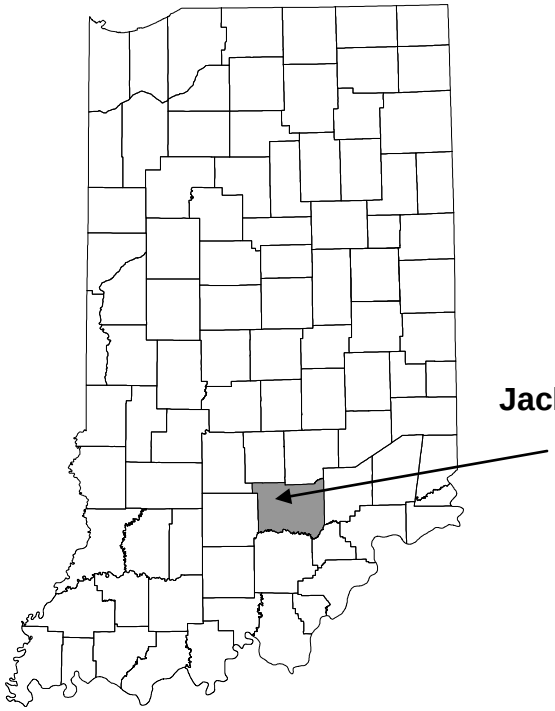
FLOOD INSURANCE STUDY

JACKSON COUNTY, INDIANA
AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
BROWNSTOWN, TOWN OF	180317
CROTHERSVILLE, TOWN OF	180378
JACKSON COUNTY (Unincorporated Areas)	180405
MEDORA, TOWN OF	180098
SEYMOUR, CITY OF	180099



Effective Date: November 19, 2014

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
18071CV000A

NOTICE TO FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) report may not contain all data available within the Community Map Repository. Please contact the Community Map Repository for any additional data.

The Federal Emergency Management Agency (FEMA) may revise and republish part or all of this FIS report at any time. In addition, FEMA may revise part of this FIS report by the Letter of Map Revision process, which does not involve republication or redistribution of the FIS report. Therefore, users should consult with community officials and check the Community Map Repository to obtain the most current FIS report components.

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

Old Zone:	New Zone:
A1 through A30	AE
B	X(Shaded)
C	X

Effective Date: November 19, 2014

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FLOOD INSURANCE STUDY
JACKSON COUNTY, INDIANA AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and supersedes the FIS reports and Flood Insurance Rate Maps (FIRMs) in the geographic area of Jackson County, Indiana, including the City of Seymour, the Towns of Brownstown, Crothersville, and Medora, and the unincorporated areas of Jackson County (hereinafter referred to collectively as Jackson County), and 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. This information will also be used by Jackson County to update existing floodplain regulations as part of the Regular Phase of the National Flood Insurance Program (NFIP), and by local and regional planners to further promote sound land use and floodplain development. Minimum floodplain management requirements for participation in the 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.

The Digital Flood Insurance Rate Map (DFIRM) and FIS report for this countywide study have been produced in digital format. Flood hazard information was converted to meet the Federal Emergency Management Agency (FEMA) DFIRM database specifications and Geographic Information System (GIS) format requirements. The flood hazard information was created and is provided in a digital format so that it can be incorporated into local GIS and be accessed more easily by the community.

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.

Information of the authority and acknowledgements for each of the new studies and previously printed FIS reports and Flood Insurance Rate Maps (FIRMs) for communities within Jackson County was compiled and is shown below:

Jackson County (Unincorporated Areas)	The hydrologic and hydraulic analyses for this study were prepared by Howard Needles Tammen & Bergendoff for the Federal Emergency Management Agency (FEMA), under Contract No. EMW-C-0093. This study, which was completed in May 1981, covered all significant flooding sources affecting the unincorporated areas of Jackson County.
Seymour, City of:	The original hydrologic and hydraulic analyses for this study were prepared by Howard Needles Tammen & Bergendoff for the Federal Emergency Management Agency (FEMA), under Contract No. EMW-C-0093. This study, which was completed in May 1981, covered all significant flooding sources affecting the City of Seymour. The revised hydrologic and hydraulic analyses for this study were prepared by the Indiana Department of Natural Resources, Division of Water, for FEMA. This study was completed in March 1994, covered all significant flooding sources affecting the City of Seymour.
Brownstown, Town of:	The hydrologic and hydraulic analyses for this study were prepared by Howard Needles Tammen & Bergendoff for the Federal Emergency Management Agency (FEMA), under Contract No. EMW-C-0093. This study, which was completed in May 1981, covered all significant flooding sources affecting the Town of Brownstown.
Medora, Town of:	The hydrologic and hydraulic analyses for this study were prepared by Howard Needles Tammen & Bergendoff for the Federal Emergency Management Agency (FEMA), under Contract No. EMW-C-0093. This study, which was completed in May 1981, covered all significant flooding sources affecting the Town of Medora.
New Studies:	The hydrologic and hydraulic analyses for approximate stream reaches of Jackson County were performed by

Morley and Associates, Inc., on behalf of the Indiana Department of Natural Resources, under Indiana Public Works Project Number E068103. The Indiana Department of Natural Resources managed the production of this study as part of their Cooperating Technical Partner agreement with the Federal Emergency Management Agency dated April 29, 2004, which was defined by the Indiana DNR Mapping Activity Statement 06-07 dated June 6, 2006 and funded under agreement number EMC-2005-GR-7022. The hydrologic and hydraulic analyses for the new detailed study stream reach were performed by Woolpert LLP and reviewed by the IDNR.

Redelineation of the previously effective flood hazard information for this FIS report, correction to the North American Vertical Datum of 1988, and conversion of the unincorporated and incorporated areas of Jackson County into the Countywide format was performed by Morley and Associates, Inc., on behalf of the Indiana Department of Natural Resources, under Indiana Public Works Project Number E068103. The Indiana Department of Natural Resources managed the production of this study as part of their Cooperating Technical Partner agreement with the Federal Emergency Management Agency dated April 29, 2004, which was defined by the Indiana DNR Mapping Activity Statement 06-07 dated June 6, 2006 and funded under agreement number EMC-2005-GR-7022.

1.3 Coordination

The purpose of an initial Consultation Coordinated Officer's (CCOs) meeting is to discuss the scope of the FIS. A final CCO meeting is held to review the results of the study. The dates of the initial and final CCO meetings held for the previously effective FIS reports covering the geographic area of Jackson County, Indiana are shown in Table 1. The initial and final CCO meetings were attended by the study contractor, FEMA (or the Federal Insurance Administration), the Indiana Department of Natural Resources (IDNR), and the affected communities.

Table 1: CCO Meeting Dates for Pre-Countywide FIS

Community Name	Initial CCO Date	Final CCO Date
Brownstown, Town of	October 10, 1994	August 30, 1995
Jackson County (Unincorporated Areas)	June 12, 1979	January 18, 1983
Medora, Town of	June 12, 1979	October 26, 1982
Seymour, City of (original)	June 12, 1979	November 8, 1982
Seymour, City of (revised)	May 10, 1995	August 30, 1995

For this countywide FIS, an initial CCO meeting was held on July 20, 2005, and was attended by IDNR, NRCS, the Jackson County Plan Commission, the Jackson County Surveyor, the Jackson County Engineer, the Jackson County SWCD, Jackson County Emergency Management Agency, the Crothersville Town Council, the Town of Brownstown and the City of Seymour.

The results of the countywide study were reviewed at the final CCO meeting held on December 15, 2011, and attended by representatives of FEMA, IDNR, City of Seymour, Town of Brownstown, and Jackson County. All problems raised at that meeting have been addressed

2.0 AREA STUDIED

2.1 Scope of Study

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

All FIRM panels for Jackson County have been revised, updated, and republished in countywide format as a part of this FIS. The FIRM panel index, provided as Exhibit 2, illustrates the revised FIRM panel layout.

Approximate methods of analysis were used to study those areas having a low development potential or minimal flood hazards as identified during the initial CCO meeting. For this study, eight new stream reaches were studied using approximate methods. The scope and methods of new approximate studies were proposed and agreed upon by FEMA, the IDNR, and Jackson County.

This FIS update also incorporates the determination of letters issued by FEMA resulting in map changes (Letters of Map Change, or LOMCs). All Letters of Map Revision (LOMRs) are summarized in Table 2. Letters of Map Amendment (LOMAs) for this study are summarized in the Summary of Map Actions (SOMA) included in the Technical Support Data Notebook (TSDN) associated with this FIS update. Copies of the TSDN may be obtained from the Community Map Repository.

Table 2: Incorporated Letters of Map Change

Flooding Source	Community and Project Id	Date Issued	Type
Heddy Run- Von Fange Ditch	99-05-085P	August 17, 1999	LOMR
East Fork White River	02-05-2032P	April 05, 2002	LOMR

Table 3: Streams Studied by Detailed Methods

Blau Ditch	Luther McDonald Ditch
East Fork White River	Medora Creek

Table 3: Streams Studied by Detailed Methods (Con'd)

Grassy Creek
Hough Creek
Hound Hollow Creek
Kiper Creek
Little Salt Creek
Runt Run
South Branch Medora Creek
Sandy Branch
UNT Sandy Branch
Vernon Fork Muscatatuck River

Table 4: Streams Studied by Approximate Methods

Ballard Creek
Beatty Walker Ditch
Bee Creek
South Fork Salt Creek
Callahan Branch
Combs Creek
Dens Ford Ditch
Dry Creek (North)
East Arm
East Fork White River
Fleetwood Brach
Grassy Creek
Greasy Creek
Guthrie Creek
Grassy Fork
Horse Lick
Hough Creek
Kiper Creek
Little Salt Creek (North)
Little South Creek (South)
Luther McDonald Ditch
McHargue Ditch
Mill Creek
Muscatatuck River
Mutton Creek Ditch
Nehrt Ditch
Negro Creek
Oathout Ditch
Pond Creek
Pruitt Branch
Runt Run
Sandy Branch
South Fork Salt Creek
Storm Creek Ditch
Sycamore Branch
Tipton Creek
Unnamed Tributary to Bee Creek
Unnamed Tributary to Dens Ford Ditch
Unnamed Tributary to Dry Creek
Unnamed Tributary to Fleetwood Branch
Unnamed Tributary to Guthrie Creek
Unnamed Tributary to McHargue Ditch
Unnamed Tributary to Pruitt Branch
Unnamed Tributary to Little Salt Creek (South)
Vernon Fork East Arm Tributary
Vernon Fork Muscatatuck River
Wayman Ditch
White Creek
2 Unnamed Tributaries to Grassy Fork
2 Unnamed Tributaries to Oathout Ditch
2 Unnamed Tributaries to Storm Creek Ditch
3 Unnamed Tributaries to East Fork White River
3 Unnamed Tributaries to Muscatatuck River
3 Unnamed Tributaries to Pond Creek
3 Unnamed Tributaries to Tipton Creek
4 Unnamed Tributaries to Grassy Creek
4 Unnamed Tributaries to Little Salt Creek (North)
6 Unnamed Tributaries to South Fork Salt Creek
7 Unnamed Tributaries to Vernon Fork Muscatatuck River

Table 5: Scope of Study

Stream	Limits of Detailed Study
Luther McDonald Ditch	Mouth (Confluence with Mutton Creek) to 2300 ft. U/S of CR 300 N
Stream	**Limits of Approximate Study**
Beatty Walker Ditch	Mouth to 5875 ft. U/S of CR 425 E
Grassy Fork	Mouth to CR 50 N
Muscatatuck River	Jackson-Lawrence County Line to Jackson-Jennings County Line
Pond Creek	County Line to 685 ft. D/S of CR 200 E
South Fork Salt Creek	Jackson-Brown County Line to SR 135
Vernon Fork	Mouth to Jackson-Jennings County Line
Vernon Fork East Arm Tributary	Mouth to 1500 ft. U/S of CR 200 S
White Creek	Mouth to 1300 ft. U/S of SR 258
Stream	**Limits of Redelineation Study**
Blau Ditch	Mouth to just U/S of Seymour Rd.
East Fork of the White River	Jackson-Bartholomew County Line to Jackson-Washington County Line
Grassy Creek	Limit of Zone A to CR 1240
Hough Creek	Mouth to CR 25
*John Thompson County Ditch	Mouth to Thompson Ditch
Kiper Creek	Mouth to SR 135
Little Salt Creek	Mouth to CR 300 W
Sandy Branch	Just U/S of U.S. 31 to just D/S of U.S. 50
UNT Sandy Branch	Mouth to just D/S of CR 990

*****Study reach lies entirely within the floodway of East Fork White River and accordingly has no floodway or profile information published in this study.

Sandy Branch and UNT Sandy Branch are studies not previously published in the 1983 Flood Insurance Study; however, the Indiana Department of Natural Resources completed detailed studies on these streams in July of 1992. These studies were provided by IDNR for use in floodplain management applications for the community. For purposes of local floodplain construction issues, these studies were used as the official source of the Base Flood Elevation and floodway limits for the studied water bodies. These studies are now being incorporated into this FIS utilizing redelineation methods.

2.2 Community Description

Jackson County is located in south-central Indiana and is bordered by Brown and Bartholomew Counties to the north, Jennings County to the east, Washington and Scott Counties to the south, and Monroe and Lawrence Counties to the west. The total

land area within the county is approximately 520 square miles. The largest city is Seymour and county seat of government is Brownstown which is located approximately 48 miles south of Indianapolis and 48 miles north of Louisville Kentucky. Jackson County is served by Interstate 65, US Highway 50, State Routes 11, 235, 258, and 31A, and the Chessie and Conrail Railroads.

The climate in Jackson County ranges from hot and humid in the summertime to cold during the winter season. Average daytime temperatures during the summer fall around 72.7 ºF, while winter temperatures average at approximately 31ºF. Precipitation for Jackson County totals an annual amount of 46.15 inches.

The northwestern half of Jackson County lies within the Norman Upland physiographic region of the State, and the southeastern half is in the Scottsburg Lowland. The topography of the county varies from nearly level to hilly. The central and eastern parts are a portion of a glaciated plain modified by wind and water action and broken by the valleys of the East Fork of the White River, the Muscatatuck River, and their tributaries. The western part is a stream dissected plain, at least partly unglaciated. Maximum local relief is about 360 feet. Maximum relief throughout the county is about 485 feet.

There are four major soil associations found in the drainage basins of the streams studied. They are Genesee-Ross-Shoals, Avonburg-Clermont, Wakeland-Stendal-Haymond-Bartle, and Bloomfield-Princeton-Ayrshire. Slowly permeable to very slowly permeable subsoils are found in the southeastern and northern uplands. The remaining of the uplands in the county have slowly permeable subsoils. River valley subsoils are mostly permeable to very permeable.

The drainage system is well defined in the hilly western portion of the county, as indicated by the high drainage density of 7.3 miles per square mile for Little Salt Creek. The drainage densities of the tributary streams in the central portion of the county are lower due to the wide flat valley of the East Fork of the White River. The drainage density of Hough Creek is 5.3 miles per square mile. The Grassy Creek drainage system is less well developed, as exemplified by its drainage density of 4.4 miles per square mile.

The East Fork of the White River, which flows southwest through the county, is one of the principal rivers in Indiana. Its length of 239.3 miles extends from its source at the confluence of the Flatrock and Driftwood Rivers in Bartholomew County to its confluence with the West Fork of the White River on the Knox, Daviess, and Pike County lines and continues to the Wabash River on the Indiana-Illinois state line at Mt. Carmel, Illinois. The drainage area of the East Fork of the White River above the confluence with the Muscatatuck River is 2,577 square miles.

The Muscatatuck River forms a majority of the southern boundary of Jackson County along with the East Fork of the White River near the eastern boundary of the county. Its length of 52.3 miles extends from its source at the confluence of Big and Graham

Creeks in eastern Jefferson County to the confluence of the East Fork of the Whiter River. The drainage area at its mouth is 1,140 square miles.

Vernon Fork, a tributary of the Muscatatuck River, drains the eastern portion of Jackson County. Vernon Fork flows southwest with a drainage area of 410 square miles.

Von Fange Ditch drains the western portion of Seymour and is continuous with Heddy Run, which flows west to East Fork White River. The total drainage area is 7.4 square miles. The drainage system is not well defined in the Seymour areas as indicated by the low drainage density of 3.0 miles per square miles for Heddy Run.

Little Salt Creek is a tributary of Salt Creek, which drains the northwestern portion of the county and flows towards the northwest.

According to U.S. Census Data from the year 2000, the population of Jackson County was reported to be 41,335. Table 6 lists the population of the incorporated areas in Jackson County.

Table 6: Population of incorporated cities and towns in Jackson County 2000 Census

Community	Population
Brownstown, Town of	2,978
Crothersville, Town of	1,570
Medora, Town of	565
Seymour, City of	18,101

2.3 Principal Flood Problems

Major flooding in Jackson County primarily occurs along the East Fork White River. Floods principally occur during the winter and spring months, but can occur during any season. Generally, two types of storm events cause flooding. During the winter and spring, storms of moderate intensity and long duration, coupled with frozen ground, cause flooding to occur. During the summer, thunderstorms which have high intensities and relatively short durations can cause floods. Localized flood problems in the incorporated areas are summarized below:

Brownstown, Town of: Major floods along the East Fork of the White River occurred in March 1913, January 1930, January 1937, January 1949, January 1959, and May 1968.

Medora, Town of: Subject to flooding from Medora Creek which is at times effected by flooding from the East Fork of the White River, due backwater. The South Branch of Medora Creek is affected by backwater flooding from

Medora Creek. Major floods along the East Fork of the White River occurred in March 1913, January 1930, January 1937, January 1949, January 1959, and May 1968. The discharges and frequencies of these floods are as follows:

Table 7: Flood Crest Elevations
USGS gage for East Fork of the White River in Medora*

Year	Discharge Cubic Feet Per Second (CFS)	Elevation (feet, gage datum)
1913	120,000	530.0
1937	65,600	524.5
1959	62,100	523.5
1961	59,400	522.1

*Elevations are from published IDNR highwater profiles (at Medora), and discharges are from the USGS gage at Seymour, Indiana.

Seymour, City of:

Major floods along the East Fork of the White River occurred in March 1913, January 1930, January 1937, January 1949, January 1959, and May 1968. The discharges and frequencies of these floods are as follows:

Table 8: Flood Crest Elevations
USGS gage for the East Fork of the White River

Year	Discharge Cubic Feet Per Second (CFS)	Elevation (feet, gage datum)
1913	120,000	571.70
1930	67,100	570.00
1937	65,600	570.20
1949	78,000	570.34
1959	62,100	570.06
1968	60,200	569.60
1994	65,200	569.81
2008	96,400	571.58

Table 9: Flood Crest Elevations
USGS gage for the South Fork of Salt Creek

Year	Discharge Cubic Feet Per Second (CFS)	Elevation (feet, gage datum)
1961	4,690	580.93
1994	4,960	581.08
1965	5,500	581.44
1968	6,400	581.84

2.4 Flood Protection Measures

Agricultural levees exist within the area of study of the East Fork of the White River, but are not considered effective for flood protection from larger frequency floods. There is a low head dam on the East fork of the White River northwest of Seymour; this structure provides no protection against flooding. Non-structural measures of flood protection are being utilized to aid in the prevention of future flood damage.

3.0 ENGINEERING METHODS

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

3.1 Hydrologic Analysis

Hydrologic analyses were carried out to establish peak discharge-frequency relationships for each flooding source studied by detailed methods affecting Jackson County. Table 10 contains a summary of peak discharges for the 10-, 2-, 1-, and 0.2-percent annual chance floods, where applicable, for each flooding source studied in detail in Jackson County. Peak discharges in the table were compiled from

previously effective FIS reports for Jackson County and incorporated areas, except for Luther McDonald Ditch. A detailed study for FIS of the stream dated April 9, 1997 was provided to IDNR by PBS&J on behalf of Woolpert Engineering. Final discharges for this stream are based on HEC-HMS.

Table 10. Summary of Discharges

Flooding Source And Location	Drainage Area (Square Miles)	Peak Discharge (CFS) 10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
BLAU DITCH					
At Mouth	3.54	900	1,400	1,670	2,180
Above Nehrt Ditch	2.10	670	1,040	1,350	1,620
Above First Tributary Upstream of Nehrt Ditch	1.89	630	980	1,280	1,530
Above Conrail Railroad	1.60	575	900	1,080	1,400
Above U.S. 31	1.32	510	810	970	1,260
EAST FORK OF WHITE RIVER					
Above Muscatatuck River	2,577	60,000	86,500	100,000	124,000
Above Confluence with Indian Creek / U.S. Route 50	2,367	59,000	85,800	98,400	123,000
At USGS Gaging Station at Seymour	2,341	59,000	85,000	98,000	122,000
GRASSY CREEK					
At 600 South Road	12.7	1,800	2,800	3,350	4,380
Above Blau Ditch	9.00	1,490	2,320	2,780	3,600
Above Conrail Railroad	8.53	1,450	2,250	2,700	3,510
Above U.S. 31	7.83	1,380	2,150	2,580	3,360
Above Tributary South of Country Road 400 South	6.90	1,290	2,000	2,400	3,140
HEDDY RUN					
At Mouth	7.37	1,320	*	2,490	*
At a point approximately 320 feet Above mouth	7.18	410	*	1,260	*
At point approximately 640 downstream of of U.S. Route 50/Tipton St.	6.17	380	*	1,130	*
HOUND HOLLOW CREEK					
At Mouth	2.11	1,250	*	2,450	*
Above Unnamed Tributary Approximately 500 Feet Downstream from Country Road 550 West	1.85	1,150	*	2,300	*
Approximately 1800 Feet Downstream from Country Road 550 West	1.50	1,050	*	2,100	*

Table 10. Summary of Discharges (Con'd)

Flooding Source And Location	Drainage Area (Square Miles)	Peak Discharge (CFS) 10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
KIPER CREEK					
At Mouth	7.5	2,280	3,670	4,450	5,820
Above Hound Hollow Creek	4.81	1,850	2,980	3,600	4,730
At Cemetery North of Freetown	4.68	1,850	*	3,600	*
LITTLE SALT CREEK					
At Mouth	22.7	3,820	6,080	7,410	9,800
Above Kipper Creek	14.9	3,200	5,100	6,200	8,200
Above Runt Run	4.53	1,800	2,900	3,500	4,600
LUTHER MCDONALD DITCH					
At Mouth	3.47	580	714	768	884
Just Upstream of Yankee Rd (200 N)	3.16	579	702	762	903
Just Upstream of CR 950 E	2.81	541	629	679	796
LUTHER MCDONALD DITCH					
Just Upstream of Railroad	2.48	916	1264	1437	1799
Just Upstream of CR 900 E	2.00	840	1168	1319	1643
MEDORA CREEK					
At Mouth	4.28	1,750	2,810	3,400	4,500
Above Confluence with South Fork	2.30	1,300	2,100	2,520	3,330
RUNT RUN					
At Mouth	6.47	2,140	3,450	4,200	5,500
SANDY BRANCH					
U.S. 31	7.28	1,200	1,800	2,100	2,800
Interstate 65	6.1	1,100	1,600	1,900	2,500
SOUTH BRANCH OF MEDORA CREEK					
At Mouth**	1.28	980	1,590	1,920	2,520
UNT SANDY BRANCH					
Confluence with Sandy Branch	1.94	640	950	1,100	1,450
At B&O Railroad	1.03	260	500	640	980
VERNON FORK MUSCATATUCK RIVER					
Above Grassy Creek	391.5	66,500	*	110,000	*
VON FANGE DITCH					
At a point approximately 530 feet Upstream of LR 600 East	4.24	270	*	760	*
Below Airport Road	3.80	260	*	740	*
At Intersection of Airport Rd. & Scheleter Rd.	2.80	780	*	1,500	*

Table 10. Summary of Discharges (Con'd)

Flooding Source And Location	Drainage Area (Square Miles)	Peak Discharge (CFS) 10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
VON FANGE DITCH (con'd)					
At Chessie System	2.35	710	*	1,320	*
Above B&O Railroad	2.26	345	*	675	*
At a point approximately 640 feet Downstream of Thompson Road	2.07	130	*	340	*
Above Second Street	1.80	620	*	1,150	*
Above 6th Street	1.21	50	*	170	*

*These streams were studied in limited detail
** Located within study area for the Medora, Indiana FIS.

Standard and accepted hydrologic methods were used to develop discharge data on the study streams in Jackson County. Except for the new detailed study stream, these data were coordinated with the Indiana Department of Natural Resources, the Natural Resources Conservation Service (formally the Soil Conservation Service), the U. S. Geological Survey and the Louisville District of the U. S. Army Corps of Engineers, through a Memorandum Of Understanding dated May 6, 1976. Discharge curves for the 10%, 2%, 1%, and 0.2% annual chance floods were developed for each study stream using several different procedures and compared for consistency.

3.2 Hydraulic Analysis

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 Flood Insurance Rate Map (FIRM) represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data table in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS report in conjunction with the data shown on the FIRM.

Cross sections for the backwater analyses were obtained from a variety of sources including: physical survey data, IDNR contour mapping, USGS topographic mapping and local contour mapping.

Water-surface elevations for floods of the selected recurrence intervals were computed through use of the USACE HEC-2 step-backwater computer program. For new approximate study areas, analyses were based on field inspection and modeling of the stream reaches using HEC-RAS program version 3.1.3. Structural measurements or field surveying was performed to limited extents. Cross section

geometry was derived from topographic mapping from the 2005 statewide orthophotography project. Starting elevations were assumed to be normal depth.
For the new detailed study stream, the USACE HEC-RAS program, version 2.2 was used. HEC-RAS is an updated version of the HEC-2 program used to perform step-backwater analyses. Cross sections for the new detailed study are based on digital aerial mapping and surveyed ground sections.

Flood profiles were prepared for all streams studied by detailed methods and show computed water-surface elevations to an accuracy of 0.5 feet for floods of the selected recurrence intervals. For this countywide FIS, flood profiles and approved LOMRs have been consolidated into continuous stream reaches and adjusted to reflect the current vertical datum as described in Section 3.3. New profiles have been prepared for the new detailed study and for the purposes of incorporating the LOMRs described in Section 2.1 above.

Channel and overbank roughness factors (Manning's "n" values) used in the hydraulic computations were chosen by engineering judgment and were based on field observations of the stream and floodplain areas. Factors were estimated by field inspection with the aid of "n" value tables and equations. Channel and overbank roughness factors used in the detailed studies are summarized by stream in Table 11.

Table 11. Channel and Overbank Roughness Factors

	Roughness Coefficients		
Stream	Main Channel	Left Overbank	Right Overbank
Blau Ditch	0.030-0.065	0.040-0.055	0.040-0.055
East Fork White River	0.030-0.080	0.028-0.080	0.030-0.080
Grassy Creek	0.030-0.075	0.040-0.070	0.040-0.070
Heddy Run	0.033	0.045-0.065	0.040-0.060
Hough Creek	0.035-0.070	0.030-0.050	0.030-0.050
Kiper Creek	0.045-0.075	0.055-0.080	0.055-0.070
Little Salt Creek	0.025-0.060	0.025-0.055	0.025-0.080
Luther McDonald Ditch	0.038-.0590	0.040-0.090	0.040-0.090
Medora Creek	0.030-0.055	0.040-0.055	0.040-0.055
Runt Run	0.025-0.070	0.025-0.075	0.025-0.080
Sandy Branch	0.040-0.080	0.040-0.110	0.040-0.080
South Branch Medora Creek	0.035-0.060	0.045	0.045
UNT Sandy Branch	0.040-0.100	0.040-0.060	0.040-0.085
Van Fange Ditch	0.033	0.045-0.065	0.040-0.060

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

3.3 Vertical Datum

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

All flood elevations shown in this FIS report and on the FIRM are referenced to NAVD88. Structure and ground elevations in the community must, therefore, be referenced to NAVD88. It is important to note that adjacent communities may be referenced to NGVD29. This may result in differences in Base Flood Elevations (BFEs) across the corporate limits between the communities.

In this revision, a vertical datum conversion of -0.41 feet was calculated at the centroid of the county and used to convert all elevations in Jackson county from NGVD29 to NAVD88 using the National Geologic Survey's VERTCON online utility (VERTCON, 2005).

(NGVD29 – 0.41 = NAVD88)

For more information on NAVD88, see the FEMA publication entitled Converting the National Flood Insurance Program to the North American Vertical Datum of 1988 (FEMA, June 1992), 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).

The coordinate system used for the production of the digital FIRMs is the Transverse Mercator projection, Indiana State Plane coordinate system, East Zone, referenced to the North American Datum of 1983 and the GRS 1980 spheroid.

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

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. Therefore, each FIS provides 1-percent-annual-chance flood elevations and delineations of the 1- and 0.2-percent-annual-chance floodplain

boundaries and 1-percent-annual-chance floodway to assist communities in developing floodplain management measures. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles, and the Floodway Data table. Users should reference the data presented in the FIS report as well as additional information that may be available at the local map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to indicate additional areas of flood risk in the community. For each stream studied by detailed methods, the 1- and 0.2-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 mapping from the 2005 statewide orthophotography flight.

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, V, and VE); and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

For the streams studied by approximate methods, only the 1-percent-annual chance floodplain boundary is shown on the FIRM (Exhibit 2).

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

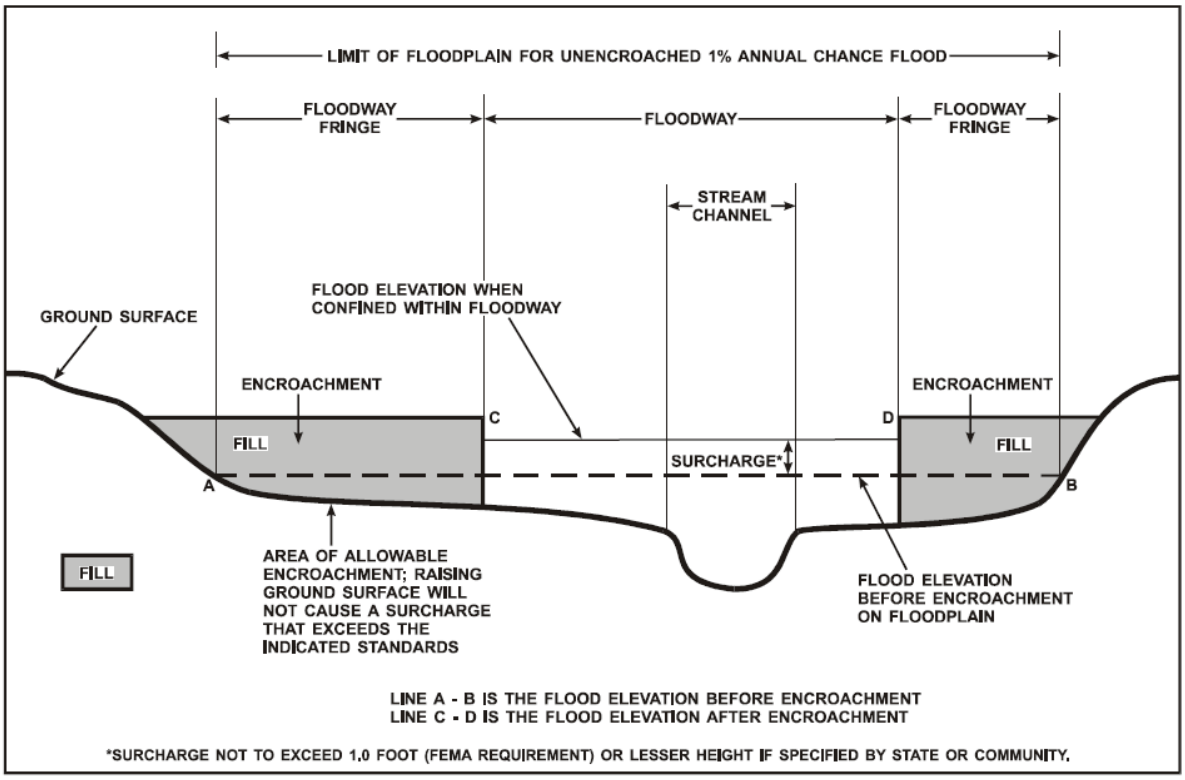
minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The State of Indiana, however, per Indiana Code IC 14-28-1 and Indiana Administrative Code 312 IAC 10, has designated that encroachment in the floodplain is limited to that which will cause no significant increase in flood height. As a result, floodways for this study are delineated based on a flood surcharge of less than 0.15 feet. The floodways in this study were approved by the IDNR, and are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodway presented in this FIS report and on the FIRM was computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations have been tabulated for selected cross sections (Table 12). In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary has been shown.

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 0.14 feet 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			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FT/SEC)	REGULATORY (FEET, NAVD)	WITHOUT FLOODWAY (FEET, NAVD)	WITH FLOODWAY (FEET, NAVD)	INCREASE (FEET)
BLAU DITCH								
A	0.150	497 [4]	1,195	1.4	531.1	528.3[3]	528.4	0.1
B	0.545	285 [4]	652	2.1	531.1	530.1[3]	530.2	0.1
C	0.923	300 [4]	669	1.9	534.3	534.3	534.4	0.1
D	1.045	302 [4]	819	1.6	534.9	534.9	535.0	0.1
E	1.217	300 [4]	196	5.5	539.7	539.7	539.7	0.0
F	1.420	330 [4]	994	1.1	540.4	540.4	540.4	0.0
G	1.590	300 [4]	510	1.9	541.8	541.8	541.8	0.0
H	1.625	260 [4]	1,088	0.9	544.0	544.0	544.0	0.0
I	1.880	159 [4]	337	2.9	544.2	544.2	544.3	0.1
EAST FORK WHITE RIVER								
A	186.36	12250 [4]	50,509	2.0	524.1	524.1	524.1	0.0
B	188.30	10950 [4]	51,820	1.9	527.0	527.0	527.1	0.1
C	195.72	12300[2,4]	67,374	1.5	541.0	541.0	541.1	0.1
D	196.92	10810 [4]	46,454	2.2	542.6	542.6	542.7	0.1
E	200.58	10950 [4]	59,513	1.7	547.6	547.6	547.6	0.0
F	208.90	12900 [4]	64,717	1.5	560.2	560.2	560.2	0.0
G	210.62	13100 [4]	58,975	1.7	563.3	563.3	563.3	0.0
H	212.11	10740 [4]	28,666	3.5	566.5	566.5	566.5	0.0
I	214.87	11050 [4]	54,820	1.8	571.5	571.5	571.5	0.0
J	215.41	7490 [4]	29,626	3.3	574.6	574.6	574.6	0.0
K	216.03	9150 [4]	42,950	2.3	576.6	576.6	576.6	0.0

[1] MILES ABOVE MOUTH
[2] COMBINED FLOODWAY WIDTH OF EAST FORK WHITE RIVER AND HOUGH CREEK
[3] ELEVATION COMPUTED WITHOUT CONSIDERATION FOR VERNON FORK MUSCATATUCK RIVER BACKWATER
[4] FLOODWAY WIDTH MAY DIFFER FROM FIRM. SEE FIRM FOR REGULATORY WIDTH.

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FT/SEC)	REGULATORY (FEET, NAVD)	WITHOUT FLOODWAY (FEET, NAVD)	WITH FLOODWAY (FEET, NAVD)	INCREASE (FEET)
GRASSY CREEK								
A	1.652[1]	980	2,256	1.5	530.5	528.2[3]	528.3	0.1
B	2.16[1]	930	2,033	1.3	531.2	528.8[3]	528.9	0.1
C	2.81[1]	610	1,583	1.7	532.3	529.9[3]	529.9	0.0
D	3.19[1]	379	1,788	1.5	532.6	530.7[3]	530.7	0.0
E	3.63[1]	390	3,113	0.9	535.5	535.5	535.5	0.0
F	4.02[1]	700	4,368	0.6	535.6	535.6	535.7	0.1
G	4.57[1]	530	2,682	1.0	537.9	537.9	538.0	0.1
H	4.83[1]	371	1,061	2.3	538.4	538.4	538.5	0.1
I	5.31[1]	385	1,333	1.8	541.5	541.5	541.5	0.0
J	5.58[1]	281	858	2.8	543.3	543.3	543.3	0.0
HEDDY RUN								
A	1.07[2]	220	532	2.1	561.6	559.2[4]	559.2	0.0
B	1.29[2]	82	218	5.2	561.6	561.0[4]	561.0	0.0
HOUND HOLLOW CREEK								
A	0.230	*	*	*	634.1	*	*	*
B	0.425	*	*	*	642.6	*	*	*
C	0.695	*	*	*	651.6	*	*	*
D	1.035	*	*	*	665.0	*	*	*
E	1.330	*	*	*	676.7	*	*	*

[1] MILES ABOVE MOUTH
[2] MILES ABOVE CONFLUENCE WITH EAST FORK WHITE RIVER
[3] ELEVATION COMPUTED WITHOUT CONSIDERATION FOR VERNON FORK MUSCATATUCK RIVER OVERFLOW
[4] ELEVATION COMPUTED WITHOUT CONSIDERATION OF BACKWATER EFFECT FROM EAST FORK WHITE RIVER
* NO FLOODWAY WAS COMPUTED

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FT/SEC)	REGULATORY (FEET, NAVD)	WITHOUT FLOODWAY (FEET, NAVD)	WITH FLOODWAY (FEET, NAVD)	INCREASE (FEET)
HOUGH CREEK								
A	1.060	585 [2]	1,895	1.5	541.5	541.5	541.6	0.1
B	1.651	400 [2]	506	5.8	544.7	544.7	544.8	0.1
C	1.759	390 [2]	592	5.0	546.8	546.8	546.8	0.0
D	2.406	630 [2]	1,535	1.6	554.3	554.3	554.4	0.1
E	2.986	700 [2]	1,680	1.3	560.6	560.6	560.6	0.0
F	3.256	380 [2]	440	4.8	564.9	564.9	564.9	0.0
G	3.306	400 [2]	622	2.9	565.6	565.6	565.6	0.0
H	4.225	258 [2]	436	3.1	577.1	577.1	577.1	0.0
KIPER CREEK								
A	0.455	900	1,823	2.4	619.1	619.1	619.2	0.1
B	0.612	680	1,433	3.1	623.7	623.7	623.7	0.0
C	0.945	573	1,850	2.4	626.8	626.8	626.8	0.0
D	1.260	470	1,295	2.8	630.7	630.7	630.7	0.0
E	1.455	414	850	4.2	635.3	635.3	635.4	0.1
F	1.715	*	*	*	641.4	*	*	*
G	2.135	*	*	*	651.5	*	*	*
H	2.440	*	*	*	658.5	*	*	*

[1] MILES ABOVE MOUTH

[2] FLOODWAY WIDTH MAY DIFFER FROM FIRM. SEE FIRM FOR REGULATORY WIDTH.

* NO FLOODWAY WAS COMPUTED

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FT/SEC)	REGULATORY (FEET, NAVD)	WITHOUT FLOODWAY (FEET, NAVD)	WITH FLOODWAY (FEET, NAVD)	INCREASE (FEET)
LITTLE SALT CREEK								
A	0.357	1080	2,809	2.6	614.2	614.2	614.3	0.1
B	0.850	758	2,487	2.5	616.6	616.6	616.6	0.0
C	1.480	958	2,558	2.4	621.1	621.1	621.2	0.1
D	1.955	900	3,464	1.8	626.4	626.4	626.4	0.0
E	2.160	760	2,417	2.6	627.1	627.1	627.2	0.1
F	2.840	515	1,293	4.8	635.1	635.1	635.2	0.1
G	3.070	538	2,033	3.1	638.8	638.8	638.9	0.1
H	3.380	528	1,259	2.8	641.5	641.5	641.6	0.1
LUTHER MCDONALD DITCH								
A	0.97	127	341	2.2	550.0	543.4 [2]	543.4	0.0
B	1.27	249	537	1.4	550.0	546.8 [2]	546.9	0.1
C	1.44	76	142	4.8	550.0	547.7 [2]	547.7	0.0
D	1.72	100	194	3.5	550.1	550.1	550.2	0.1
E	1.93	132	341	4.2	554.2	554.2	554.2	0.0
F	2.24	350	4,139	0.3	568.6	568.6	568.6	0.0
G	2.66	350	2,776	0.2	568.6	568.6	568.6	0.0
H	2.85	63	205	2.6	568.6	568.6	568.6	0.0
I	3.06	51	195	2.7	571.9	571.9	571.9	0.0
J	3.32	17	68	3.5	576.4	576.4	576.5	0.1

[1] MILES ABOVE MOUTH

[2]LUTHER MCDONALD DITCH ELEVATION DOES NOT CONSIDER VERNON FORK MUSCATATUCK RIVER BACKWATER EFFECTS

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FT/SEC)	REGULATORY (FEET, NAVD)	WITHOUT FLOODWAY (FEET, NAVD)	WITH FLOODWAY (FEET, NAVD)	INCREASE (FEET)
MEDORA CREEK								
A	0.630	470	924	3.7	524.0	524.0	524.1	0.1
B	0.702	470	1,031	3.3	525.1	525.1	525.1	0.0
C	0.776	440	1,275	2.0	527.4	527.4	527.5	0.1
D	0.833	310	697	3.6	528.0	528.0	528.1	0.1
E	0.879	370	1,440	1.8	530.1	530.1	530.2	0.1
F	0.976	370	1,065	2.3	530.5	530.5	530.6	0.1
G	1.046	370	985	2.6	532.2	532.2	532.3	0.1
H	1.194	370	758	3.3	533.3	533.3	533.3	0.0
I	1.313	370	873	3.0	534.5	534.5	534.6	0.1
RUNT RUN								
A	0.052	550	708	5.9	639.3	639.3	639.4	0.1
B	0.156	580	1,795	2.3	641.5	641.5	641.6	0.1

[1] MILES ABOVE MOUTH

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH [4] (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FT/SEC)	REGULATORY (FEET, NAVD)	WITHOUT FLOODWAY (FEET, NAVD)	WITH FLOODWAY (FEET, NAVD)	INCREASE (FEET)
SANDY BRANCH								
A	150 [1]	173	569	3.7	550.2	550.2	550.3	0.1
B	1,418 [1]	201	489	4.3	552.6	552.6	552.7	0.1
C	2,420 [1]	225	937	2.0	555.8	555.8	555.9	0.1
D	4,056 [1]	472	1,129	1.7	556.8	556.8	556.9	0.1
E	6,114 [1]	307	953	2.0	561.0	561.0	561.1	0.1
F	8,490 [1]	328	1,003	1.9	566.0	566.0	566.1	0.1
G	9,968 [1]	250	687	2.8	567.9	567.9	568.0	0.1
H	11,658 [1]	291	809	2.3	572.5	572.5	572.6	0.1
I	12,450 [1]	295	1,071	1.8	574.8	574.8	574.9	0.1
J	13,190 [1]	216	548	1.5	576.2	576.2	576.3	0.1
K	14,458 [1]	340[3]	484	1.7	582.3	582.3	582.3	0.1
L	15,250 [1]	124	377	2.1	585.4	585.4	585.5	0.1
M	15,724 [1]	72	186	4.3	589.5	589.5	589.5	0.1
UNT SANDY BRANCH								
A	0.212 [2]	140	198	5.6	575.6	575.6	575.7	0.1
B	0.422 [2]	72	305	3.6	578.7	578.7	578.7	0.0
C	0.596 [2]	155	468	2.3	582.3	582.3	582.4	0.1
D	0.66 [2]	203	589	1.9	583.5	583.5	583.6	0.1
E	0.875 [2]	212	610	1.8	587.6	587.6	587.7	0.1
F	1.113 [2]	200	2051	0.4	595.4	595.4	595.4	0.0
G	1.341 [2]	200	1,467	0.6	595.4	595.4	595.4	0.0
H	1.565 [2]	*	*	*	597.2	*	*	*
I	1.851 [2]	*	*	*	599.1	*	*	*
J	2.143 [2]	*	*	*	602.0	*	*	*

[1] FEET ABOVE US HWY 31
[2] MILES ABOVE MOUTH
[3] TOP WIDTH BASED ON ADMINISTRATIVE FLOODWAY DESIGNATION
[4] SANDY BRANCH/UNT SANDY BRANCH - FLOODWAY WIDTH MAY DIFFER FROM FIRM. SEE FIRM FOR REGULATORY WIDTH.
* NO FLOODWAY WAS COMPUTED

TABLE 12

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN AND INCORPORATED AREAS

FLOODWAY DATA

SANDY BRANCH - UNT SANDY BRANCH

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FT/SEC)	REGULATORY (FEET, NAVD)	WITHOUT FLOODWAY (FEET, NAVD)	WITH FLOODWAY (FEET, NAVD)	INCREASE (FEET)
SOUTH BRANCH MEDORA CREEK								
A	0.057[2]	260	654	2.9	525.5	525.5	525.6	0.1
B	0.107[2]	355	648	3.0	526.8	526.8	526.9	0.1
C	0.175[2]	450	712	2.7	527.6	527.6	527.7	0.1
D	0.227[2]	250	769	2.5	530.1	530.1	530.2	0.1
E	0.332[2]	275	893	2.1	530.4	530.4	530.5	0.1
F	0.425[2]	300	938	2.0	530.7	530.7	530.8	0.1
VON FANGE DITCH								
C	1.49[2]	87	250	3.0	562.6	562.6	562.7	0.1
D	1.68[2]	94	221	3.4	563.5	563.5	563.5	0.0
E	1.89[2]	220	302	2.5	565.1	565.1	565.1	0.0
F	1.99[2]	120	324	2.3	565.4	565.4	565.5	0.1
G	2.22[2]	350	547	1.4	566.6	566.6	566.6	0.0
H	2.41[2]	165	592	1.3	567.0	567.0	567.0	0.0
I	2.60[2]	95	282	1.2	567.9	567.9	567.9	0.0
J	2.75[2]	125	398	0.9	568.0	568.0	568.1	0.1
K	3.29[2]	230	376	0.9	568.7	568.7	568.8	0.1
L	3.47[2]	175	344	1.0	568.9	568.9	569.0	0.1
M	3.56[2]	100	239	1.4	569.1	569.1	569.2	0.1
N	3.67[2]	105	228	0.7	569.4	569.4	569.5	0.1
O	3.77[2]	125	135	1.3	569.4	569.4	569.5	0.1
P	3.87[2]	125	433	0.4	569.5	569.5	569.6	0.1
Q	3.99[2]	80	205	0.8	569.5	569.5	569.6	0.1
R	4.08[2]	98	179	0.9	569.8	569.8	569.8	0.0
S	4.11[2]	90	258	0.7	569.8	569.8	569.8	0.0

[1] FEET ABOVE MOUTH

[2] MILES ABOVE MOUTH

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

Zone AE

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

Zone AO

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

Zone X

Zone X is the flood insurance risk zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, and areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by levees. No BFEs or base flood 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 risk zones as described in Section 5.0 and, in the 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole-foot BFEs or average depths. Insurance agents use the zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

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

The current FIRM presents flooding information for the entire geographic area of Jackson County. Previously, separate FIRMs were prepared for each identified flood prone incorporated community and for the unincorporated areas of the county. Historical data relating to the maps prepared for each community are presented in Table 13.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
Brownstown, Town of	September 6, 1996	N/A	September 6, 1996	
[1]Crothersville, Town of	N/A	N/A	N/A	
Jackson County (Unincorporated Areas)	March 17, 1978	N/A	January 5, 1984	
Medora, Town of	November 23, 1973	December 26, 1975	January 5, 1984	
Seymour, City of	December 17, 1973	June 18, 1976	November 2, 1983	August 16, 1996

[1]This Community does not have map history prior to the first countywide mapping

TABLE 13

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

This FIS report either supersedes or is compatible with all previous studies on streams studied in this report and should be considered authoritative for purposes of the NFIP.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting the Flood Insurance and Mitigation Division, Federal Emergency Management Agency, Region V, 536 S. Clark Street, 6th Floor, Chicago, IL 60605

9.0 BIBLIORAPHY AND REFERENCES

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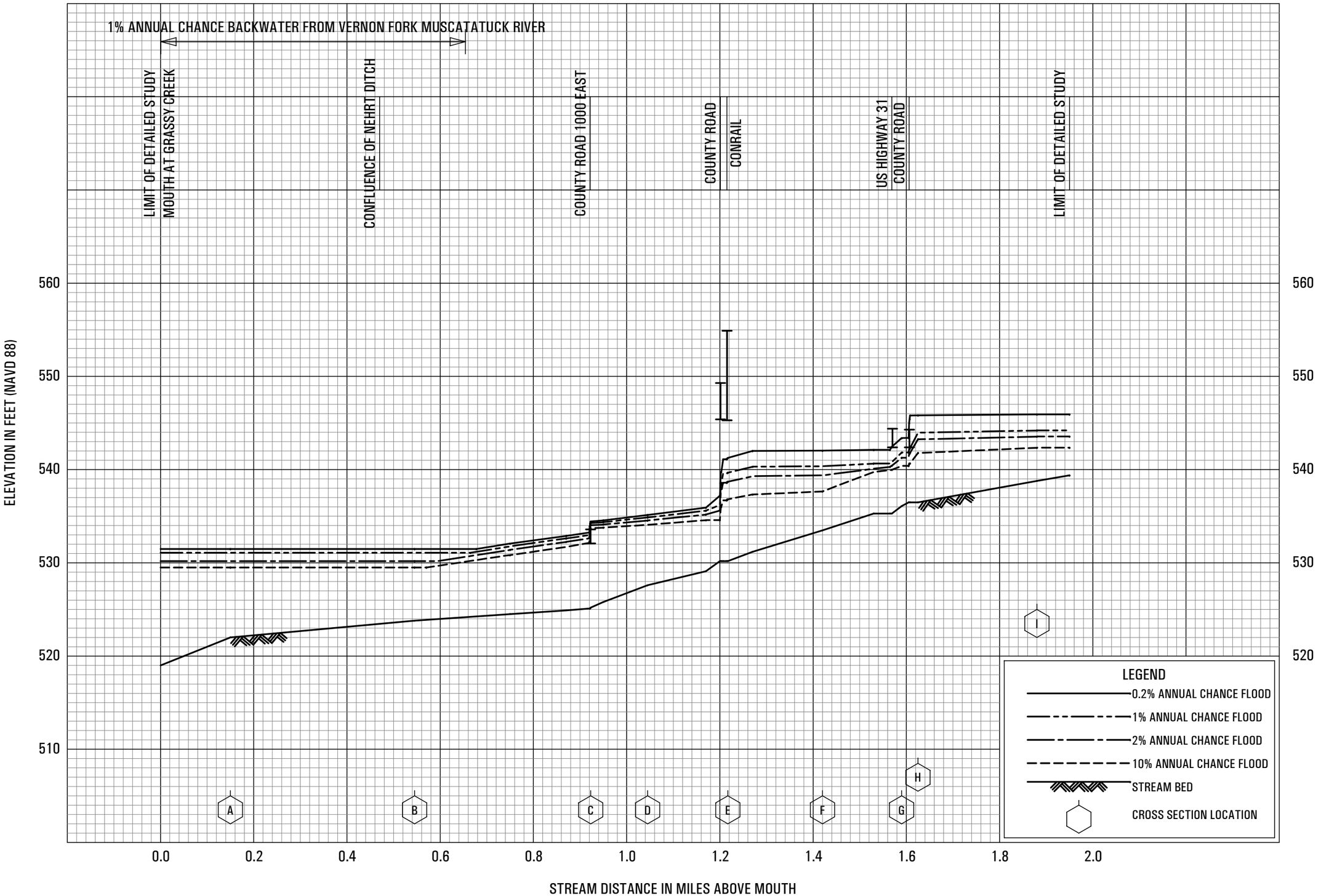


FLOOD PROFILES

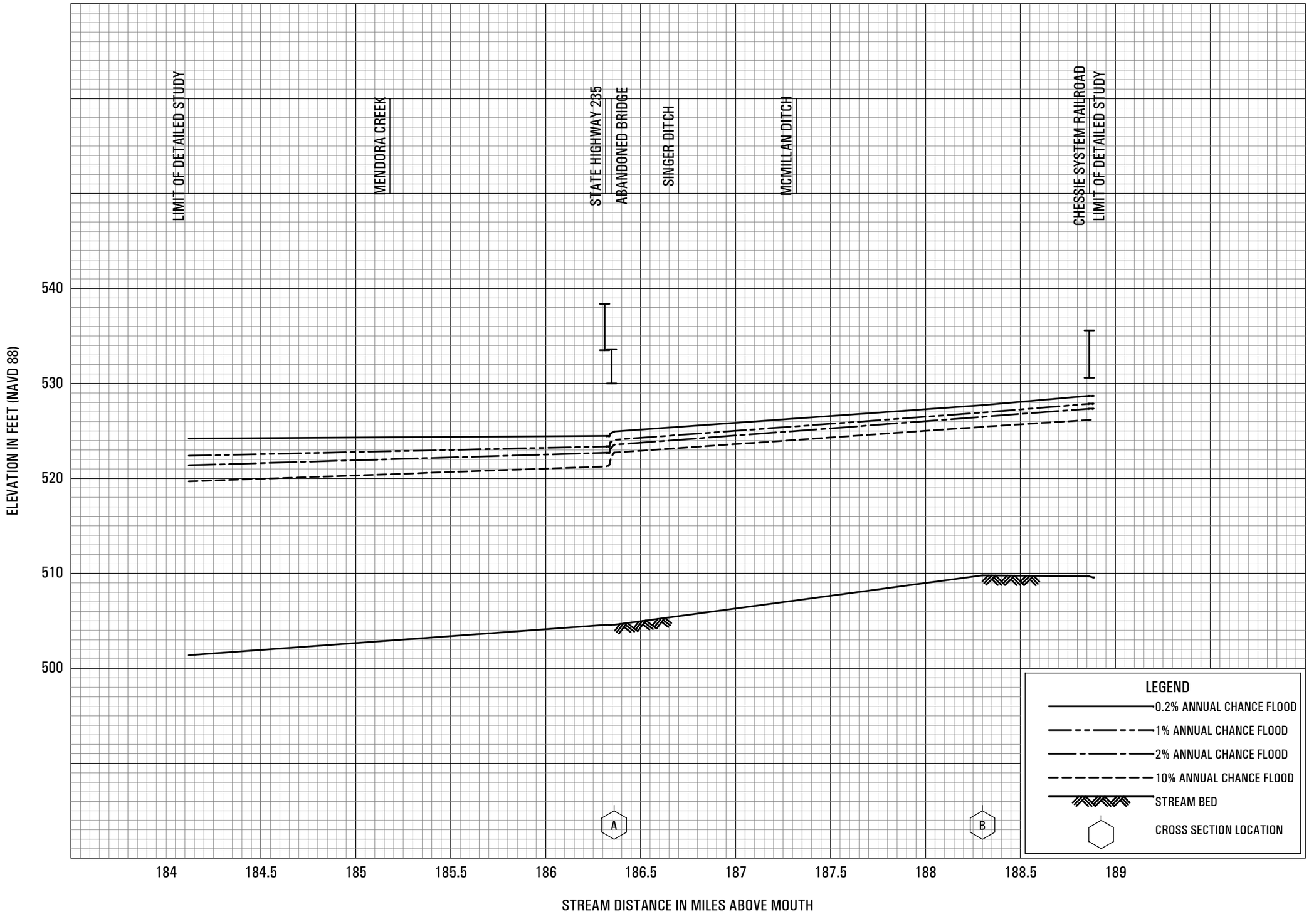
BLAU DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

01P



FLOOD PROFILES

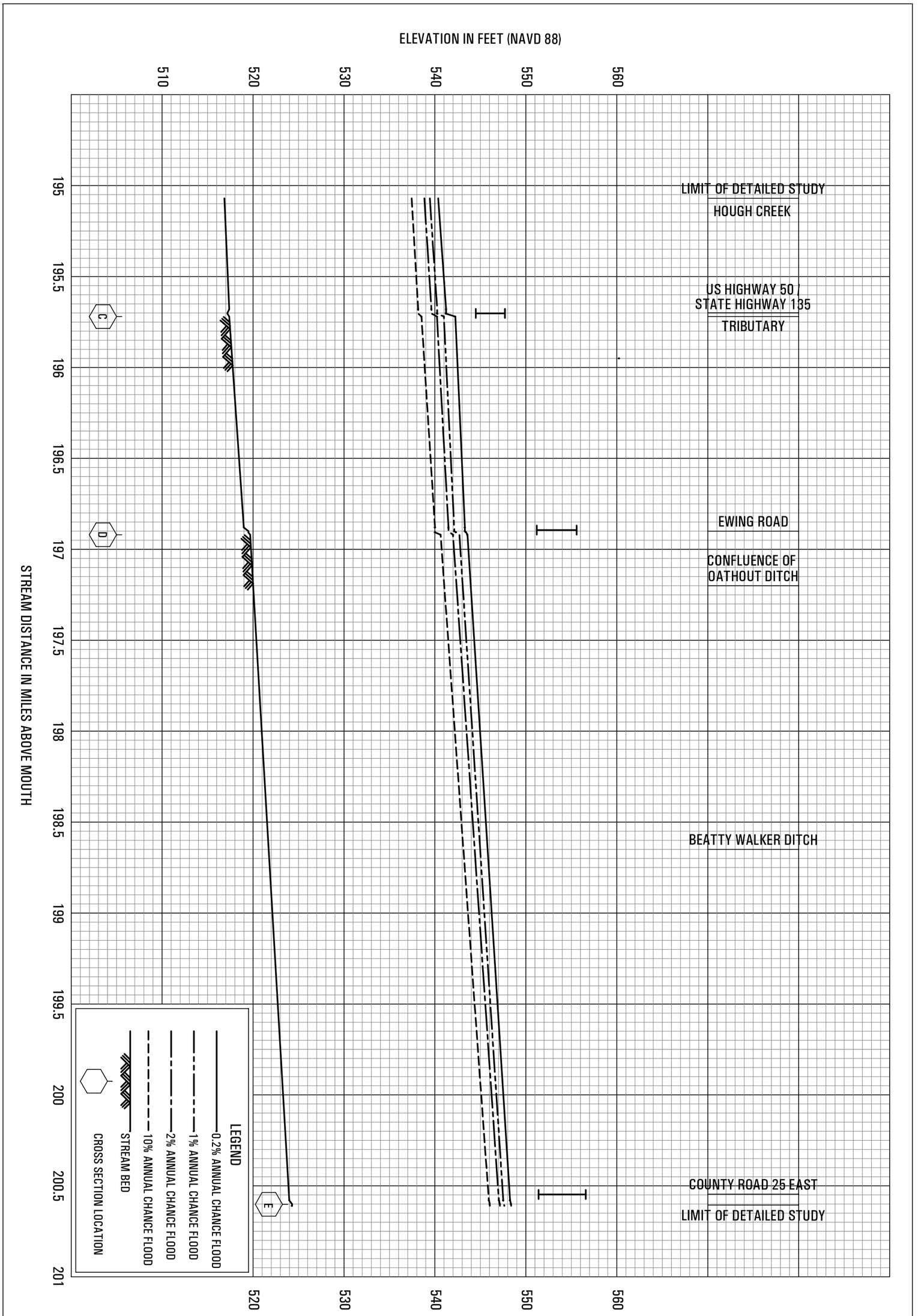
EAST FORK WHITE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

02P



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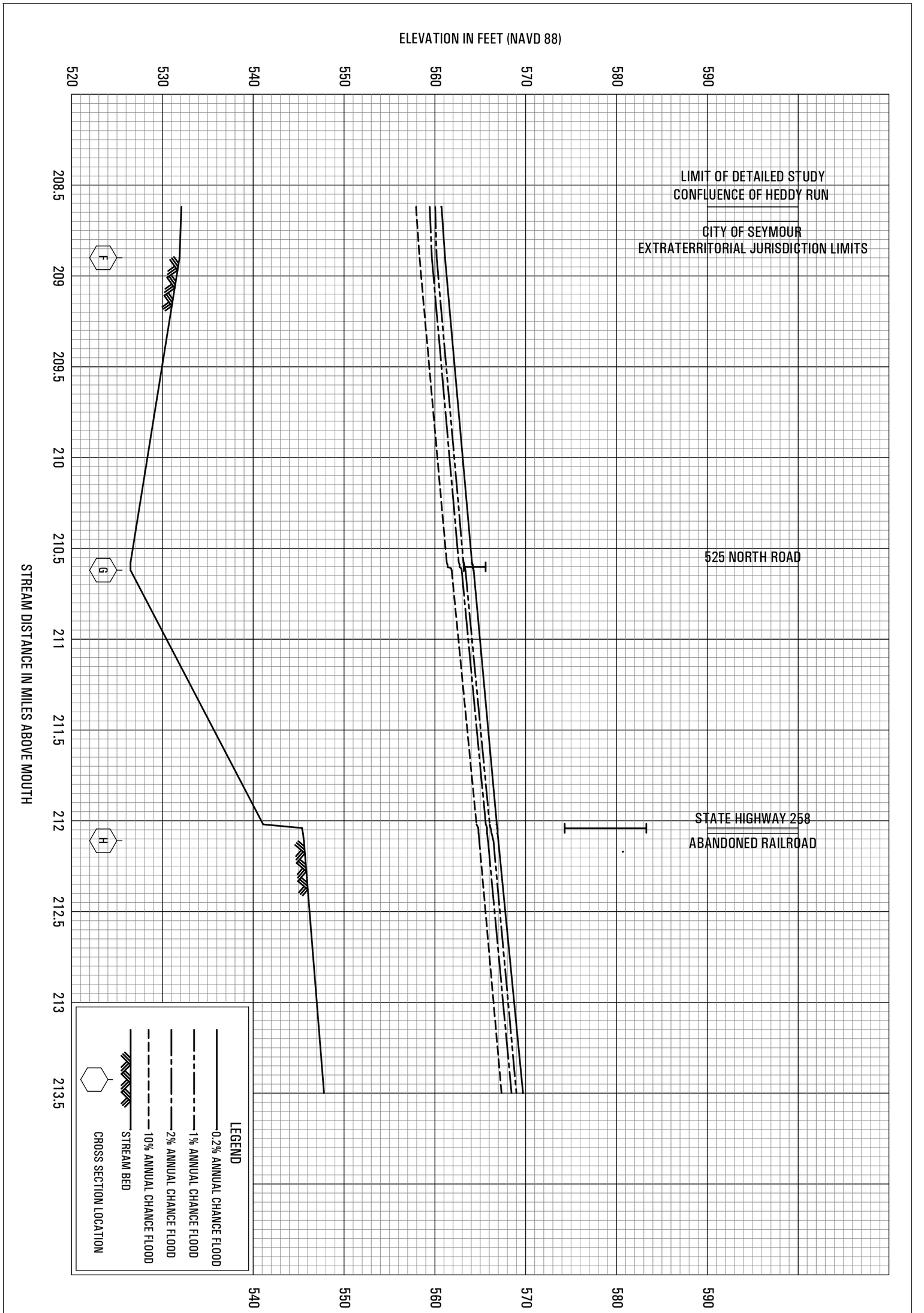
FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

FLOOD PROFILES

EAST FORK WHITE RIVER



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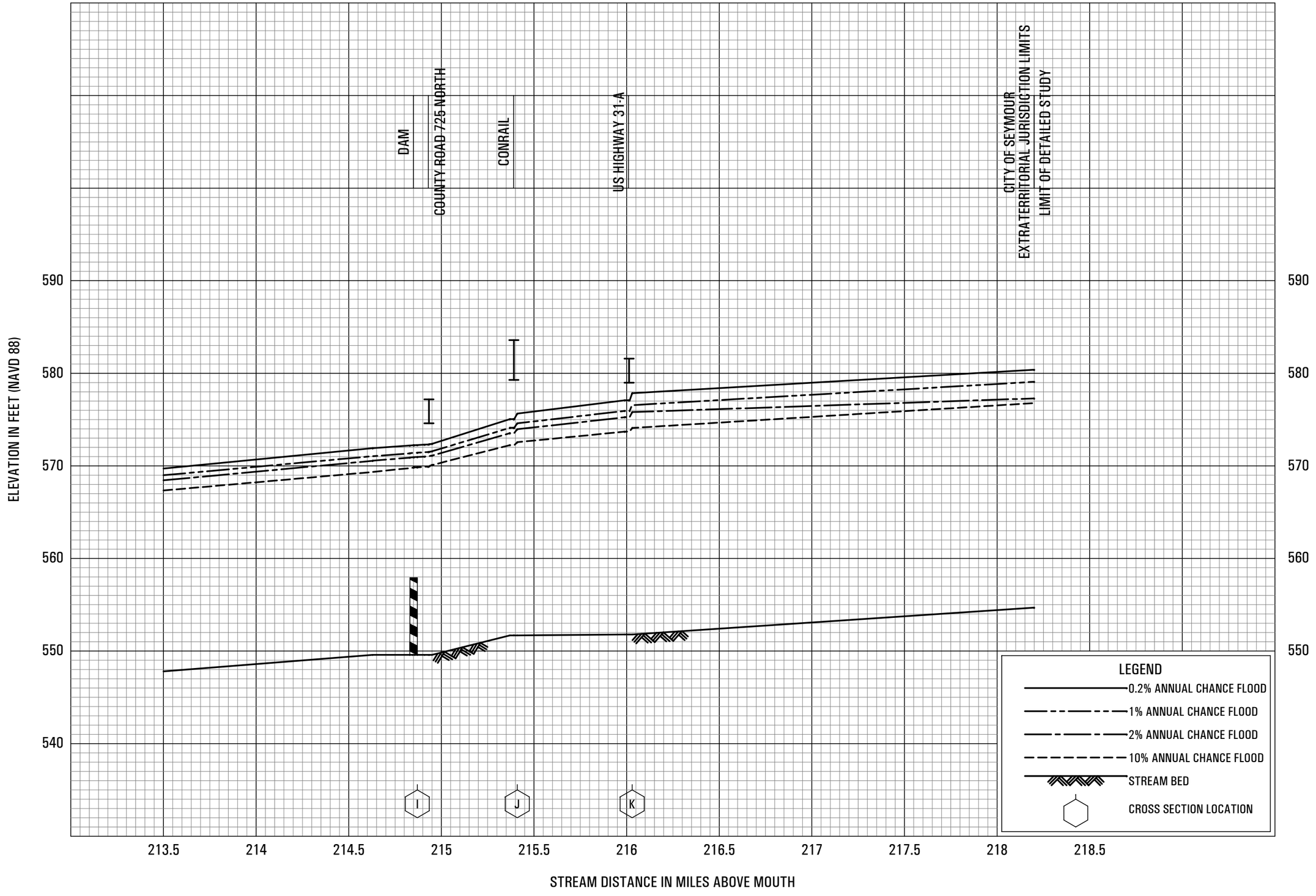
FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

FLOOD PROFILES

EAST FORK WHITE RIVER



FLOOD PROFILES

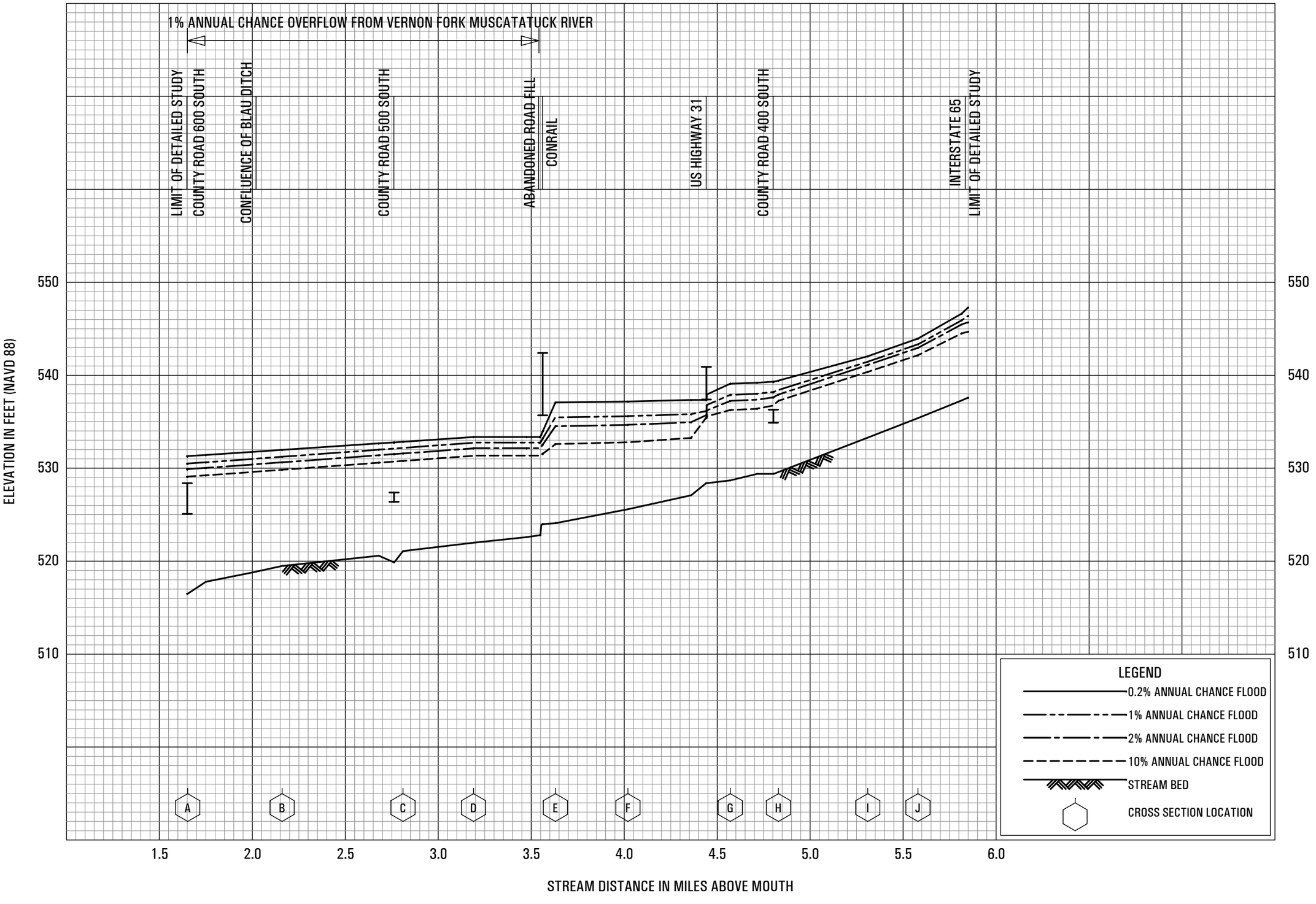
EAST FORK WHITE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

05P



FLOOD PROFILES

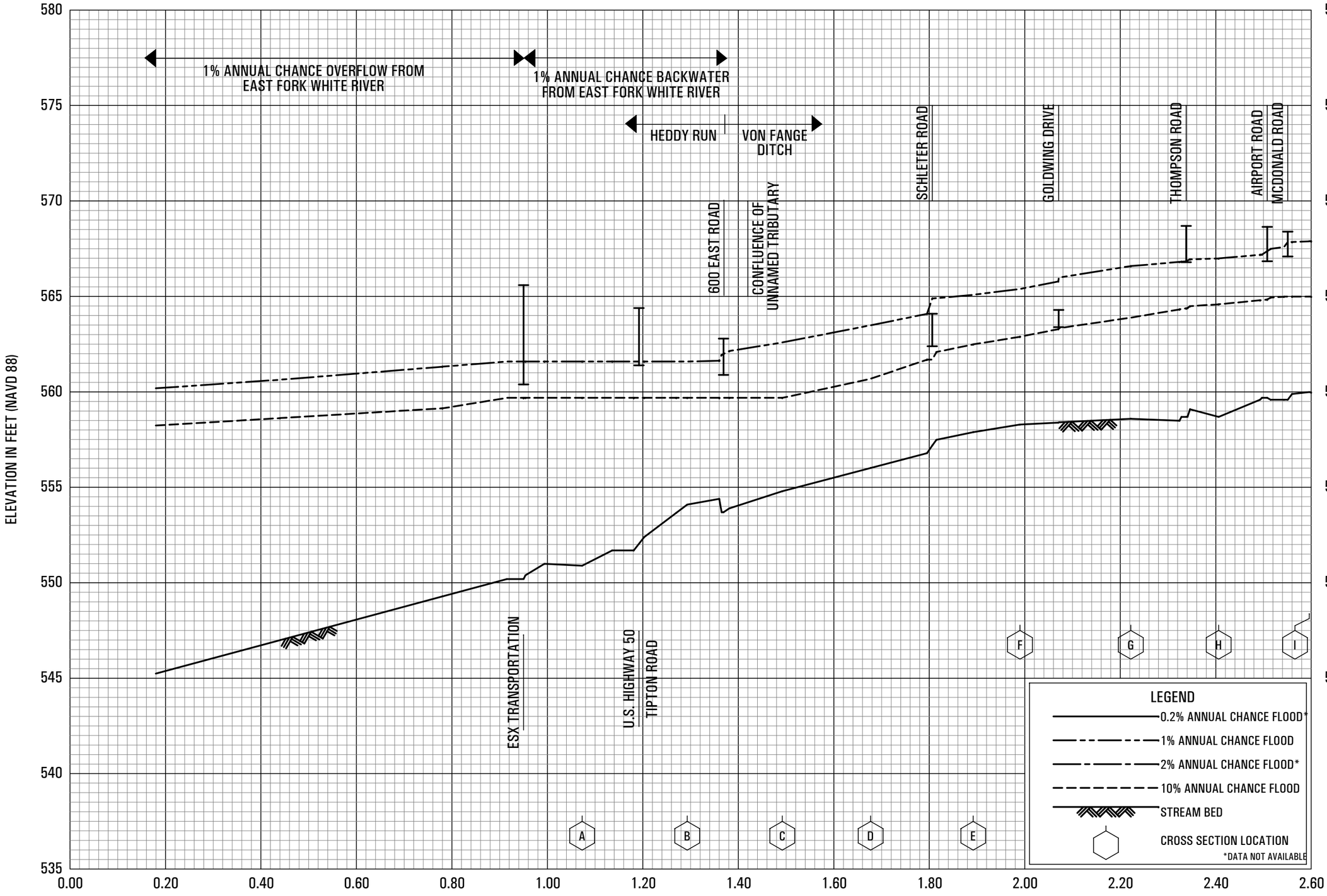
GRASSY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

06P



FLOOD PROFILES

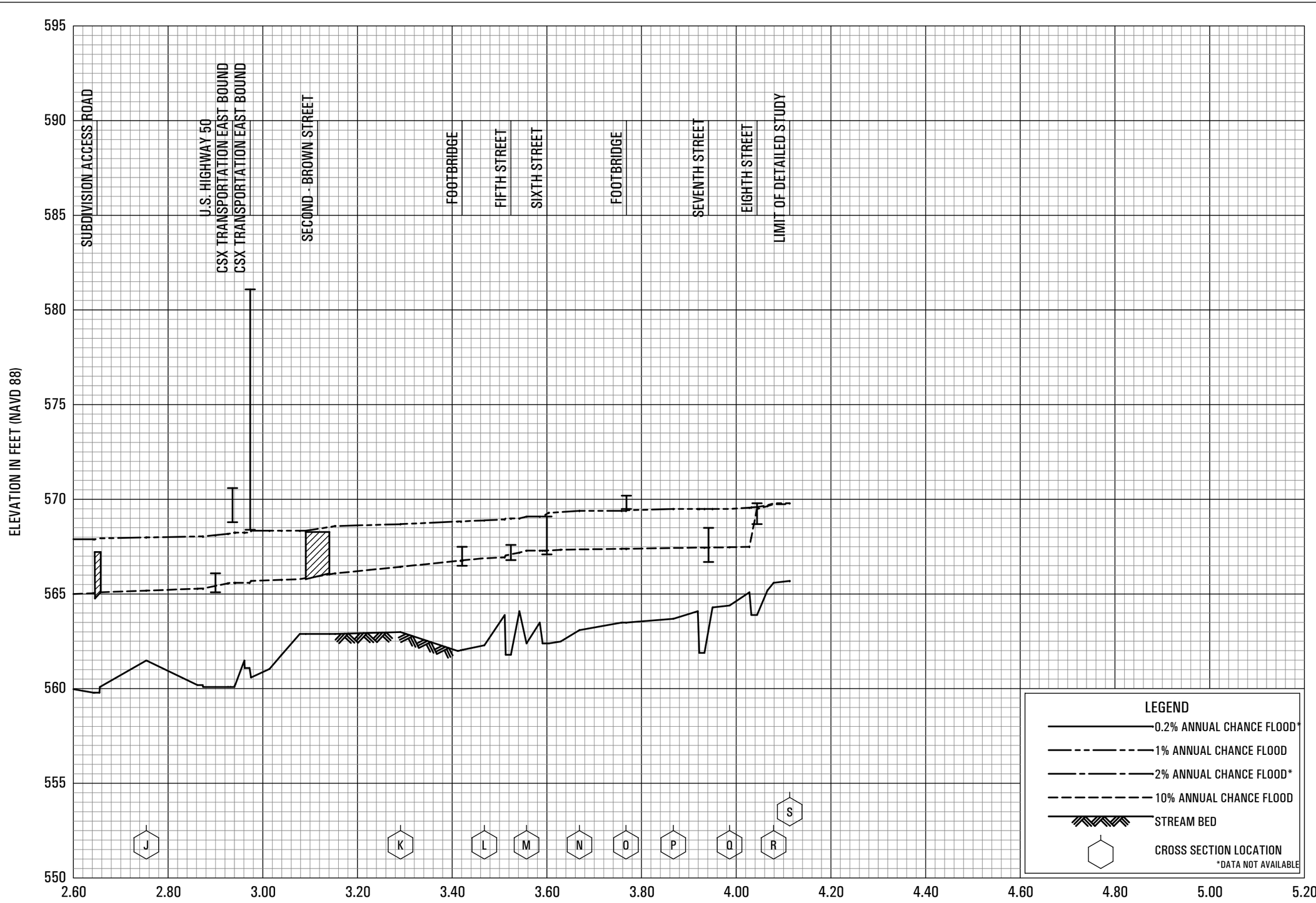
HEDDY RUN - VON FANGE DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

07P



ELEVATION IN FEET (NAVD 88)

STREAM DISTANCE IN MILES ABOVE CONFLUENCE WITH EAST FORK WHITE RIVER

FLOOD PROFILES

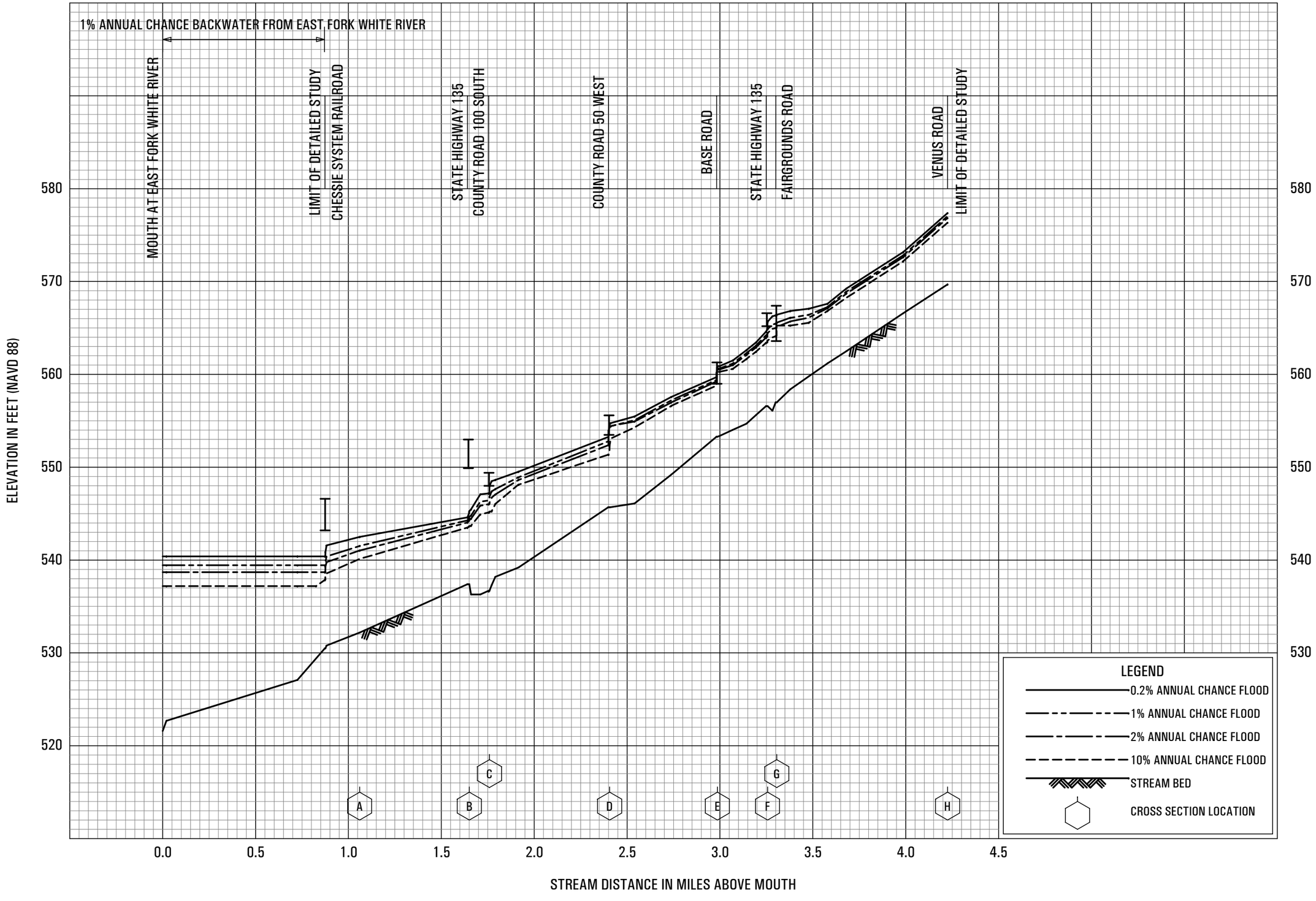
HEDDY RUN - VON FANGE DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

08P



FLOOD PROFILES

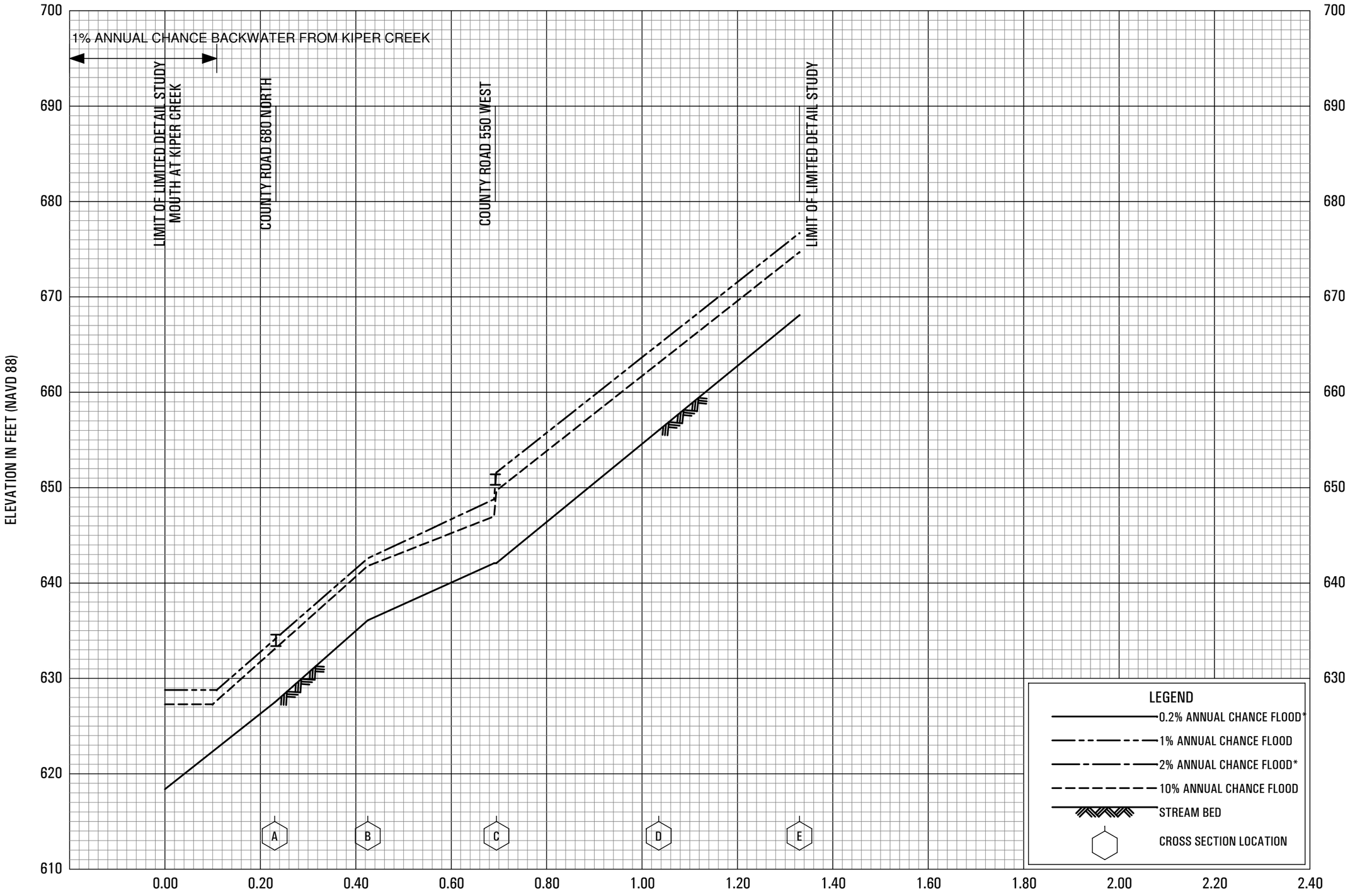
HOUGH CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

09P



FLOOD PROFILES

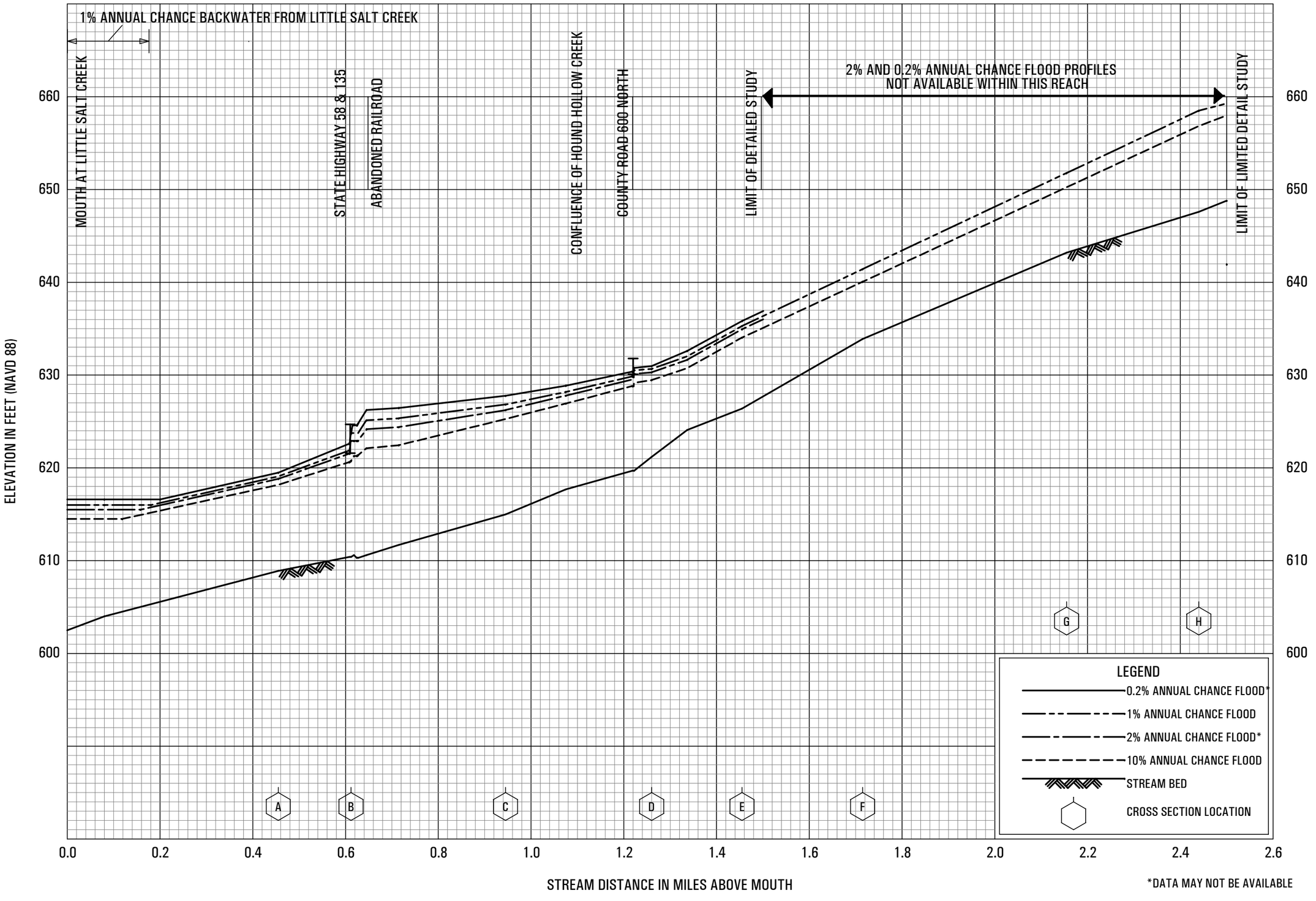
HOUND HOLLOW CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

10P



*DATA MAY NOT BE AVAILABLE

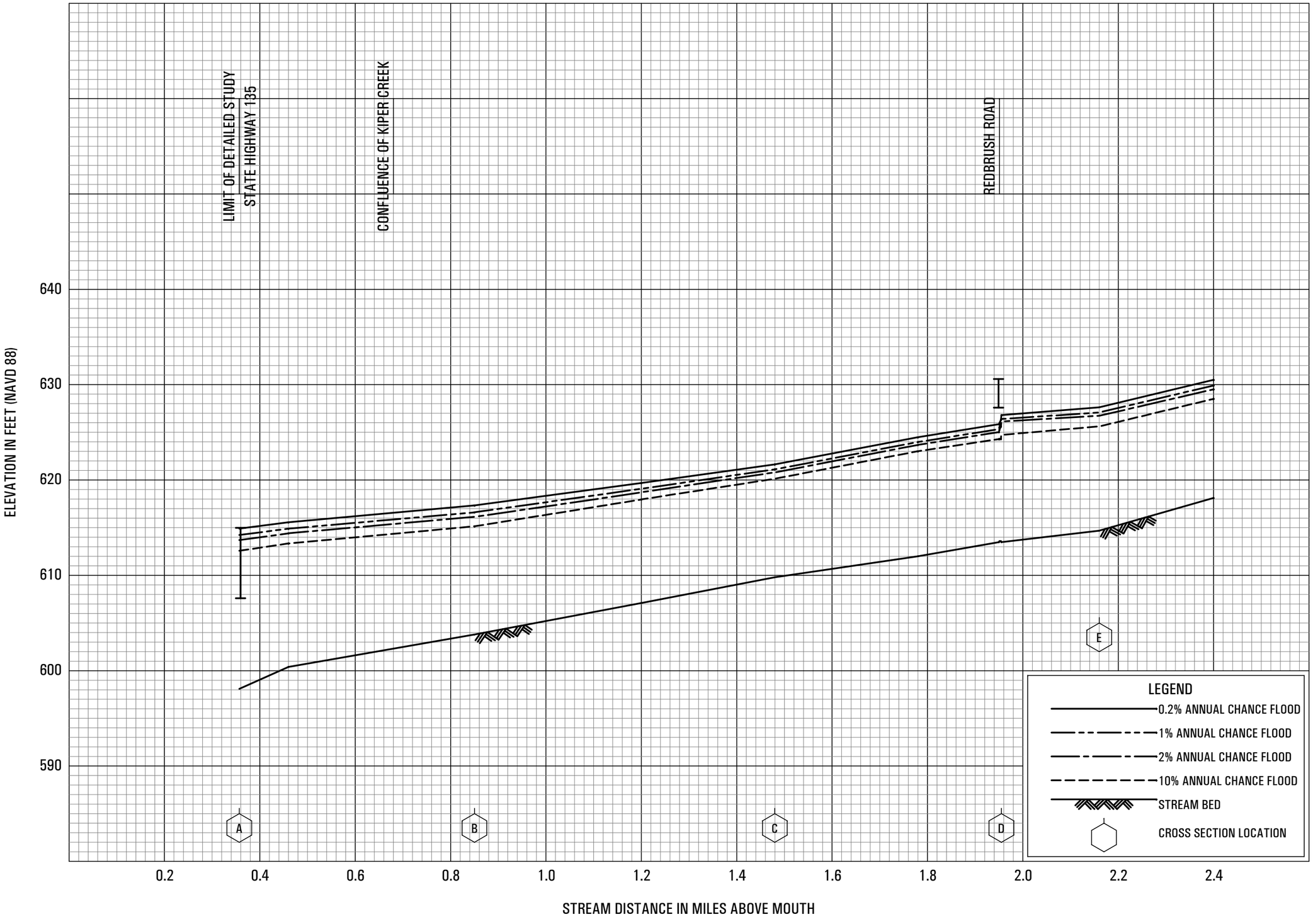
FLOOD PROFILES

KIPER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS



FLOOD PROFILES

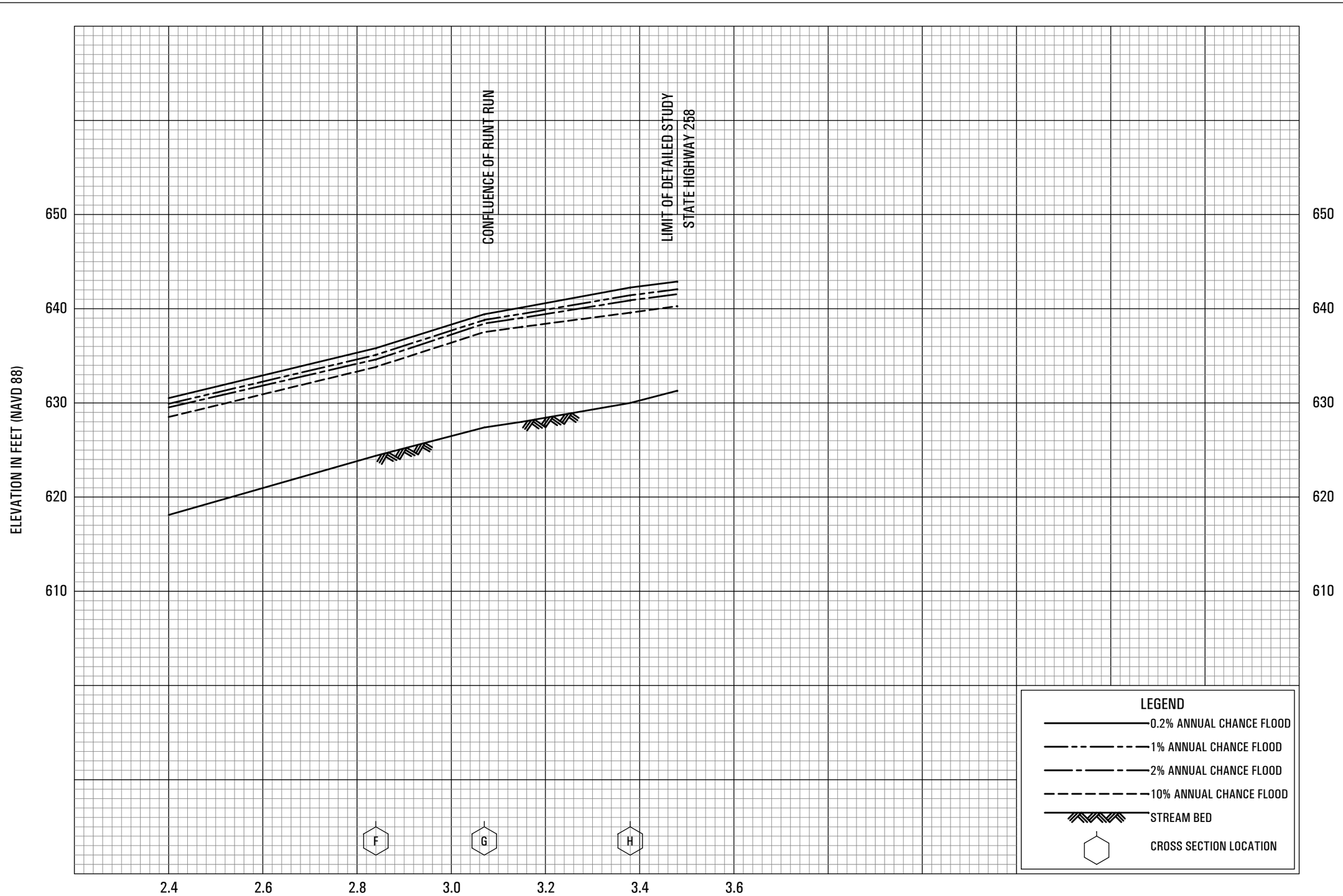
LITTLE SALT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

12P



FLOOD PROFILES

LITTLE SALT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

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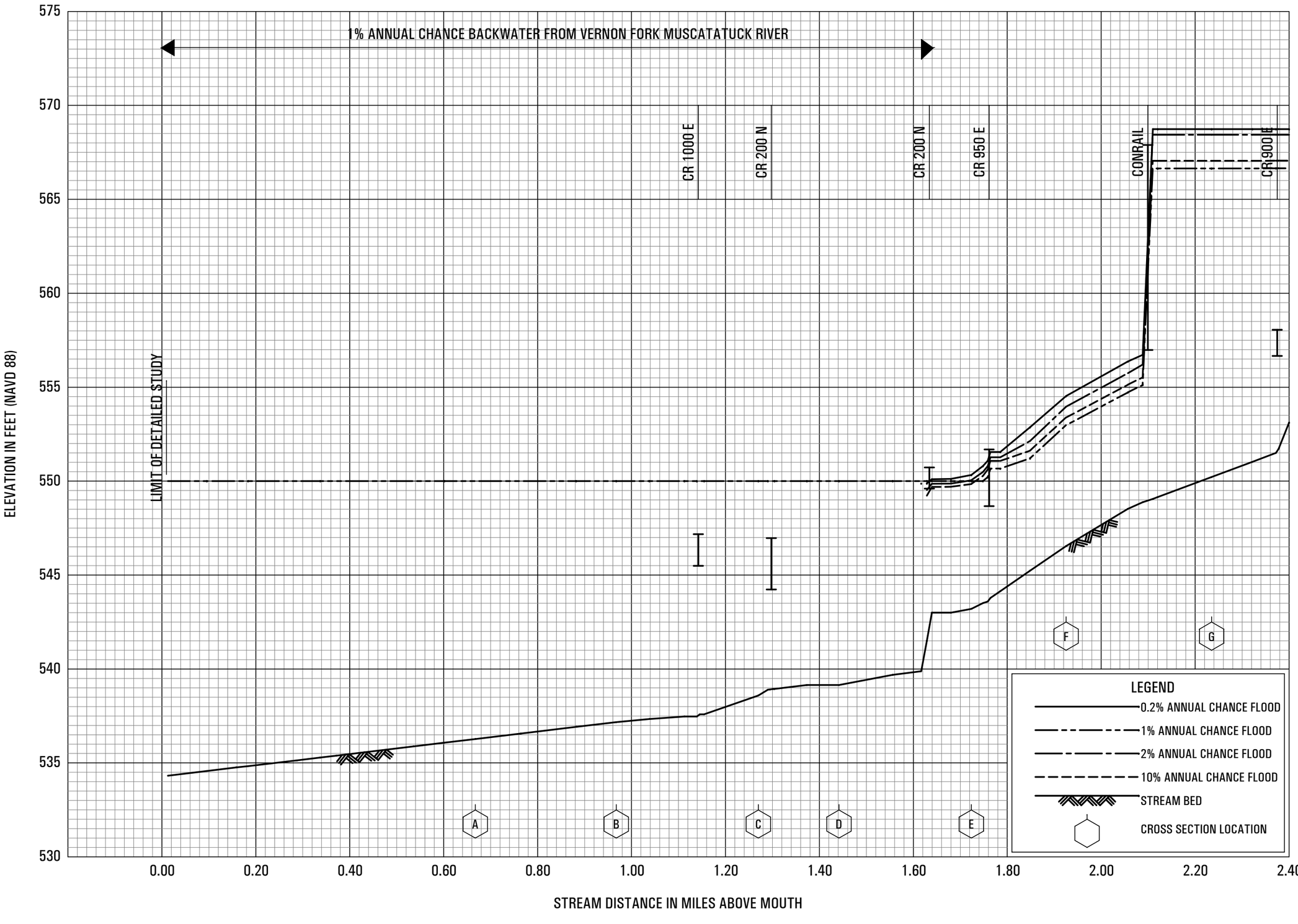


FLOOD PROFILES

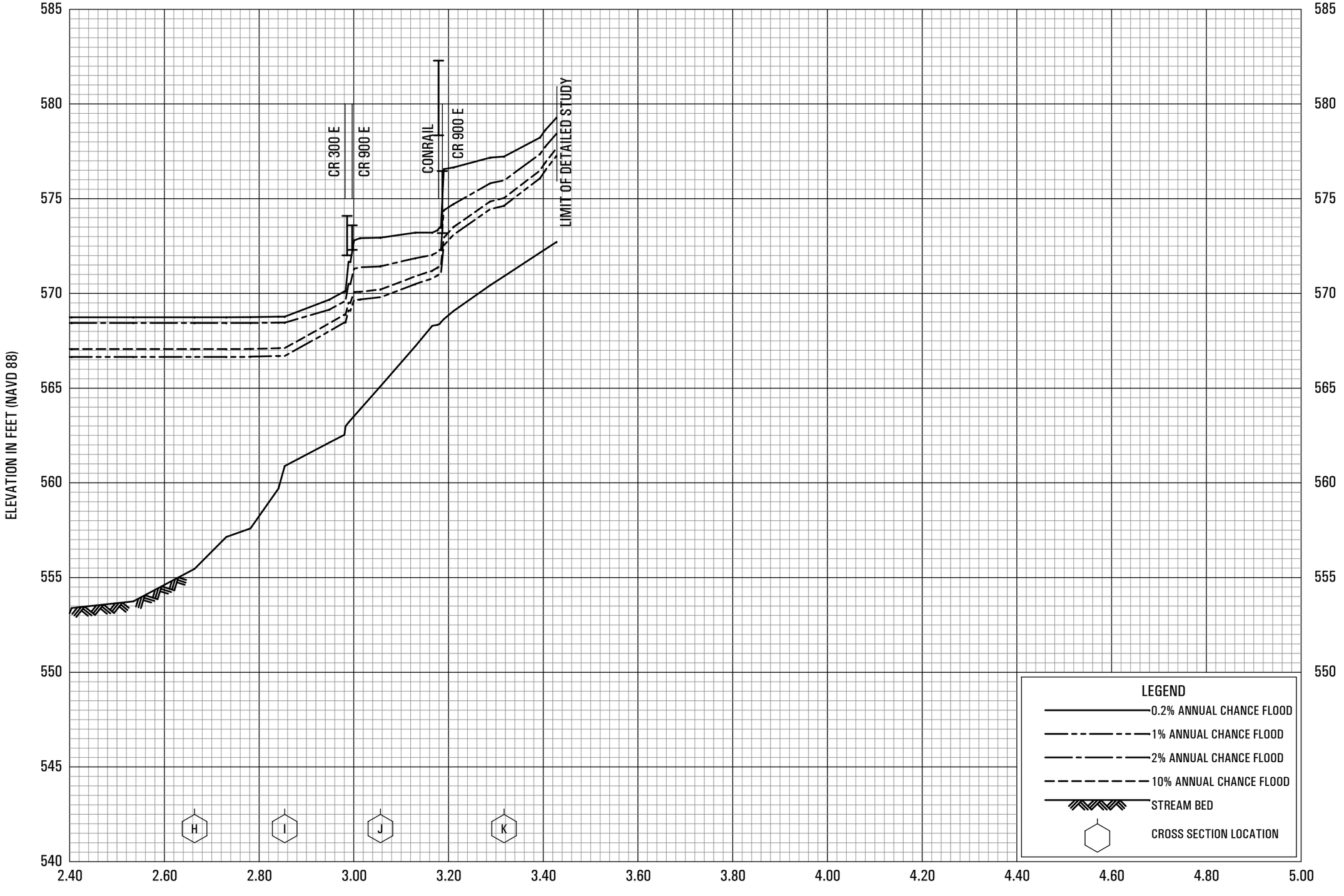
LUTHER MCDONALD DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

14P



FLOOD PROFILES

LUTHER MCDONALD DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

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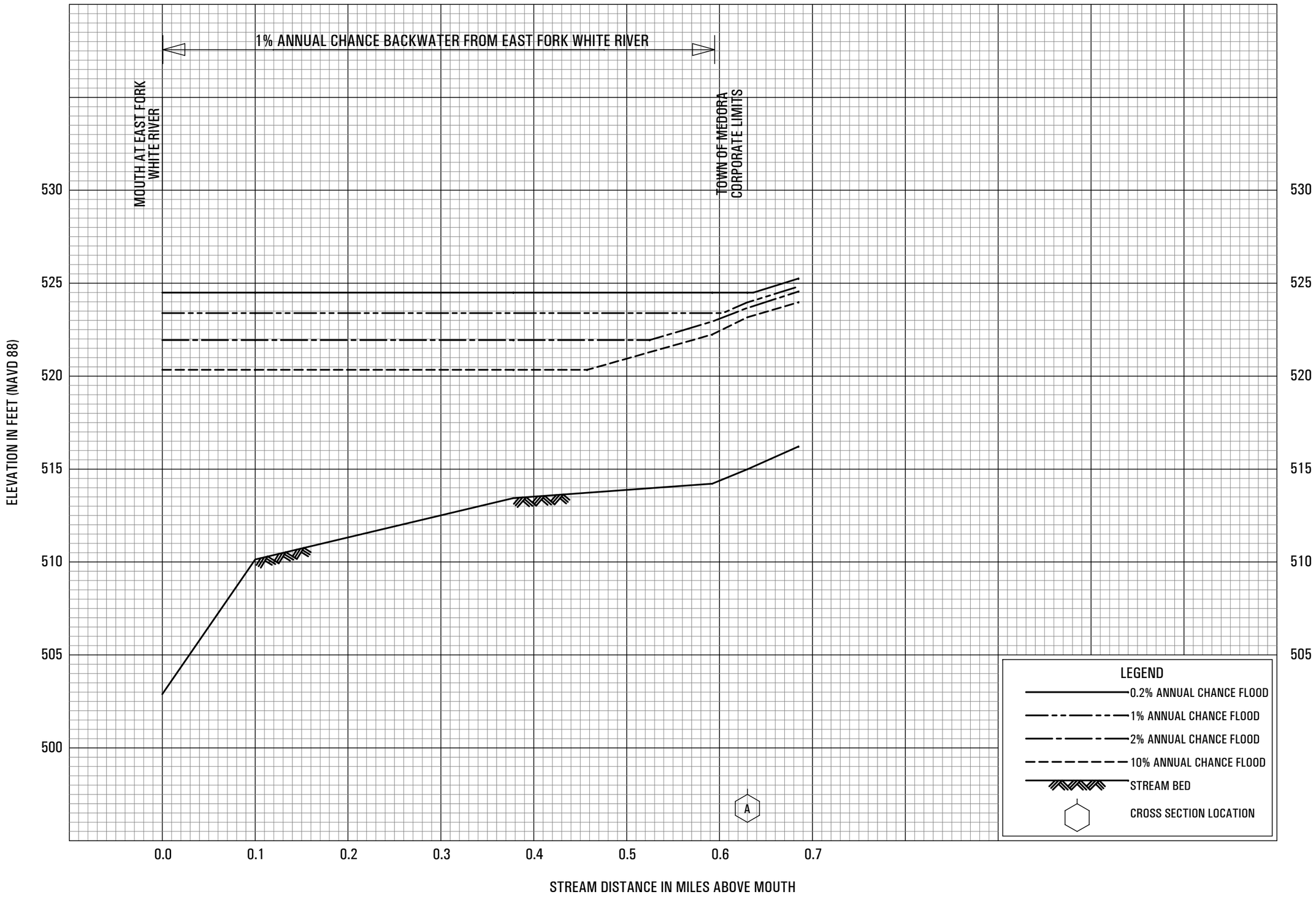


FLOOD PROFILES

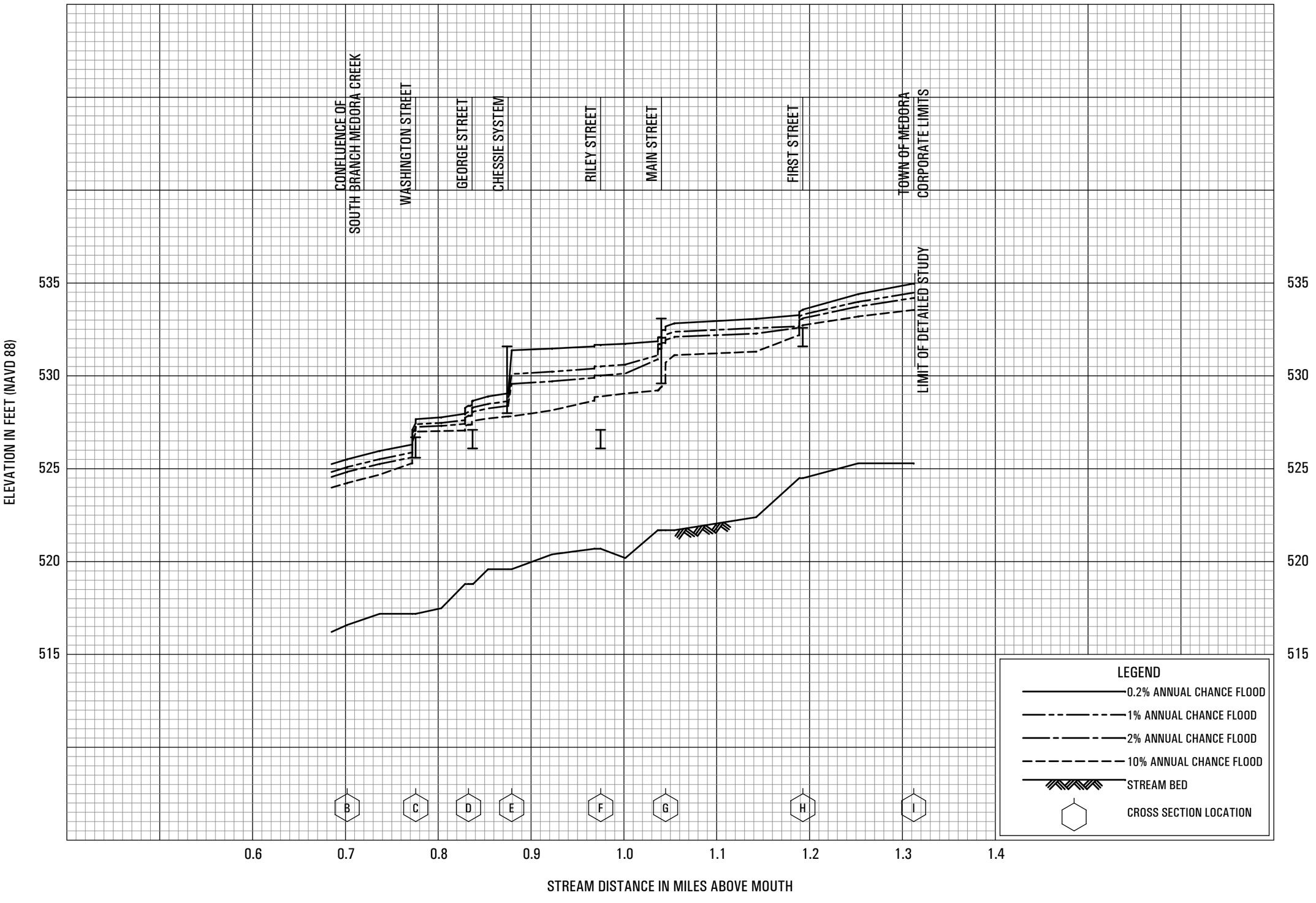
MEDORA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

16P



FLOOD PROFILES

MEDORA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

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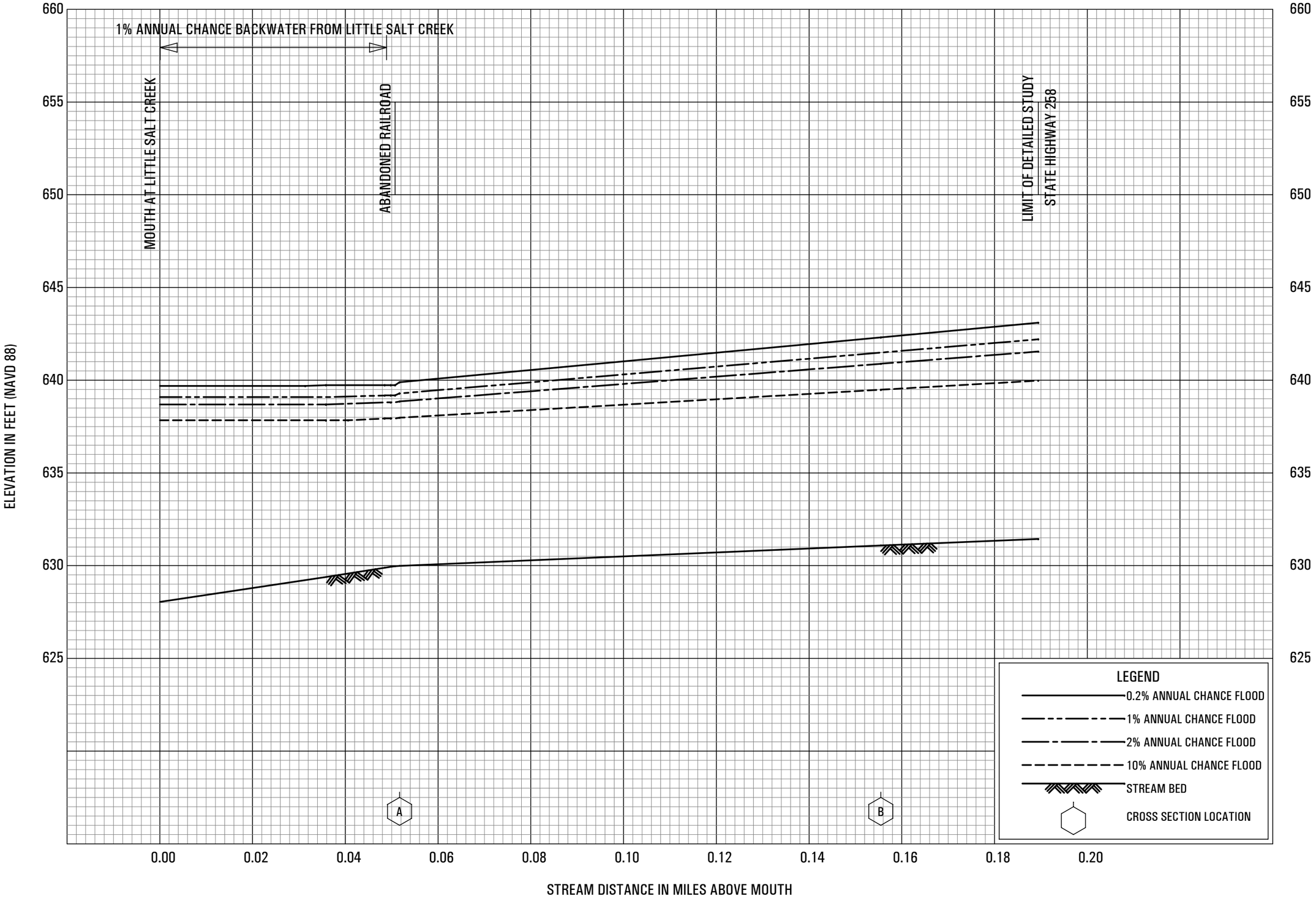


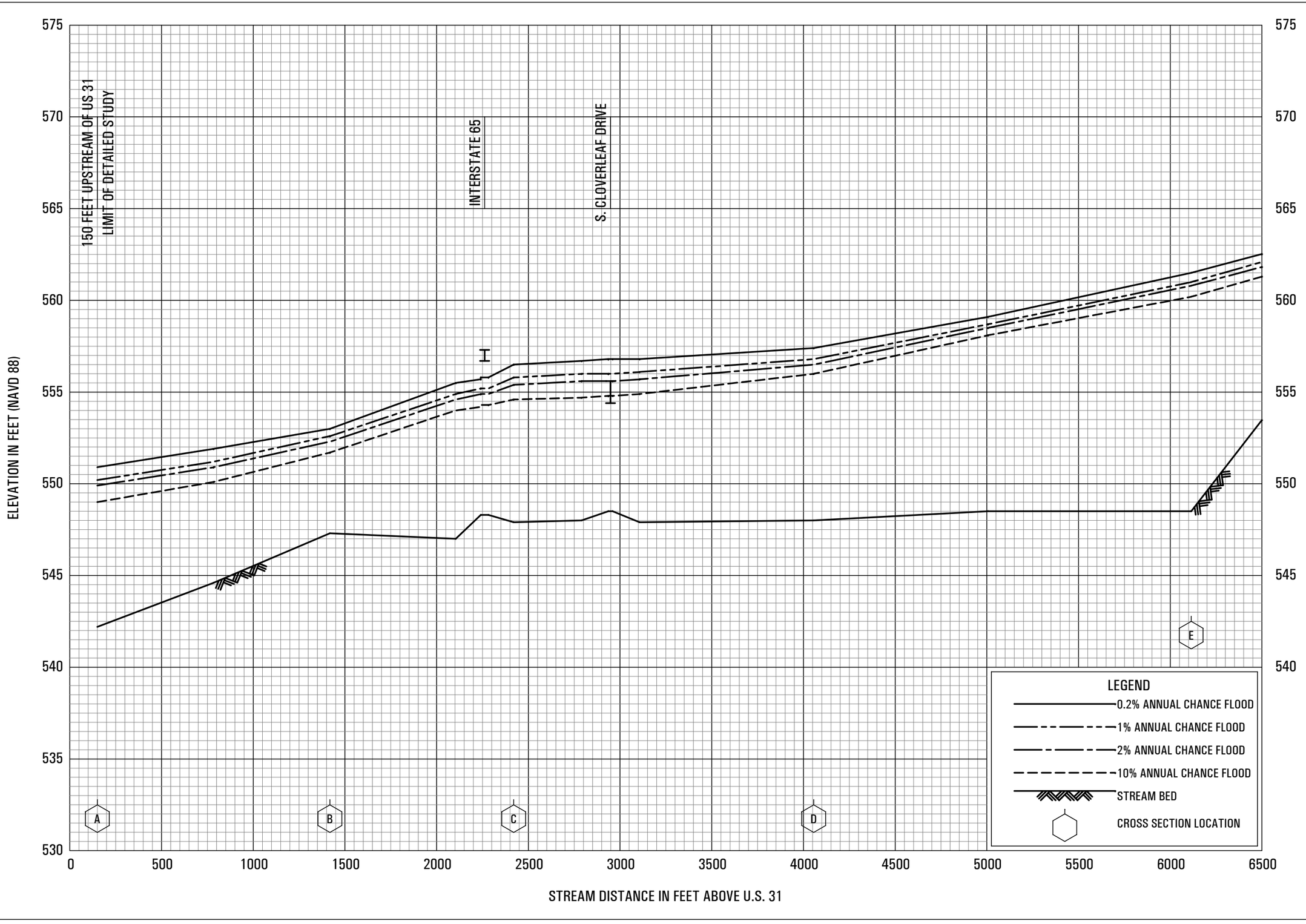
FLOOD PROFILES

RUNT RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS



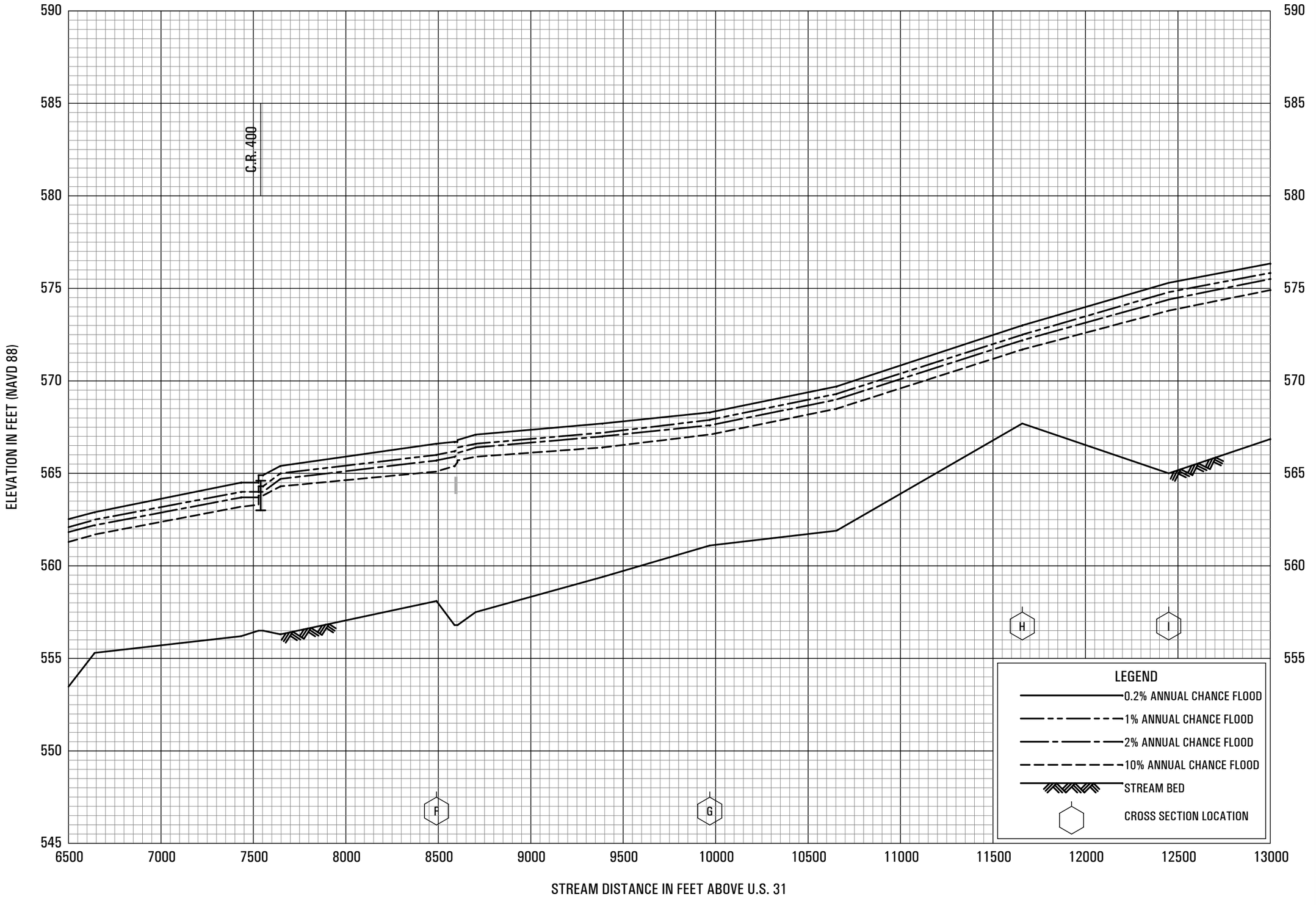
FLOOD PROFILES

SANDY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS



FLOOD PROFILES

SANDY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

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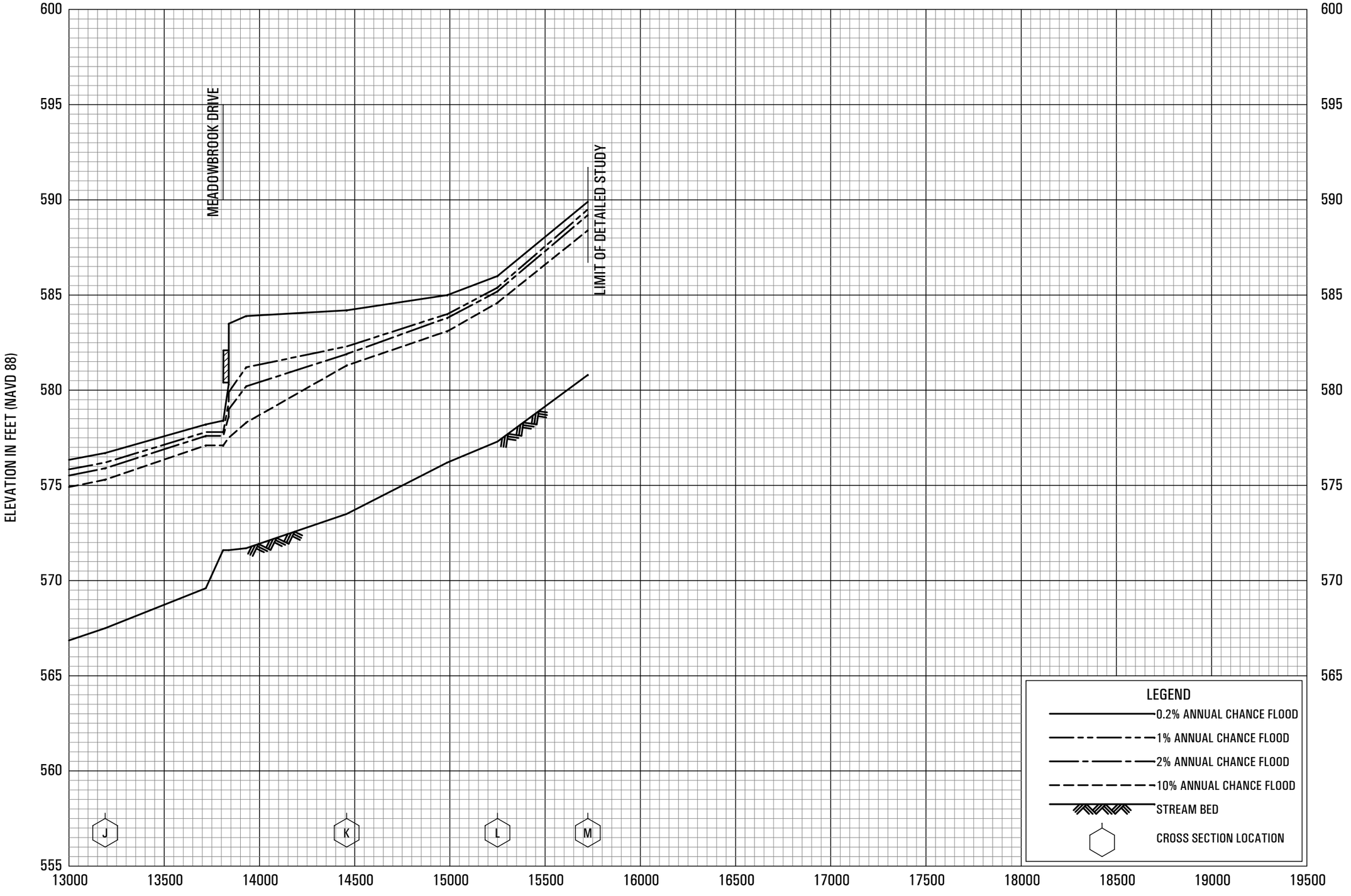


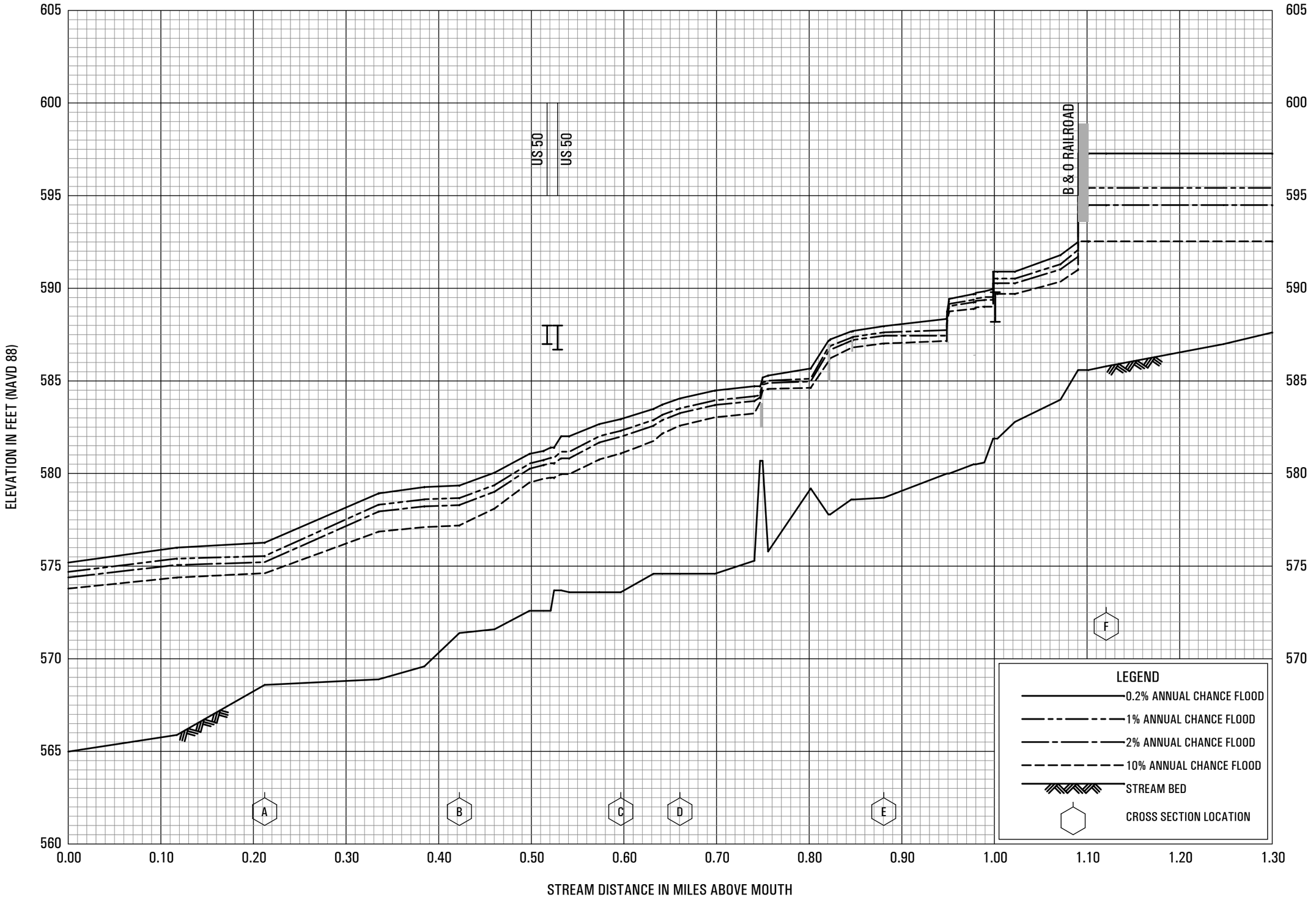
FLOOD PROFILES

SANDY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS



FLOOD PROFILES

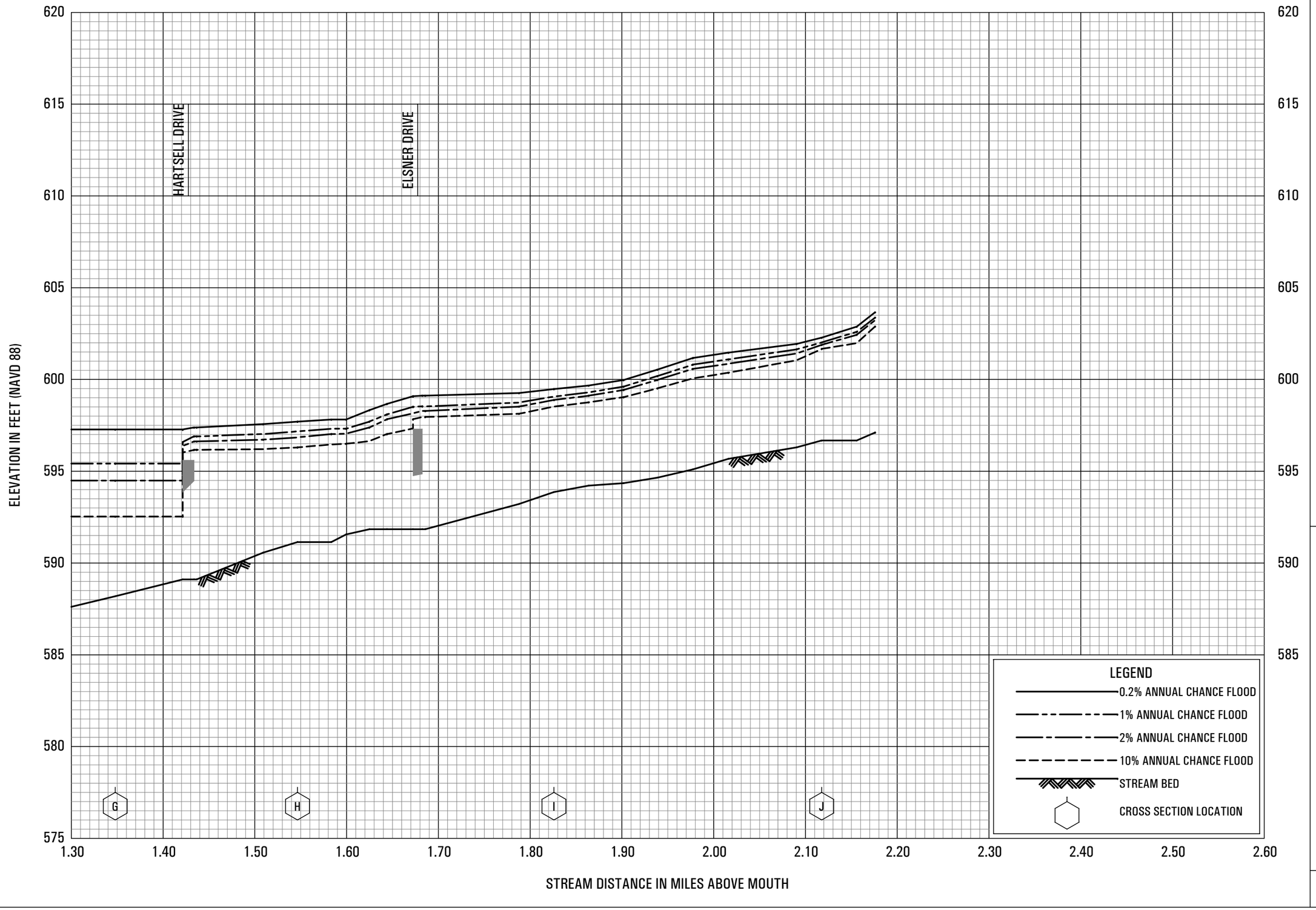
UNT SANDY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

22P



FLOOD PROFILES

UNT SANDY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

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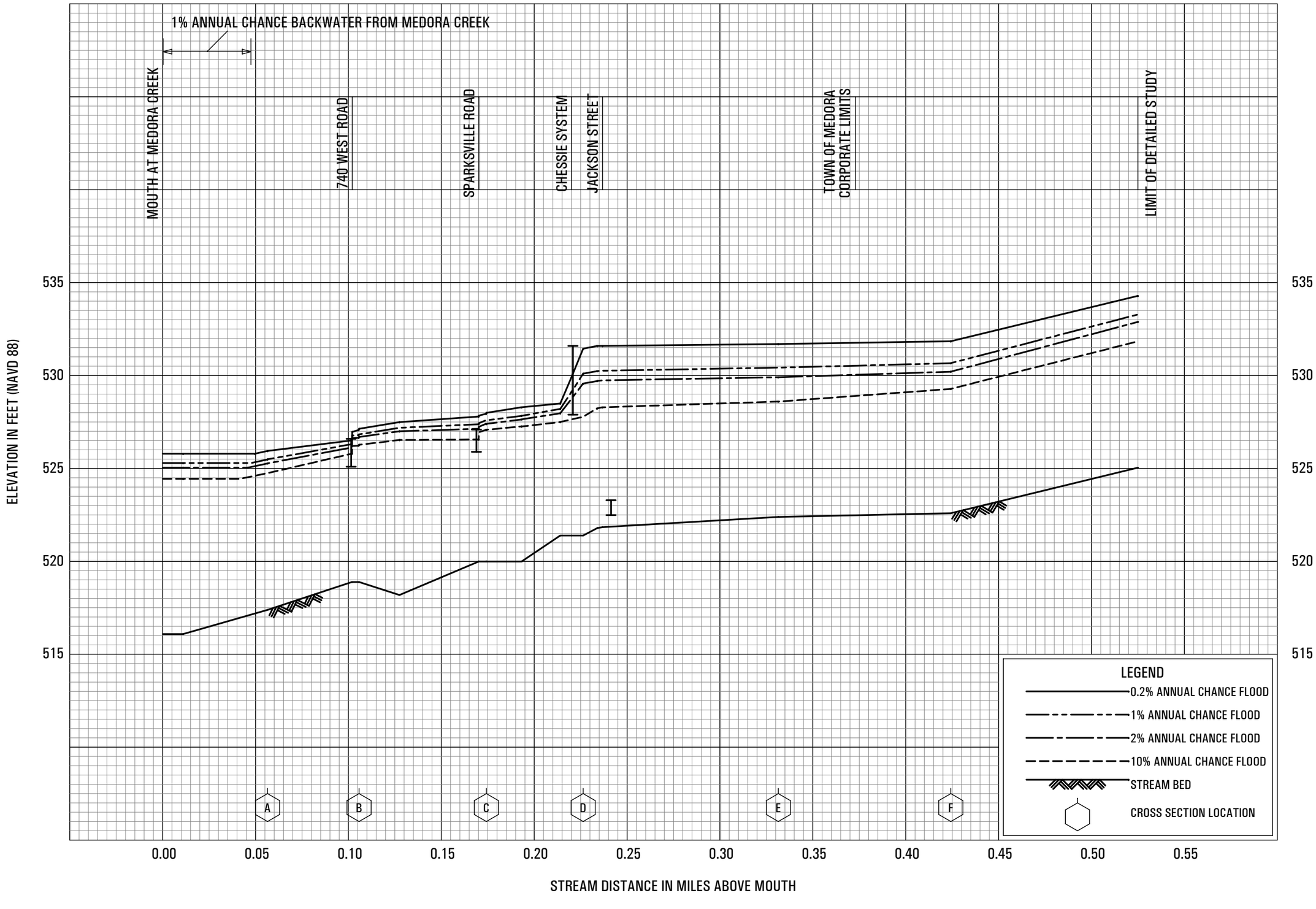


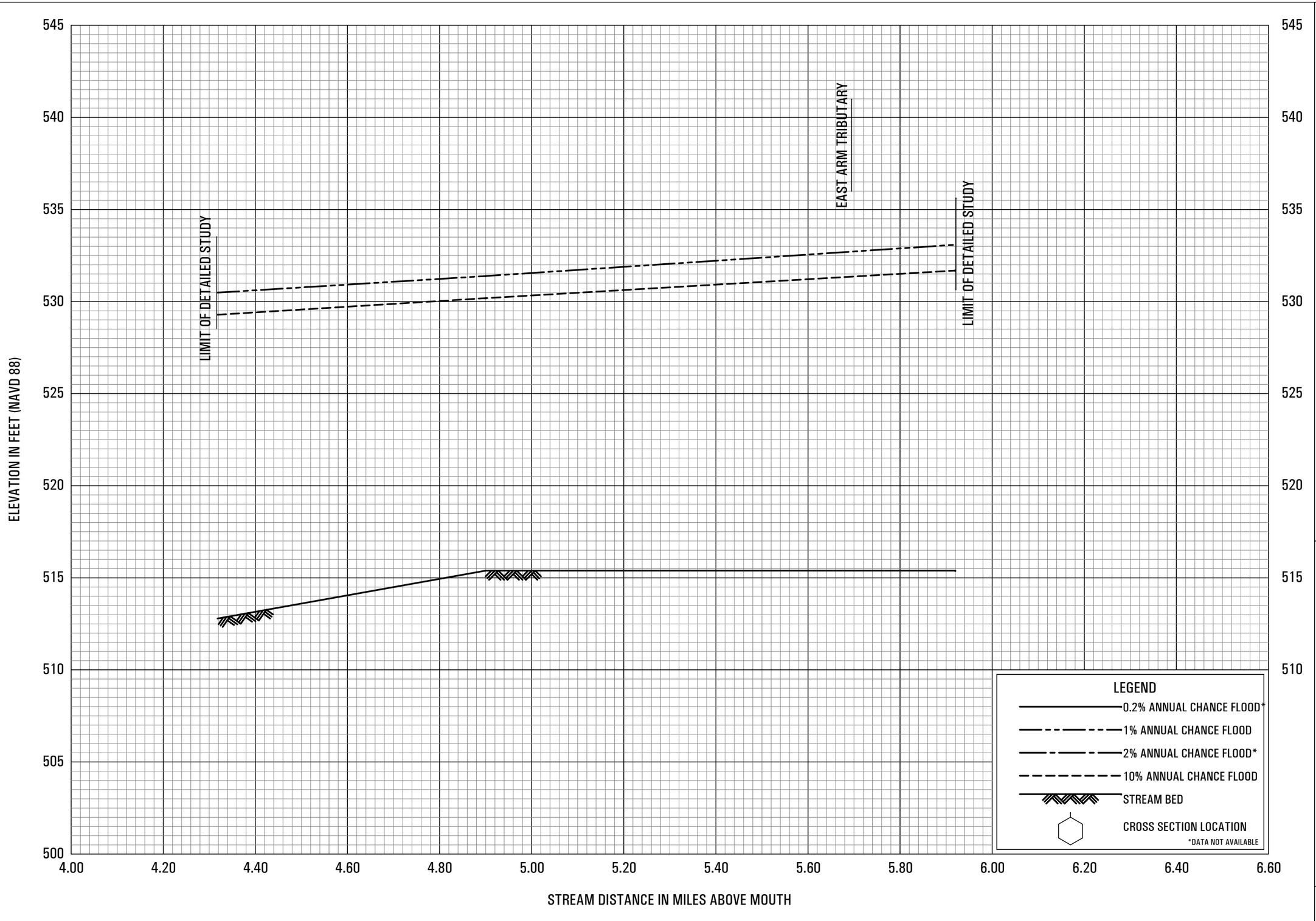
FLOOD PROFILES

SOUTH BRANCH MEDORA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS



FLOOD PROFILES

VERNON FORK MUSCATATUCK RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, IN

AND INCORPORATED AREAS

25P