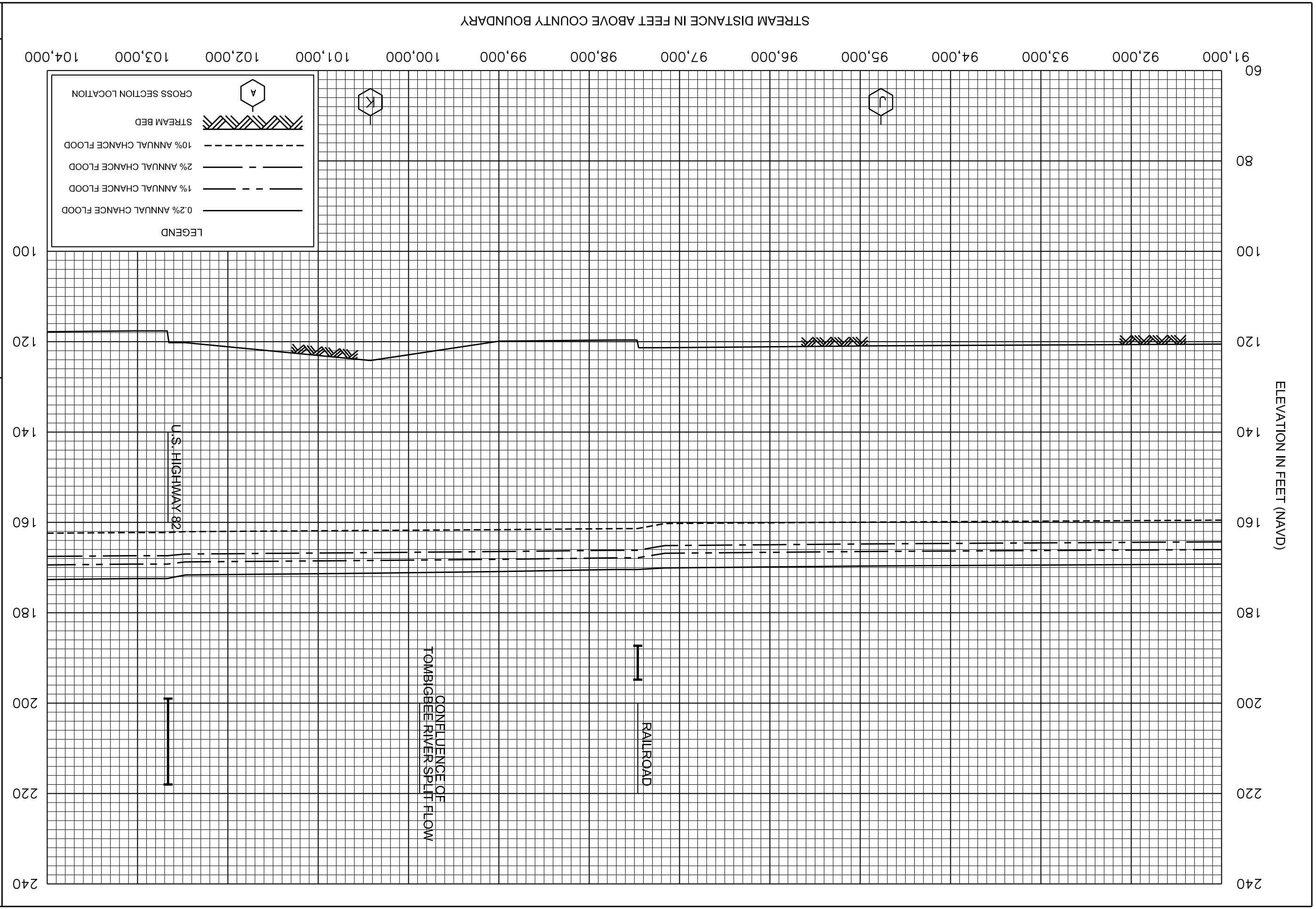


FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER

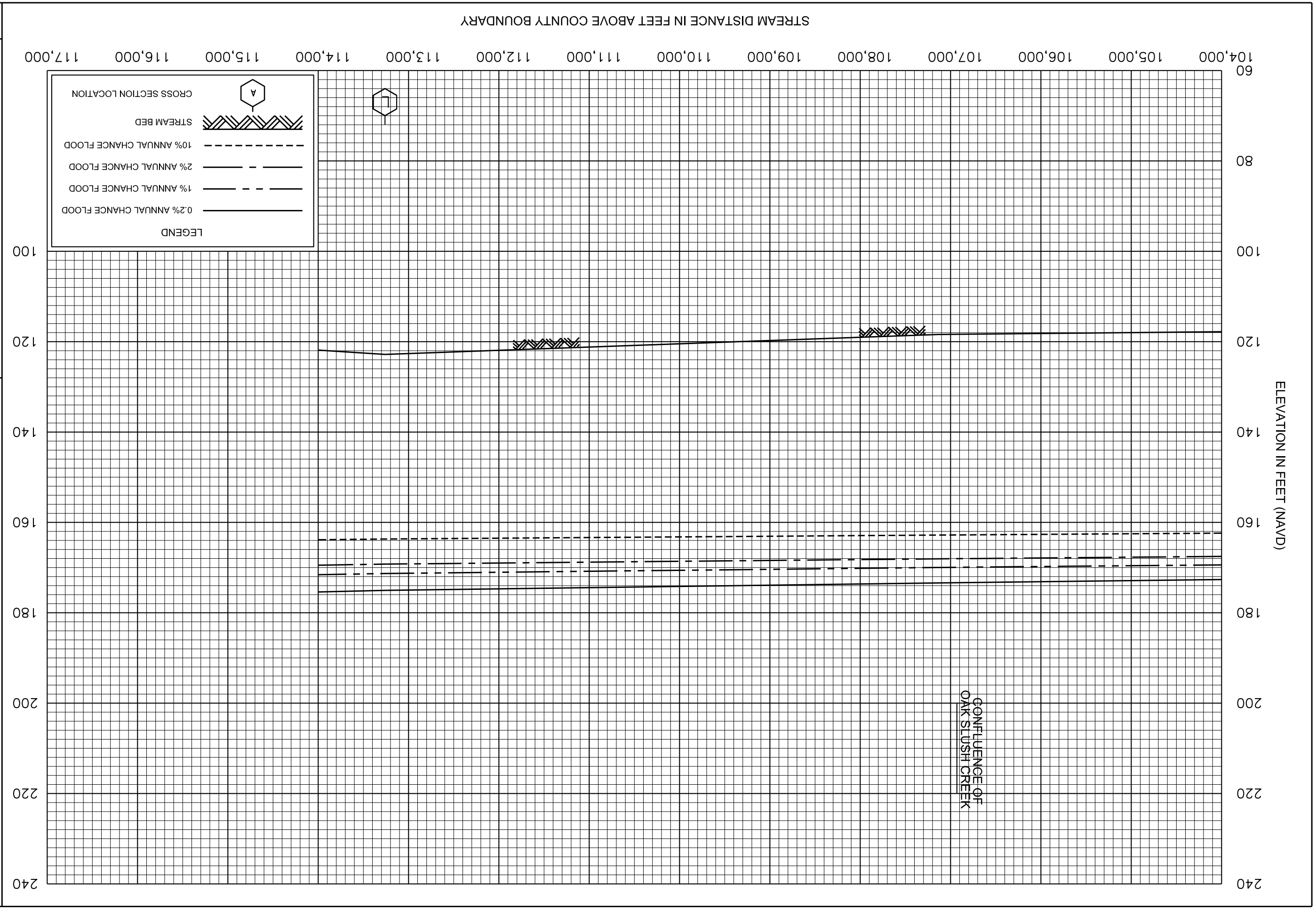


FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER

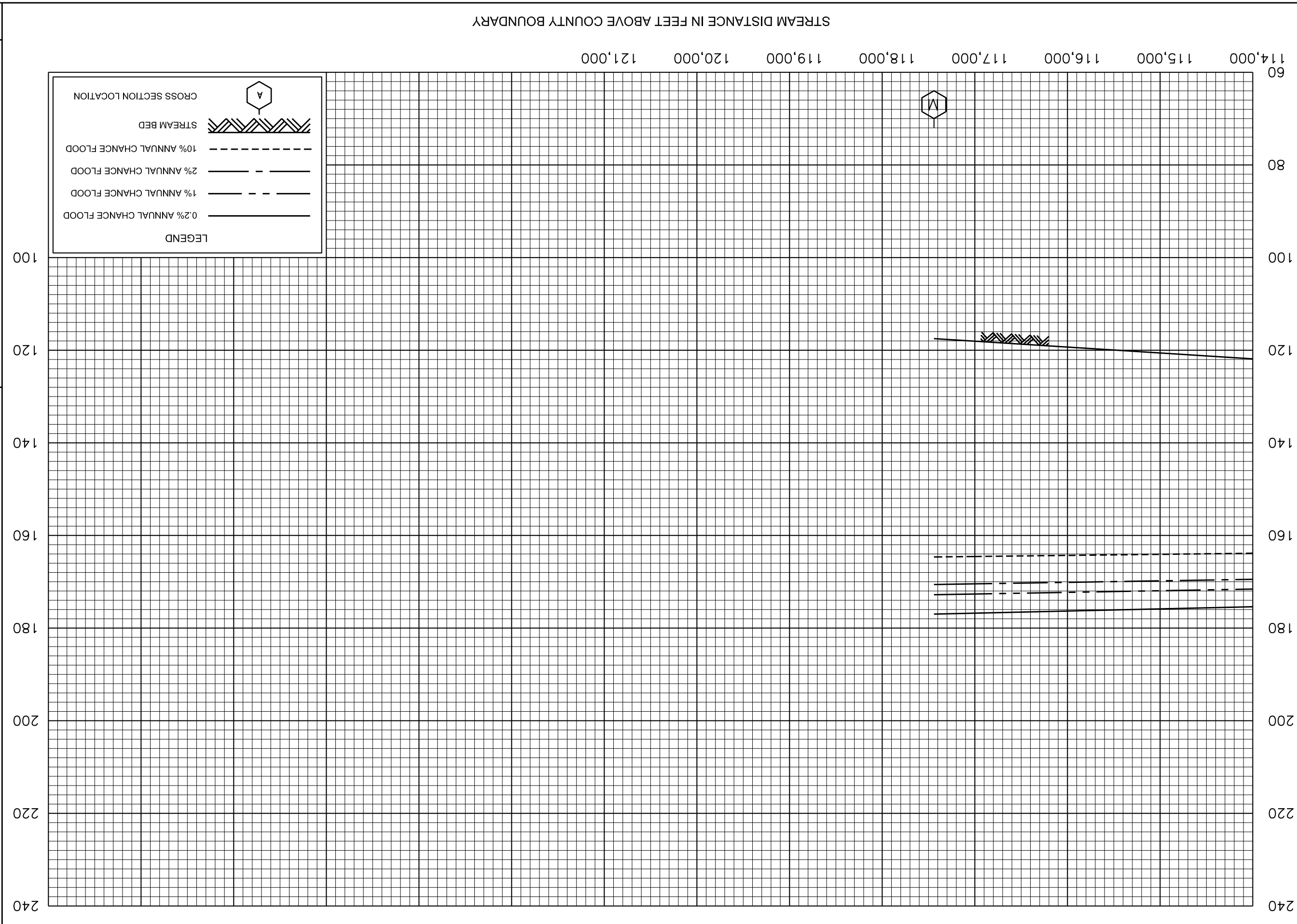


FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER



ELEVATION IN FEET (NAVD)

240
220
200
180
160
140
120
100
80
60

COLUMBUS LOCK AND DAM
CONFLUENCE OF TOMBIGBEE RIVER TRIBUTARY 2
CONFLUENCE OF TIBBEE CREEK
RAILROAD
MS HIGHWAY 50
UNNAMED RD
MONROE/ LOWNDES COUNTY BOUNDARY

DOWNSTREAM FLOOD HAZARD INFORMATION IS STUDIED BY NEW DETAILED METHODS. THESE METHODS REFLECT MORE DETAILED AND UP-TO-DATE STREAM CHANNEL CONFIGURATIONS. AS A RESULT, THE STREAM CHANNEL DISTANCES MAY NOT AGREE WITH THE ADJOINING REDELINEATED PORTION OF THE STREAM.

N O P Q R S T U V

LEGEND

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

22 23 24 25 26 27 28 29 30 31 32 33

STREAM DISTANCE IN MILES ABOVE STATE BOUNDARY

FLOOD PROFILES

TOMBIGBEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

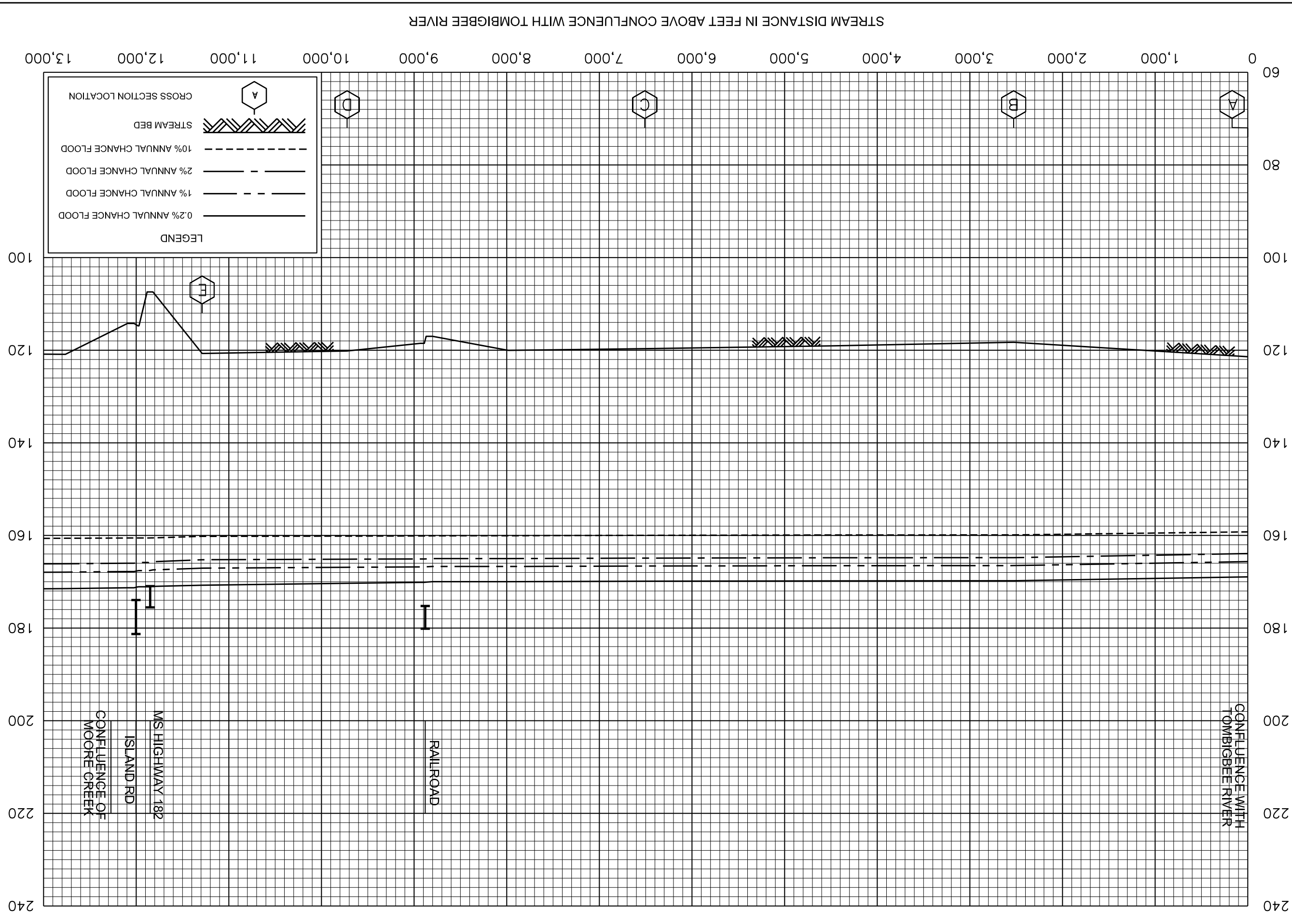
46P

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

TOMBIGBEE RIVER SPLIT FLOW



260
240
220
200
180
160
140
120
100
80

ELEVATION IN FEET (NAVD)

13,000
14,000
15,000
16,000
17,000
18,000
19,000
20,000
21,000

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH TOMBIGBEE RIVER

LEGEND

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

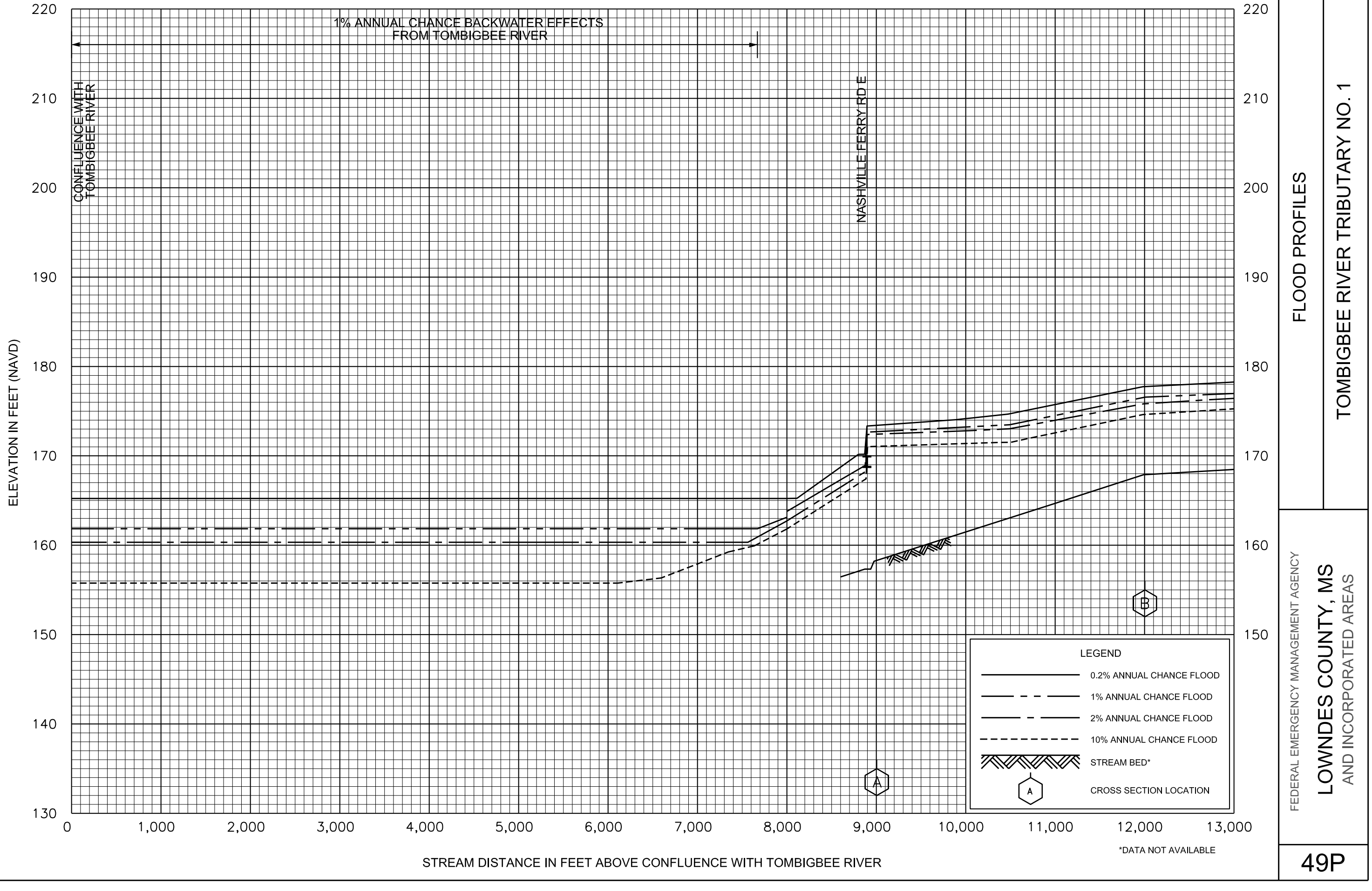
FLOOD PROFILES

TOMBIGBEE RIVER SPLIT FLOW

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

48P



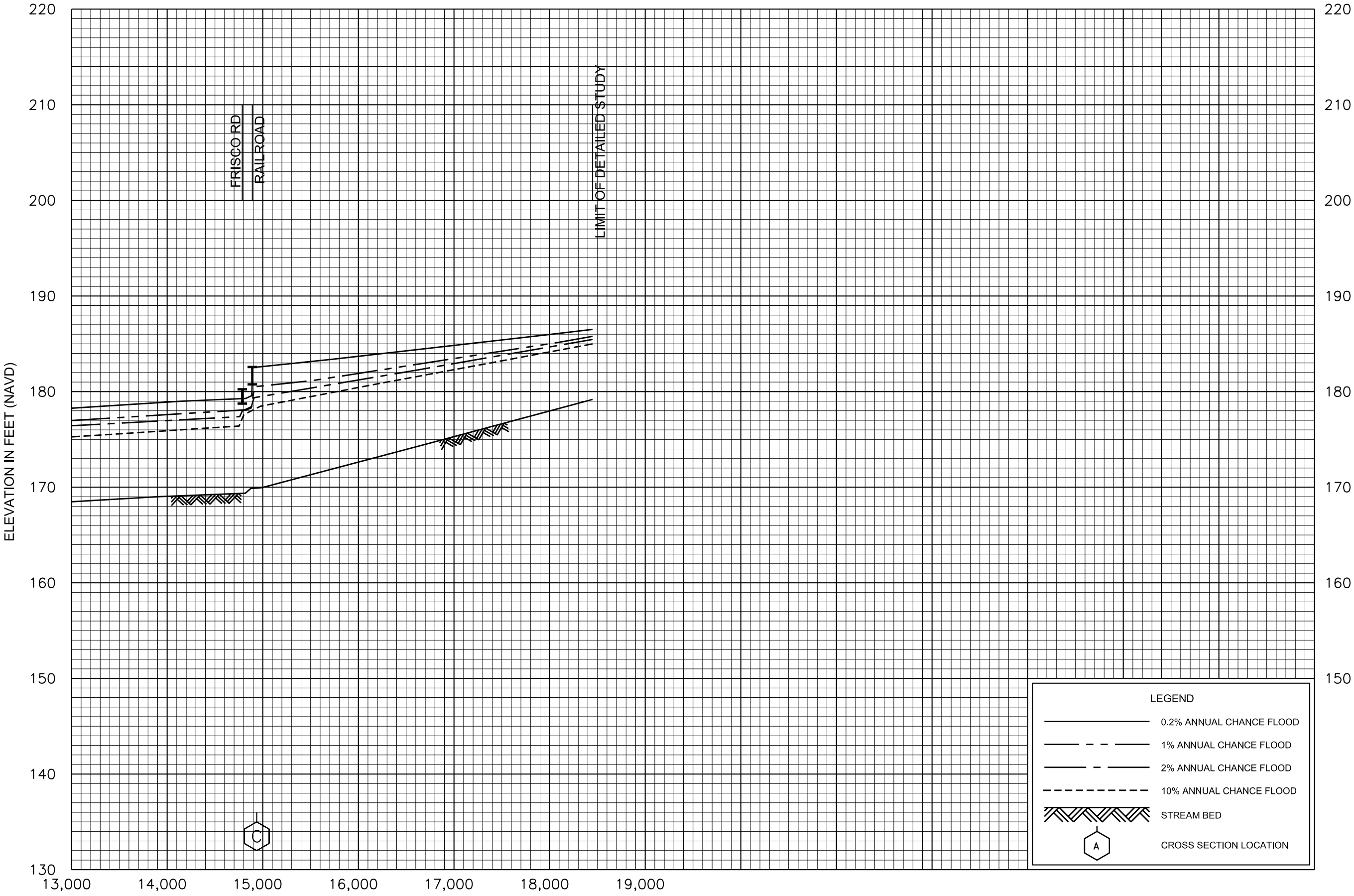
FLOOD PROFILES

TOMBIGBEE RIVER TRIBUTARY NO. 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

49P



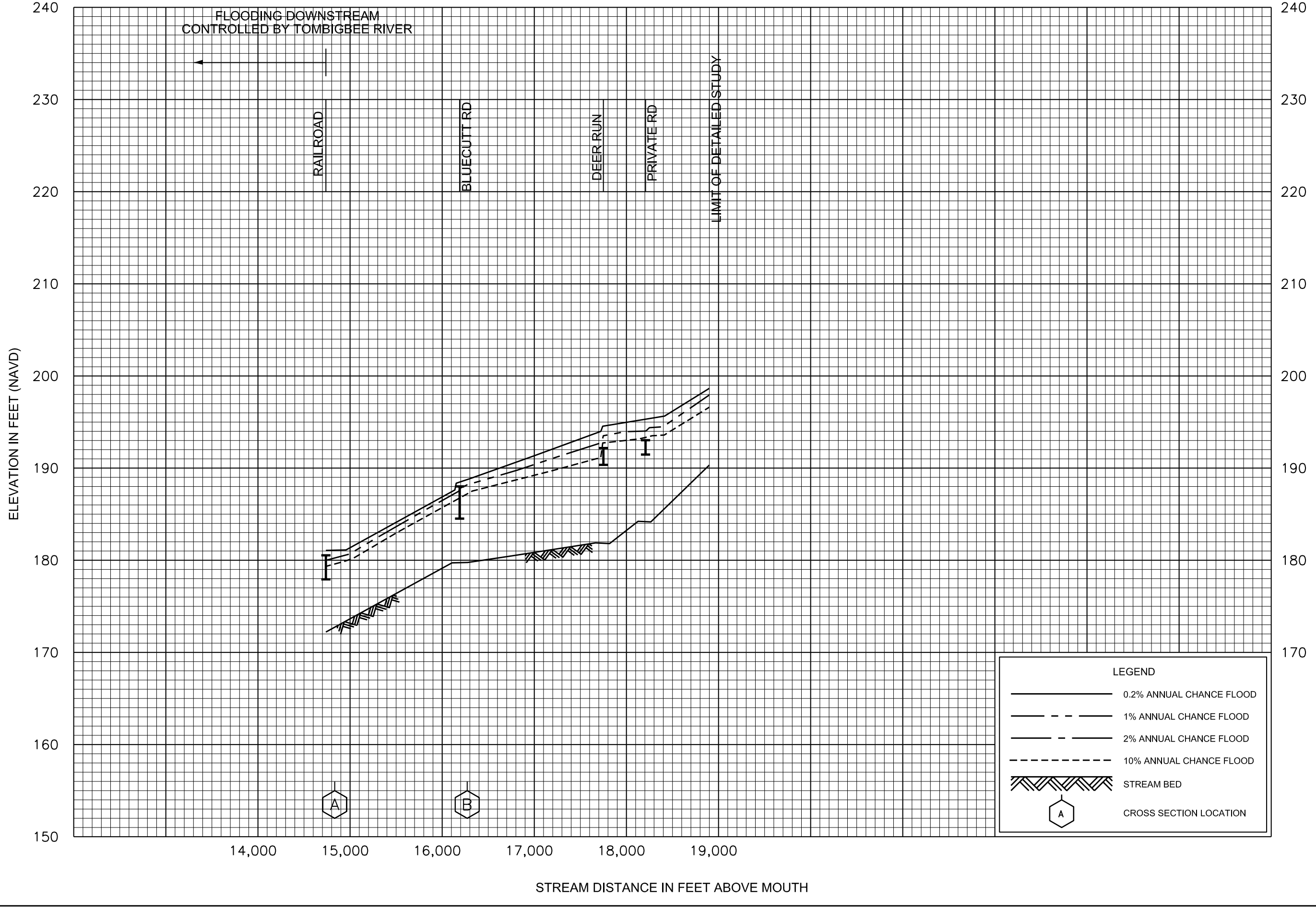
FLOOD PROFILES

TOMBIGBEE RIVER TRIBUTARY NO. 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

50P



FLOOD PROFILES

TOMBIGBEE RIVER TRIBUTARY NO. 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

51P

FLOODING CONTROLLED BY McCRARY CREEK

CONFLUENCE WITH McCRARY CREEK

RAILROAD

MS HIGHWAY 182/ S LEHMBERG RD

ELEVATION IN FEET (NAVD)

220
210
200
190
180
170
160
150
140
130

0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
11,000

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH McCRARY CREEK

A
B
C
D

LEGEND

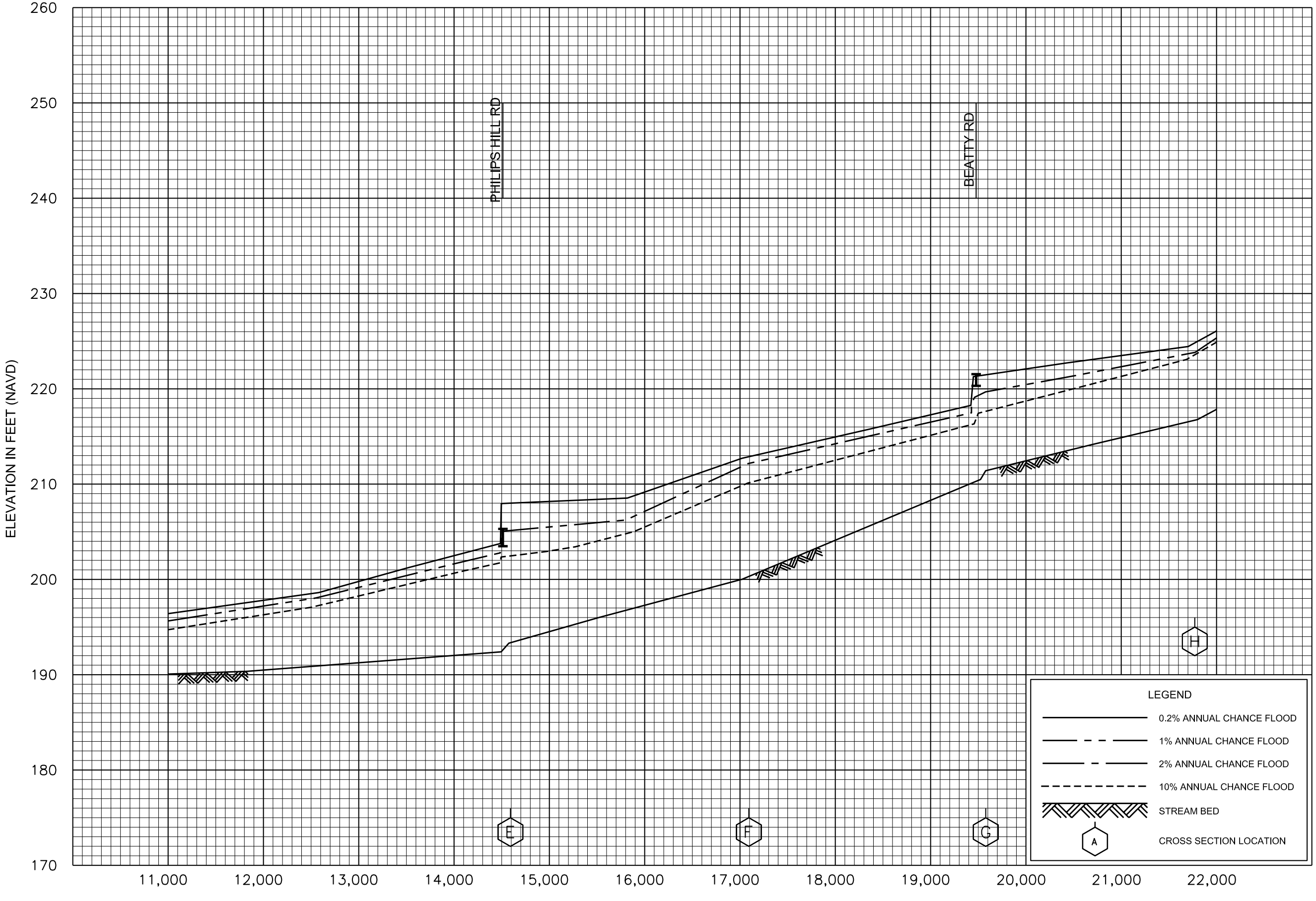
- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- A — CROSS SECTION LOCATION

FLOOD PROFILES

VERNON BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS



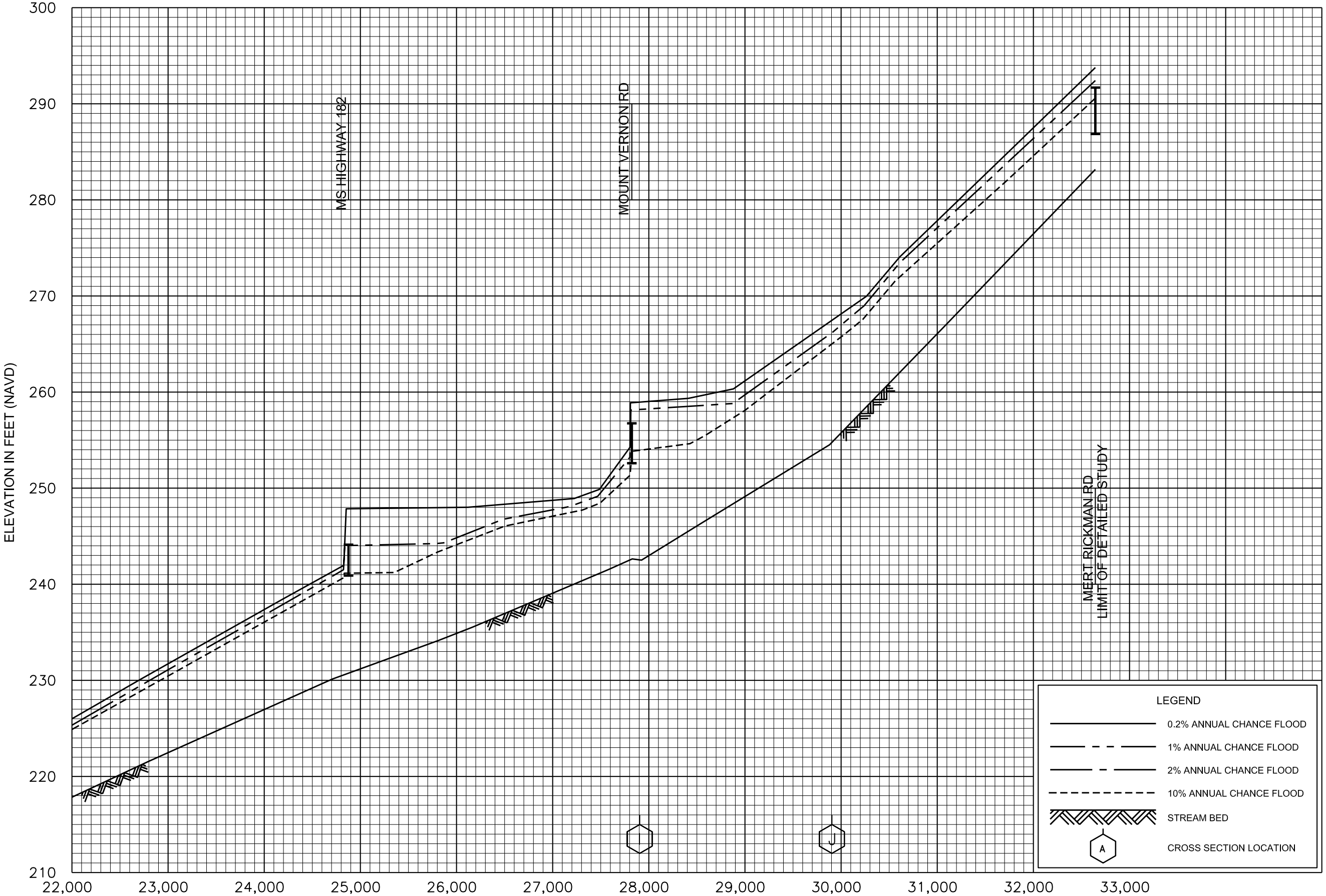
FLOOD PROFILES

VERNON BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

53P



FLOOD PROFILES

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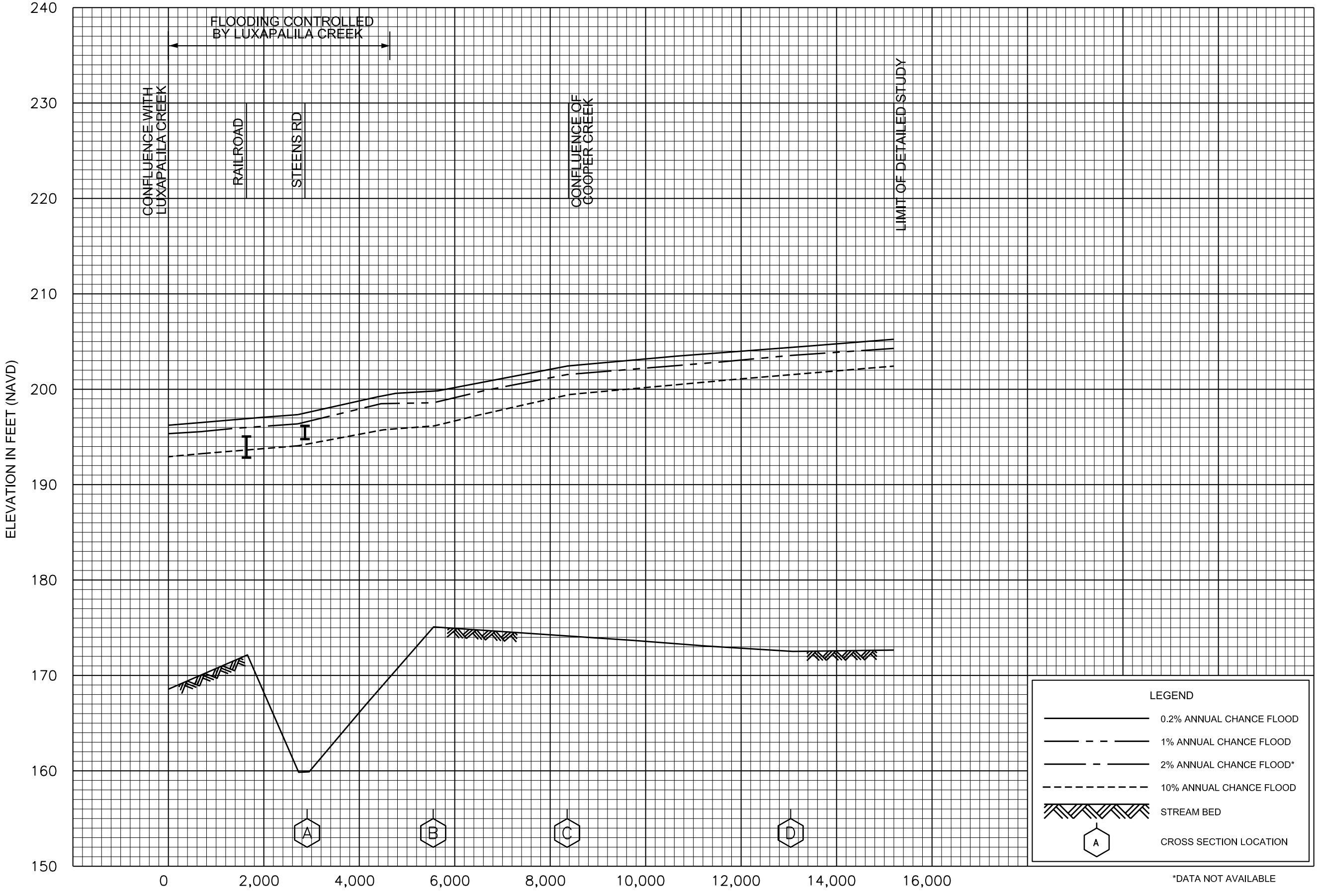

FLOOD PROFILES

YELLOW CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOWNDES COUNTY, MS
AND INCORPORATED AREAS

55P