

FLOOD INSURANCE STUDY

This Preliminary FIS report only includes revised Floodway Data Tables and revised Flood Profiles. The unrevised components will appear in the final FIS report.



LAFAYETTE PARISH, LOUISIANA AND INCORPORATED AREAS

Community Name	Community Number
Broussard, Town of	220102
Carencro, City of	220103
Duson, Town of	220104
Lafayette, City of	220105
Scott, City of	220106
Youngsville, City of	220358
Lafayette Parish (Unincorporated Areas)	220101



Lafayette Parish

REVISED PRELIMINARY
DECEMBER 19, 2014



Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
22055CV000A

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 at any time. In addition, part of this FIS may be revised by the Letter of Map Revision (LOMR) process, which does not involve republication or redistribution of the FIS report. It is, therefore, the responsibility of the users to consult with community officials and to check the community repository to obtain the most current FIS components.

Initial Parish-wide FIS Date: January 19, 1996

First Revised Parish-wide FIS Date: January 20, 1999 - to update corporate limits, to change Base Flood Elevations, to add Base Flood elevations, and to change zone designations

Second Revised Parish-wide FIS Date: <To Be Determined> to update corporate limits, to change Base Flood Elevations, to add Base Flood elevations, and to change zone designations

This Preliminary FIS report only includes revised Floodway Data Tables and revised Flood Profiles. The unrevised components will appear in the final FIS report.

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FLOOD INSURANCE STUDY
LAFAYETTE PARISH AND INCORPORATED AREAS, LOUISIANA

1.0 INTRODUCTION

1.1 Purpose of Study

This parish-wide Flood Insurance Study (FIS) revises previous FIS/Flood Insurance Rate Maps (FIRMs), for the geographic areas of Lafayette Parish, Louisiana, including the Cities of Carencro, Lafayette, Scott and Youngsville; the Towns of Broussard and Duson; and the unincorporated areas of Lafayette Parish (hereinafter referred to collectively as Lafayette Parish).

Only the portion of Town of Duson located in Lafayette Parish is included in this FIS. See the separately published FIS reports and Flood Insurance Rate Maps (FIRMs) for countywide map dates and flood hazard information outside of Lafayette Parish.

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

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

Please note that the City of Duson is geographically located in Lafayette and Arcadia Parishes. Only the Lafayette Parish portion of the City of Duson is mapped for this FIS. Please see the separately published Arcadia Parish FIS for portion of the City of Duson located in Arcadia Parish.

1.2 Authority and Acknowledgments

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

Information on the authority and acknowledgements for each jurisdiction shown in this parish-wide FIS, as compiled from their previously printed FIS reports, is shown below.

Pre-Parish-wide Revision

For the Town of Broussard, the hydrologic and hydraulic analyses for the original study effective March 16, 1988, were prepared by the U.S. Army Corps of Engineers (USACE) for the Federal Emergency Management Agency (FEMA), under Inter-Agency Agreement No. EMW-83-EM-1823, Project Order No. 9. That work was completed in August 1986.

For the City of Carencro, the hydrologic and hydraulic analyses for the original study effective November 5, 1980, were prepared by Pyburn & Odom, Inc., for FEMA, under Contract No. H-4813. That work was completed in July 1979. The hydrologic and hydraulic analyses for the revision effective December 4, 1984, were prepared by Dewberry & Davis for FEMA. That work was completed in February 1984. The information used in that revision was provided by the Acadian Metropolitan Code Authority.

For the Town of Duson, the hydrologic and hydraulic analyses for the FIS dated March 30, 1981, (FIRM dated September 30, 1981), were prepared by the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-18-78, Project Order No. 46. That work was completed in September 1980.

For the City of Lafayette, the hydrologic and hydraulic analyses for the original study effective September 30, 1980, were prepared by the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-16-75, Project Order No. 14. That work was completed in September 1977. The hydrologic and Hydraulic analyses for the revision effective July 3, 1985, were prepared by Dewberry & Davis for FEMA. That work was completed in February 1984. The information used in that revision was provided by the Acadian Metropolitan Code Authority. Another revision was completed in April 1987. It was based on information provided by the Acadian Metropolitan Code Authority.

For the City of Scott, the hydrologic and hydraulic analyses for the original study effective April 4, 1983, were prepared by the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-9-79, Project Order No. 14. That work was completed in May 1981. The hydrologic and hydraulic analyses for the revision effective December 4, 1984, were prepared by Dewberry & Davis for FEMA. That work was completed in February 1984. The Information used in that revision was provided by the Acadian Metropolitan Code Authority.

For the unincorporated areas of Lafayette Parish, the hydrologic and hydraulic analyses for the original study effective August 7, 1980, were prepared by the USACE for FEMA, under Inter-Agency Agreement No. IAA-H-16-75, Project Order No. 14. That work was completed in October 1978. The hydrologic and hydraulic analyses in the July 3, 1985, revision were prepared by Dewberry & Davis for FEMA. That work was completed in February 1984. The information used in that revision was provided by the Acadian Metropolitan Code Authority. The June 3, 1988 revision was completed in April 1987. It was based on information provided by the Acadian Metropolitan Code Authority and the original October 1978 hydrologic and hydraulic analyses.

January 19, 1996, Parish-wide Revision

The January 19, 1996, Parish-wide FIS was revised to incorporate the results of detailed hydrologic and hydraulic analyses for Coulee Ile Des Cannes, Lateral F, and Lateral F2. This work was performed by S. E. Huey Co., Consulting Engineers, for FEMA under Contract No. EMW-90-C-3130, and was completed in September 1992.

January 20, 1999, Parish-wide Revision

The hydrologic and hydraulic analyses for Bayou Queue de Tortue, South Branch, North Branch and Duson Branch were performed by S. E. Huey Co., Consulting Engineers, for FEMA, under Contract No. EMW-93-C-4148. This restudy was completed in February 1997.

The hydrologic and hydraulic analyses for all revised streams except Cypress Bayou, Cypress Bayou Ditch, and Bayou Carencro were prepared by the USACE, New Orleans District; Grooms Engineering; and an engineering consultant to the Town of Broussard Louisiana Department of Transportation and Development, Office of Highways, for FEMA. This work was completed in October 1990.

The hydrologic and hydraulic analyses for Cypress Bayou and Cypress Bayou Ditch were prepared by the S. E. Huey Co., Consulting Engineers, for FEMA, under Contract No. EMW-90-C-3130. That work was completed in January 1992.

New Revised Parish-wide Revision

The hydrologic and hydraulic analyses for all revised flooding sources were prepared by the USACE, New Orleans District and the University of Louisiana at Lafayette, as part of a contract with the USACE under Task Order 015, Task 42 for Lafayette Parish, Louisiana. This work was complete on August 23, 2004.

Additional work was performed by Camp Dresser & McKee Federal Programs (CDM), under USACE's interagency agreement with FEMA, Agreement No. HSFE06-04-X-0016. This work was completed on March 2007.

The updated hydrologic and hydraulic analyses on Beau Basin Coulee was prepared by Michael Baker International, LLC under an agreement with FEMA. This work was completed in 2011.

The updated hydrologic and hydraulic analyses for Coulee Ile Des Cannes, Coulee Granges, Coulee Ile Des Cannes Lateral 1, Coulee Ile Des Cannes Lateral 2, Coulee Ile Des Cannes Lateral 3, Coulee Ile Des Cannes Lateral 4 were performed by C.H. Fenstermaker under an agreement with FEMA, Lafayette Consolidated Government and The City of Scott, under contract number O.M.B. N.O. 1660-0016. This work was completed on October 2012.

Base map information is from the Army Corps of Engineers, New Orleans District, 2004.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 15. The horizontal datum was North America Datum 1983 (NAD 83), Geodetic Reference System 1980 (GRS 80) spheroid. Differences in datum, spheroid, projection, or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdictional boundaries. These differences do not affect the accuracy of this FIRM.

1.3 Coordination

The dates of the initial and final Consultation Coordination Officer (CCO) meetings held for Lafayette Parish and the incorporated communities within its boundaries are shown in Table 1, "Initial and Final Precountywide CCO Meeting Dates."

**TABLE 1 – INITIAL AND FINAL PRECOUNTYWIDE CCO MEETINGS
DATES**

<u>Community Name</u>	<u>Initial CCO Date</u>	<u>Final CCO Date</u>
Lafayette Parish, Unincorporated Areas	January 22, 1975 November 20, 1991 June 24, 1995	August 14, 1979 October 28, 1993 September 23, 1997
City of Lafayette	January 22, 1975 July 1975	July 19, 1979 *
Town of Broussard	January 29, 1984 October 29, 1991	April 8, 1987 *
City of Carencro	May 1978	April 27, 1979
Town of Duson	December 1977 June 24, 1995	November 10, 1980 September 23, 1997
City of Scott	December 1978	April 30, 1982

* Data either not available or not applicable.

For the January 19, 1996, parish-wide FIS, the initial CCO meeting was held on November 20, 1991 and attended by representatives of the City of Scott and the Study Contractor. The final CCO meeting was held on October 28, 1993, and attended by members of the Parish, incorporated communities, and FEMA.

For the January 20, 1999, parish-wide FIS, the initial CCO meeting was held on June 24, 1995, and attended by representatives of the Town of Duson, Louisiana and S.E. Huey Co. The final meeting was held on September 23, 1997, and attended by representatives of FEMA, the Lafayette Parish Public Works Department, and the Floodplain Administration.

For this parish-wide study the initial CCO meeting was held on October 1, 2004, and attended by representatives of FEMA, the communities, and the study contractors to explain the nature and purpose of Flood Insurance Studies and to identify the streams to be studied by detailed methods.

For this parish-wide study the second CCO meetings was held on December 18, 2007, and attended by representatives of FEMA, the communities, and the study contractors in order to review the results of the studies. All problems raised at that meeting have been addressed in this study.

For this parish-wide study the final CCO meetings was held on [to be determined], and attended by representatives of FEMA, the communities, and the study contractors in order to review the results of the studies. All problems raised at that meeting have been addressed in this study.

2.0 **AREA STUDIED**

2.1 Scope of Study

This parish-wide FIS covers the geographic area of Lafayette Parish, Louisiana. The areas studied by detailed methods were selected with priority given to all known flood hazard areas and areas of projected development and proposed construction.

All or portions of the flooding sources listed in Table 2, "Flooding Sources Studied by Detailed Methods," were previously studied by detailed methods. The limits of detailed study are indicated on the Flood Profiles (Exhibit 1) and on the FIRMs (Exhibit 2).

TABLE 2 – FLOODING SOURCES STUDIED BY DETAILED METHODS

<u>Flooding Source</u>	<u>Flooding Source</u>
Acadiana Coulee (Vermilion Lateral 2)	Coulee Mine - Lateral No. 1 (West Channel)
Bayou Carencro	Cypress Bayou Ditch
Bayou Parc Perdue	Dan Dabaillion Coulee (Francois Coulee)
Bayou Queue de Tortue	Darby Coulee
Beau Basin Coulee	Duson Branch
Broadmoor Coulee	Edith Coulee
Coulee Bend	Gaston Coulee (North)
Coulee Des Poches / Grenovillieres Swamp	Gaston Coulee (South)
Coulee Fortune North (Cypress Bayou)	Grand Avenue Coulee / Upper Reach
Coulee Fortune South	Isaac Verot Coulee – Lateral 2
Coulee Ile Des Cannes	Isaac Verot Coulee – Lateral 2A
Coulee Ile Des Cannes - Lateral 1	Isaac Verot Coulee – Lateral 3
Coulee Ile Des Cannes - Lateral 2	Jupiter Street Coulee
Coulee Ile Des Cannes - Lateral F (Lateral 3)	Manor Park Coulee
Coulee Ile Des Cannes - Lateral F2	North Branch
Coulee Ile Des Cannes - Lateral 4	Old Coulee Mine
Coulee Ile Des Cannes - Lateral 5	Point Brule Coulee
Coulee Lantier	Saint John Coulee
Coulee LaSalle	South Branch
Coulee Mine	Vermilion River
Coulee Mine Branch	Webb Coulee
Coulee Mine - Lateral No. 1 (East Channel)	West Coulee Mine

This parish-wide FIS reflects changes to the corporate limits for the unincorporated areas of Lafayette Parish, and the incorporated areas of the City of Carencro, Lafayette, Scott, Youngsville, and the Towns of Broussard and Duson.

This revision was carried out in order to include flood hazard information for the incorporated communities and unincorporated areas within Lafayette Parish; as part of this revision, updated analyses were included for the flooding sources shown in Table 3, "Scope of Revision".

All or portions of the numerous flooding sources in this parish-wide FIS were studied by approximate methods. 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 Lafayette Parish.

TABLE 3 – SCOPE OF REVISION

<u>Flooding Source</u>	<u>Limits of Revised or New Detailed Study</u>
Acadiana Coulee (Vermilion Lateral 2)	From its confluence with the Vermilion River to approximately 2 miles upstream to Guidry Road
Bayou Carencro	From its confluence with the Vermilion River to approximately 12.5 miles upstream to Billeaux Drive
Bayou Parc Perdue	From the Lafayette Parish corporate limit to approximately 6 miles upstream to Fortune Road
Bayou Queue de Tortue	From the Lafayette Parish corporate limit to approximately 16.7 miles upstream to Whitmore Road
Beau Basin Coulee	From its confluence with the Vermilion River to approximately 6.3 miles upstream to I-49
Broadmoor Coulee	From its confluence with the Vermilion River to approximately 1.5 miles upstream to Robley Road
Coulee Des Poches / Grenovillieres Swamp	From its confluence with the Vermilion River to approximately 5 miles upstream to the Southern Pacific Railroad
Coulee Fortune North (Cypress Bayou)	From its confluence with the Vermilion River to approximately 3.8 miles upstream to S. Morgan Street
Coulee Fortune South	From the Lafayette Parish corporate limits to approximately 4.2 miles upstream to Heart D. Farm Road
Coulee Ile Des Cannes and its tributaries	From its confluence with the Vermilion River to approximately 34.3 miles upstream to Cocodrill Road

TABLE 3 – SCOPE OF REVISION (continued)

<u>Flooding Source</u>	<u>Limits of Revised or New Detailed Study</u>
Coulee Lantier	From its confluence with the Vermilion River to approximately 2.5 miles upstream to Magellan Road
Coulee LaSalle	From the Lafayette Parish corporate limits to approximately 3.9 miles upstream to Cane Break Road
Coulee Mine and its tributaries	From its confluence with the Vermilion River to approximately 24 miles upstream to Emile Drive
Dan Dabaillion Coulee (Francois Coulee)	From its confluence with the Vermilion River to approximately 5.9 miles upstream to Guidry Lane
Darby Coulee	From its confluence with the Vermilion River to approximately 3.3 miles upstream to LA Highway 339
Edith Coulee	From its confluence with the Vermilion River to approximately 1.7 miles upstream to LA Highway 733
Grand Avenue Coulee	From its confluence with the Vermilion River to approximately 2.1 miles upstream to Crawford Street
Isaac Verot Coulee and its tributaries	From its confluence with the Vermilion River to approximately 11.3 miles upstream to Highway 89
Jupiter Street Coulee	From its confluence with the Webb Coulee to 1.0 mile upstream to Southern Pacific Railroad
Manor Park Coulee	From its confluence with the Vermilion River to approximately 2.6 miles upstream to Parklane Road
Point Brule Coulee	From the Lafayette Parish boundary line to approximately 1.4 miles upstream to the Lafayette Parish boundary line
Vermilion River	For approximately 61 miles, from a point in Perry, Vermilion County, to the confluence with Bayou Carencro
Webb Coulee (Lower Reach)	From its confluence with the Vermilion River to approximately 1.9 miles upstream to Jupiter Street Coulee

This parish-wide FIS also incorporates Coulee Ile Des Cannes and tributaries data created by C.H. Fenstermaker under contract number O.M.B. N.O. 1660-0016, with FEMA, Lafayette Consolidated Government and The City of Scott. The revision affects the communities the Cities of Lafayette and Scott, as well as the Unincorporated Areas of Lafayette Parish, LA. This work was completed on October 2012.

This parish-wide FIS also incorporates a revised study by detailed methods on Beau Basin Coulee created by Michael Baker International, LLC in 2011; using a steady model developed in HEC-RAS v3.1.3.

2.2 Community Description

Lafayette Parish is located in the southwest Louisiana Bayou country which has become famous the world over as the “Cajun Country.” The climate is characterized by warm summers and mild winters. The normal annual precipitation averages 60.48 inches. The parish covers approximately 270 square miles, of which about 300 acres is water. It is located about 35 miles from the Gulf of Mexico and is bordered by St. Martin Parish and St. Mary Parish on the east, St. Landry Parish to the north, Vermilion Parish on the south and Acadia Parish on the west. The oil industry plays a vital role in the parish economy, yet the area remains diversified, depending greatly upon agriculture and distribution of retail and wholesale trade. The population of Lafayette Parish in the year 2010 was reported to be 221,578 per U.S. Bureau of the Census (Reference 1).

The Vermilion River is the major waterway in the parish. Its head of navigation lies within the City of Lafayette. The majority of streams in the parish contribute flow to the Vermilion River. The river flows through Lafayette Parish and Vermilion Parish. It passes near several communities and across the Intracoastal Waterway before it empties into Vermilion Bay, which connects the Gulf of Mexico. The drainage pattern of the Vermilion River system is complex in nature because it serves as a tributary to Bayou Teche via Bayou Fusilier in the upper reaches near Arnaudville, Louisiana. It is also connected to Bayou Teche through the privately owned Evangeline (Ruth) Canal. The Bayou Fusilier control structure, Keystone Dam, and the Evangeline Canal structures are used to regulate the distribution of flows for irrigation and navigation purposes during low flows. The low marsh area on the left descending bank between Lafayette and Breaux Bridge serves as a ponding area during high flood stages. The elevation of this marsh varies between 10 and 15 feet.

Most of the development along the Vermilion River is located in high ridges to the west or right descending bank above the floodplain. Parks, golf courses, power plants, sewage disposal plants, and residential homes are located close to the channel.

Coulee Mine and Lateral No. 1 (East and West Channels) drain sparsely developed areas in the upper reaches and moderately developed areas in the lower reaches. This area is located on flat terrain approximately 20 to 35 feet in elevation.

Grand Avenue Coulee, which is located on a plateau 25 to 30 feet high, drains into the confined channel of the Vermilion River. The lower reaches of Breaux Bridge Coulee and Francois Coulee, which have elevations varying between 10 and 15 feet, cut across the flat floodplain of the Vermilion River. The upper reaches of Breaux Bridge Coulee and Jupiter Street Coulee have elevations varying between 30 and 40 feet.

There is commercial development located on U.S. Route 167, State Route, 182, St. Peter Street, and Romer Street. There is a mixture of commercial and light industrial

development along Railroad Street. Commercial areas are expected to expand to accommodate new residential development. Much of the existing residential development is located in the floodplains of Beau Basin and Gaston Coulee, but large portions of land outside the floodplains are available for development.

The Memphis-Frost Association soils cover most of the parish. These are gently sloping to nearly level loamy soils that formed in loess. While the Memphis soils (on the gently sloping stream divides and drainage way side slopes) are well drained, the Frost soils (in long narrow depressions along drainage ways) are poorly drained. Open drainage ditches are provided throughout the community, and several hundred feet of storm sewer culverts are being installed.

2.3 Principal Flood Problems

During high flood states, an unusual phenomena occurs on the Vermilion River. When the river below Pinhook Bridge is unable to carry high flows, the direction is reversed upstream toward the low marsh areas east of Lafayette Parish. This reversal is limited to the reach between Pinhook Bridge and Long Bridge where the left descending bank borders a low swamp area. When the stages downstream of Pinhook Bridges are relatively low, the direction of flow is the normal downstream direction.

Significant floods are reported to have occurred as early as 1907. In researching rainfall records, using high-water stages on the Vermilion River and interviewing local citizens, it was determined that other significant floods occurred in 1927, 1940, 1946, 1947, 1953, 1955, 1959, 1961, 1964, 1966, 1969, 1971, 1977, 1980, 1982, 1989, 1993, 1995, 2001, and 2004.

The most severe flood in the study area occurred in August 1940 and approximated the Standard Project Flood (SPF). Studies of this flood showed extremely heavy rainfall at Lafayette FAA Airport daily rainfall station. For the four-day period of August 6-9, a rainfall of 27.33 inches was recorded; for the 10-day period of August 1-10, a rainfall of 37.36 inches was recorded. As this immense quantity of water began to run off, the slope of the ground and flat terrain, together with obstructed embankments, caused the flood to spread overland. The waters generally began throughout most of the flooded areas. In certain areas, most notably those lying to the north and west of St. Martinville, water continued to rise for several days. This area between the Teche and Vermilion ridges is normally drained by the Vermilion River. On this occasion, however, the Vermilion River, unable to carry the flow pouring in from the north and west, reversed its flow and begin to flow into the low marsh areas and to pour in excess water through the Evangeline Canal into Bayou Teche.

A significant flood also occurred in the parish in December 1971. Significant amounts of rainfall started falling on December 1 and continued through December 6. The rainfall accumulation recorded for this period was 10.07 inches. The heaviest concentration was the rainfall of 5.09 inches that occurred on December 5. Observed amounts of rainfall at the recording gage were 5.80 and 8 inches for 24-hour and 48-hour durations, respectively. This prolonged rainfall caused higher stages than previous rainfalls of higher intensity and shorter duration.

The most recent flood to occur in the area was in April 1977. Rainfall for this flood was similar to the 1971 flood. Inspections on the ground and aerial over flights indicated that the 1977 flood inundated approximately the same areas as the December 1971 flood.

Backwater flooding along Beau Basin and Gaston Coulee occasionally causes flood problems in the City of Carencro. A survey of area residents revealed occasional serious flood problems, including water damage in homes. Although flooding of homes and businesses is relatively infrequent in most areas, floodwaters in yards, fields, and streets are not uncommon.

The history of flooding within the City of Scott indicates that flooding can occur during any season of the year. Floods occur due to limited stream capacities and because the nature of the terrain offers little relief. The existing channel capacities are exceeded by floods of low frequency that spread rapidly over the floodplains. Due to the flatness of the floodplains, they are entirely covered by floodwaters during the less frequent floods. After this condition occurs, increases in the discharges produce only minor increases in water-surface elevations. The principal sources of flooding in the City of Scott are from rainfall runoff and backwater from Lateral F, Lateral F2, and West Coulee Mine.

According to local officials, the main flooding problem the Town of Broussard has is caused by Coulee Des Poches and Grenovillieres Swamp. In this FIS, Grenovillieres Swamp is considered to be the headwaters of Coulee Des Poches.

Grenovillieres Swamp flows near U.S. Route 90 in the eastern portion of the Town of Broussard. The channel, deeply entrenched, flows in a northwestern direction from its headwaters. At a point approximately 2 miles downstream of the Southern Pacific Transportation Company spur, it confluences with a tributary to Coulee des Poches to form the main channel of Coulee Des Poches, which then flows in a northwestern direction discharging into the Vermilion River. Flooding along both Coulee Des Poches and Grenovillieres Swamp is limited to the immediate floodplain area.

Approximately 4,000 feet of Grenovillieres Swamp lies within the corporate limits of the Town of Broussard. The remaining portion of Grenovillieres swamp and all of Coulee Des Poches lies in the City of Lafayette and Lafayette Parish.

Hurricane Cindy developed on Sunday, July 3, 2005 from an area of disturbed weather in the extreme northwestern Caribbean Sea. She quickly proceeded to make landfall on the Yucatan Peninsula, and eventually moved out into the Gulf of Mexico where she began a gradual intensification before making landfall near Grande Isle, Louisiana; on July 5, 2005. Cindy made landfall as a minimal Category 1 Hurricane with 75 mph surface winds. Cindy dumped over seven inches of rain in various locations in the Southeast, and upwards of five inches in the Mid Atlantic.

Hurricane Katrina formed over the Bahamas on August 23, 2005, and crossed southern Florida as a moderate Category 1 hurricane, causing some deaths and

flooding there before strengthening rapidly in the Gulf of Mexico. The hurricane strengthened to a Category 5 hurricane over the warm Gulf water, but weakened before making its second landfall as a Category 3 hurricane on the morning of Monday, August 29, near Buras-Triumph, Louisiana. At landfall, hurricane-force winds extended outward 120 miles (190 km) from the center and packed wind speeds of 125 mph; causing severe destruction along the Gulf coast from central Florida to Texas, much of it due to the storm surge. The most significant number of deaths occurred in New Orleans, Louisiana, which flooded as the levee system catastrophically failed, in many cases hours after the storm had moved inland. Eventually 80 percent of the city and large tracts of neighboring parishes became flooded, and the floodwaters lingered for weeks. The worst property damage occurred in coastal areas, such as Mississippi beachfront towns; over 90 percent of these were flooded. Boats and casino barges rammed buildings, pushing cars and houses inland; water reached 6–12 miles (10–19 km) from the beach. Hurricane Katrina was one of the deadliest and most costly hurricanes killing over 1,800 people and costing over \$108 billion dollars.

Hurricane Rita was the fourth–most intense Atlantic hurricane ever recorded and the most intense tropical cyclone ever observed in the Gulf of Mexico. Hurricane Rita was part of the record-breaking 2005 Atlantic hurricane season, which included three of the six most intense Atlantic hurricanes ever (along with #1 Wilma and #6 Katrina), Rita was the eighteenth named storm, tenth hurricane, and fifth major hurricane of the 2005 season. Rita entered the Gulf of Mexico's abnormally warm waters and rapidly intensified to reach peak winds of 180 mph on September 21. After steadily weakening and beginning to curve to the northwest, Rita gradually weakened and made landfall on Sabine Pass, Texas with winds of 120 mph on September 24. It weakened over land and degenerated into a large low-pressure area over the lower Mississippi Valley on September 26. In Louisiana, the storm surge from Rita inundated low-lying communities near the coast, worsening effects caused by Hurricane Katrina less than a month prior. The surge topped levees, allowing water to surge further inland. Lake Charles suffered from severe flooding. Electric service was disrupted in some areas of Louisiana for several weeks.

Hurricane Gustav was the seventh named hurricane of the 2008 Atlantic hurricane season. Gustav was a very destructive hurricane, reaching Category 4 status. Gustav made landfalls in Louisiana as a Category 2. Despite being only of Category 2 intensity, at its Louisiana landfall on September 1, 2008, Gustav's large size enabled it to cause extensive and widespread damage. Gustav caused severe damage in and around Baton Rouge, knocking out electricity to some areas of the city for weeks. Gustav caused around \$6.61 billion in damage, as well as approximately 150 deaths.

Hurricane Isaac made landfall at the Mississippi Rivers South West Pass on August 29, 2012. Maximum sustained winds of 80 mph caused widespread damage. The system's large size generated a strong storm surge that caused extensive damage to low-lying areas of the state. A National Ocean Service (NOS) tide gauge located on the southern end of Lake Borgne near Shell Beach registered a storm surge height of 11.03 ft, the highest in association with the storm. The strong storm surge inundated areas of lower Louisiana. Areas of Plaquemines Parish were estimated to have been submerged under as much as 17 ft of water,

based on pressure sensors from the United States Geological Survey. In eastern areas of the parish, water had accumulated from Breton Sound against a levee. The rising water levels later overtopped the levee height, causing it to overflow and inundate primarily uninhabited areas between Braithwaite and Belair. The strong storm surge, in combination with strong winds forced the Mississippi River to flow upstream for nearly a day, rising as much as 10 ft in Belle Chasse and 8 ft in New Orleans. In nearby LaPlace, 5,000 homes were flooded by the surge. Hurricane Isaac dropped heavy rainfall across the state, particularly in eastern areas of Louisiana.

2.4 Flood Protection Measures

Channel improvements for the Vermilion River, Bayou Fusilier, and Bayou Teche, authorized under the Flood Control Act of August 18, 1941 (Reference 37), were started on March 20, 1944, and completed on March 27, 1957. These improvements were for navigation and flood control.

The City of Lafayette and Lafayette Parish have made numerous drainage improvements such as clearing and enlarging canals and permanent improvements such as concrete lining. Several proposals have been suggested for future drainage improvements by the Regional Planning Commission. In order to reduce flooding in the River Oaks subdivision, a pumping station was built on the right descending bank of the Vermilion River.

The City of Carencro has expended considerable effort to reduce local flooding through improvements of roadside ditches and culverts. While these improvements will relieve some local problems in minor storms, major relief can only be provided by improving flow on Beau Basin, the City of Carencro's major drain. Beau Basin has been studied by the Louisiana Department of Transportation and Development, Office of Public Works, and improvements within the corporate limits are said to be forthcoming; however, no date has been set, and no improvements to Beau basin outside the corporate limits have been proposed.

Non-structural measures of flood protection are being utilized to aid in the prevention of future flood damage. These are in the form of land-use regulations adopted from the Code of Federal Regulations that control building within areas that have a high risk of flooding (Reference 4).

3.0 **ENGINEERING METHODS**

For the flooding sources studied in detail, standard hydrologic and hydraulic study methods were used to determine the flood hazard data. Flood events of a magnitude which are expected to be equaled or exceeded once on the average during any 10-, 2-, 1-, or 0.2-percent annual chance 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 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 which equals or exceeds the 100-year flood (1-percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and, 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 relationships for each flooding source studied in detail affecting the parish.

Pre-parish-wide Analyses

The United States Geological Survey (USGS) and the USACE have maintained flood records for the Vermilion River. Staff gages in the vicinity of the study area are at the following locations on the river: Station No. 85 (1948 to present), Broussard Bridge; Station V-A Pinhook Bridge (1941 to present), which was transferred to the Surrey Avenue Bridge (1960 to present) and redesignated V-Va; Station T-E, Long Bridge (1960 to present); Station T-AA, Tontons Bridge (1948 to present); and Station N-84 Evangeline Canal at the junction with the Vermilion River (1938 to 1958).

Although these gages have been available, very limited discharge information was found for the Vermilion River. Due to storage effects and interbasin flow, it was difficult to reconstruct discharge-frequency relationships along the reaches of the Vermilion River covered in this study. Using a publication by Leo R. Beard, the preferred method of analysis for stage-frequency relationships was the graphical method (Reference 9). This method was used rather than the log-Pearson Type III distribution. Peak discharges are not required to perform a stage-frequency analysis.

Very little information for the other pre-parish-wide streams studied by detailed methods was available. It was necessary to use synthetic methods to reconstruct the hydrology for areas studied in detail. Synthetic unit hydrographs were derived from criteria found in Technical Report 2D, which was prepared for southwestern Louisiana by the USGS in cooperation with the Louisiana Department of Transportation and Development, Office of Public Works (Reference 4).

Rainfall frequencies and distributions were derived from Technical Paper No. 40 (Reference 7). Rainfall quantities for the 10-, 2-, and 1-percent annual chance floods were used in conjunction with the unit hydrograph to develop discharges along each major tributary. In the Flood Plain Information report for the City of Lafayette, the Standard Project Flood was used to determine a reasonable upper limit of flooding (Reference 10). The Standard Project Flood is not the maximum flood possible, but it is a rare event that can be expected to occur from a severe combination of meteorologic and hydrologic conditions. The Standard Project Flood was determined from information found in EM 1110-2-1411 (Reference 10). Rainfall

from the 1940 flood approximated rainfall quantities derived from the Standard Project Flood. It can be assumed that the Standard Project Flood discharge quantities give a reasonable estimate of the flood elevations created by the 1940 flood. Since data were already available for the Standard Project Flood, an analysis was made that showed that the Standard Project Flood approximated the 500-year flood boundary. The use of the Standard Project Flood in this manner was coordinated with representatives from FEMA in January 1977. The 1940 flood approximated the Standard Project Flood and was assigned a 0.2-percent annual chance flood frequency.

The 10-, 2-, and 1-percent annual chance flood discharges of Gaston Coulee (North) were developed using USGS regionalized methods (Reference 13). Adjustments for effects of urbanization were made in accordance with the procedures recommended in the USGS publications.

The 0.2-percent annual chance flood discharge was extrapolated from a log-probability plot of the data discussed above.

Rainfall depth, frequency, and duration data were obtained from the Rainfall Frequency Atlas of the United States for hypothetical storms of 10-, 2-, 1-, and 0.2-percent annual chance flood recurrence intervals (Reference 7). No rainfall runoff monitoring is performed in the vicinity of the City of Scott; therefore, synthetic unit hydrographs and rainfall runoff relationships were established from regionalized data contained in Unit Hydrographs for Southwest Louisiana and Rainfall-Runoff Relations for Southwest Louisiana (References 4 and 15). Runoff hydrographs were developed from unit hydrographs and runoff using a computerized model. Peak discharges were adjusted for storage effects by the Modified Puls method available in the USACE HEC-1 computer program (Reference 6).

The additional flooding West Coulee Mine, and Coulee Mine was obtained from the Flood Insurance Study for the unincorporated areas of Lafayette Parish (Reference 14).

Rainfall depth, frequency, and duration data were obtained from the Rainfall Frequency Atlas of the United States for hypothetical storms of the 10-, 2-, 1-, and 0.2-percent annual chance flood recurrence intervals (Reference 7).

No rainfall runoff monitoring is performed in the vicinity of the Town of Duson; therefore, synthetic unit hydrographs and rainfall runoff relationships were established from regionalized data contained in Unit Hydrographs for Southwest Louisiana and Rainfall-Runoff Relations for Southwest Louisiana (References 4 and 15). Runoff hydrographs were developed from unit hydrographs and runoff using a computerized model. Peak discharges were adjusted for storage effects by the Modified Puls Method available in the HEC-1 computer program (Reference 6).

Discharge information for the hydrologic analyses for Coulee Des Poches and Grenovillieres Swamp were computed by the USACE for the Flood Insurance Study for the unincorporated areas of Lafayette Parish (Reference 14). The 1-percent annual chance flood discharge shown for the confluence of Coulee Des Poches with

the Vermilion River was adjusted by the ratio of the drainage areas to obtain a starting discharge at cross section A.

January 19, 1996, parish-wide Revision

Hydrologic analysis of Coulee Ile Des Cannes and Lateral F2 were studied for this latest parish-wide revision.

January 20, 1999, parish-wide Revision

Hydrologic analyses were carried out to establish peak discharge-frequency relationships for Bayou Queue de Tortue, South Branch, North Branch and Duson Branch. Incremental rainfall patterns used in the hydrologic analysis of Bayou Queue de Tortue and its tributaries were obtained from Weather Bureau Technical Paper No. 4, "Rainfall Frequency Atlas of the United States" (Reference 7). Flows for the original FIS were obtained from synthetic unit hydrographs. Rainfall-runoff relationships were obtained from regionalized data contained in USGS Technical Report No. 2C, "Rainfall-Runoff Relations for Southwestern Louisiana" (Reference 15), and Technical Report No. 2D, "Unit Hydrographs for Southwestern Louisiana" (Reference 4). Flows for this restudy were computed using the Natural Resources Conservation Service (formerly the SCS) lag method (Reference 27). Computed lag times were used in the USACE HEC-1 computer model (Reference 29). The USGS formula shown in the report entitled "Floods in Louisiana, Magnitude and Frequency" (Reference 8) and Snyder's synthetic coefficients used in the USACE HEC-1 computer model were used to check peak flows.

In order to determine the discharge or flows to be used for computing backwater water surface profiles for various frequencies, an analysis was made of the different methods used in Louisiana. The methods used in the Lafayette Parish area were the USGS procedure, the modified USGS procedure and the (SCS) procedure. These methods are described in Technical Report 2D, Unit Hydrographs for Southwestern Louisiana published in 1969 and in the Louisiana Department of Transportation and Development (LDOTD), Hydraulic Manual revised in March 1987 (References 4 and 5). After comparing these methods it was decided to use the modified USGS method and the SCS method used by the LDOTD. These methods allowed discharges to be modified in accordance with the degree of recent use in the Lafayette Parish area, and provided concurrence with ongoing studies.

The hydrologic analyses for Cypress Bayou and Cypress Bayou Ditch were developed using Snyder's synthetic coefficients with the HEC-1 computer program (Reference 6), Rainfall quantities were obtained from the U.S. Weather Bureau's Technical Paper 40 (Reference 7). The USGS Formula shown in Floods In Louisiana, Magnitude and Frequency was used to check peak flows (Reference 7).

This parish-wide Revision

Hydrologic Engineering Center Hydrologic Modeling System (HEC-HMS) versions 2.2.2 and 3.0.1 (Reference 30 and 31) were utilized for the hydrologic analyses. The Muskingum Cunge 8-point method was utilized for channel routing to develop the

HEC-HMS models for streams with steady state hydraulic models; for streams with unsteady state hydraulic model, flow hydrographs generated by HEC-HMS were routed through the hydraulic models for computation of peak discharges.

Bayou Carencro, Coulee Des Poches, Coulee Lantier, Darby Coulee, Edith Coulee, and the Vermilion River models were developed from existing studies as previously noted. The peak discharges for these streams, along with Edith Coulee, and with the exception of the Vermilion River, were determined utilizing HEC-HMS version 2.2.2 and a peak discharge interpolation method.

The HEC-HMS models received from the existing studies included only one sub-basin delineated for the entire watershed, with only one outlet point. The HEC-HMS models for each of the flooding sources were updated to compute peak discharges at the upstream limit of the studies. Watershed areas and lag times for watersheds at the upstream study limits were developed using GIS; curve numbers were estimated by using existing model information and aerial maps. Peak discharges computed at the upstream and downstream study limits were then utilized to create a discharge versus drainage area graph. A sub-watershed was then created in GIS for intermediate locations where significant flow change was anticipated. The peak discharges for such intermediate locations were then estimated from the discharge versus drainage area graphs based on contributing drainage area at such locations.

Hydrologic model development for Acadiana Coulee, Bayou Parc Perdue, Bayou Queue de Tortue, Broadmoor Coulee, Coulee Fortune North (Cypress Bayou), Coulee Fortune South and tributaries Coulee LaSalle, Coulee Mine and tributaries, Dan Dabaillion Coulee, Grand Avenue Coulee, Isaac Verot Coulee and tributaries, Manor Park Coulee and Point Brule Coulee was accomplished using HEC-geo HMS, version 9 (beta) for ArcGIS 9.0.

Hydrologic model development data for the Coulee Ile Des Cannes and its tributaries created by C.H. Fenstermaker using HEC-HMS v3.5.

This parish-wide FIS also incorporates a revised study by detailed methods on Beau Basin Coulee created by Michael Baker International, LLC in 2011; using a model developed in HEC-HMS.

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

It should be noted that number of study streams were modeled using unsteady-state conditions. Therefore, the peak discharges listed in Table 4 are the results of a hydraulic analysis that included channel and floodplain routings.

TABLE 4 – SUMMARY OF DISCHARGES

Flooding Source and Location	Drainage Area (sq.mi)	10-Percent Annual Chance	Peak Discharges (cfs)		
			2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance
Acadiana Coulee (Vermilion Lateral 2)–(U)					
At confluence with Vermilion River	1.16	911	1,215	1,417	1,823
At Bruce Street	1.01	815	1,034	1,304	1,699
At Canberra Road	0.94	606	823	1,025	1,331
At Bellevue Plantation Road	0.81	667	898	1,110	1,438
At Crestlawn Drive	0.75	576	780	956	1,272
At Guidry Road	0.45	442	543	685	938
App 1,100 ft upstream of Guidry Road	0.31	442	520	669	902
Bayou Carencro					
At confluence with Vermilion River	50.08	5,570	7,862	9,054	12,112
At Meche Road	47.81	5,400	7,600	8,800	11,700
At LA 182	39.88	4,900	7,000	8,100	10,700
At I-49	36.46	4,700	6,700	7,700	10,200
At Waters Drive	31.45	4,350	6,200	7,100	9,550
At Billeaux Road	22.20	3,550	5,160	5,930	7,940
Bayou Parc Perdue–(U)					
At Parish Boundary	9.16	1,651	2,363	2,721	3,881
At Chemin Agreable	6.86	1,614	2,319	2,668	3,790
At Savoy Road	6.00	508	829	1,074	1,667
At Iberia Street	2.23	440	818	1,025	1,543
At Hawk Drive	1.77	361	724	918	1,397
At Copperfield Way	1.75	310	642	822	1,243
At Fortune Road	1.25	207	418	538	822
Bayou Queue de Tortue					
At Parish Boundary	39.40	3,049	4,344	5,045	7,020
At LA 342	36.69	2,964	4,818	5,588	7,717
At 6,800 ft downstream from W. Congress Street	27.96	2,901	4,193	4,880	6,779
At W. Congress Street	21.87	2,429	3,603	4,204	5,737
At LA 720 Landry Road	18.13	1,816	2,734	3,194	4,404
At 5,000-ft downstream from LA 719	15.37	1,470	2,233	2,612	3,695
At LA 719	8.46	1,256	1,934	2,282	3,110
At A Street (Splits to Southern Branch)	8.46	347	564	670	1,018
At LA 343	6.73	409	750	890	1,245
At Southern Pacific Railroad	5.92	415	753	887	1,222
At Anderson Rd (Splits to Indian Bayou)	4.61	344	577	667	900
At I-10	4.61	844	1,147	1,317	1,750
At Gazette Road	3.00	600	800	900	1,200
At Whitmore Road	1.87	369	513	593	808

(U) Indicates the peak discharge determined utilizing HEC-RAS unsteady modeling when maximum stages occur.

TABLE 4 – SUMMARY OF DISCHARGES (continued)

Flooding Source and Location	Drainage Area (sq.mi)	10-Percent Annual Chance	Peak Discharges (cfs)		
			2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance
Beau Basin Coulee					
At confluence with Vermilion River	6.76	1,614	2,527	3,201	4,550
At Beau Basin Road	6.00	1,530	2,379	3,018	4,243
At approximately 0.9 miles downstream from St. Espirit Road	5.79	1,362	2,116	2,673	3,764
At St. Espirit Road	4.80	1,095	1,679	2,108	2,957
At I-49	3.77	906	1,388	1,721	2,435
At Bernard Street / LA-726	2.87	878	1,349	1,667	2,368
At approximately 200 feet upstream of Bernard Street / LA-726	1.55	672	1,020	1,269	1,791
At North Church Street	1.20	589	894	1,115	1,580
At E Armand Street	0.98	526	796	996	1,413
At approximately 200 feet downstream of Railroad Street	0.42	321	503	634	923
At approximately 50 feet downstream of Debutante Road	0.30	255	396	512	723
Broadmoor Coulee--(U)					
At confluence with Vermilion River	0.71	772	1,000	1,091	1,299
At Ambassodor Caffery Pkwy	0.65	607	775	844	976
At Dover Boulevard	0.60	609	778	846	982
At 1,400 ft upstream from Dover Boulevard	0.54	433	541	584	649
At Robley Drive	0.37	343	420	460	497
Coulee Bend					
At confluence with Dan Dabaillion Coulee (Francois Coulee)	5.3	1,800	2,400	2,800	3,800
Coulee Des Poches / Grenovillieres Swamp					
At confluence with Vermilion River	4.48	4,070	6,188	6,824	8,450
At Market Place	4.00	3,750	5,800	6,500	8,000
At Verot School Road	3.25	3,200	5,100	5,900	7,000
At 700 ft. upstream of Verot School	2.53	2,700	4,350	5,000	5,800
At Beau Pre Road	1.95	2,200	3,600	4,200	4,600
At South Park Road	1.40	1,600	2,700	3,100	3,400
At 1500 ft upstream of Consolidated	0.96	1,100	1,800	2,000	2,300
At S. Bernard Road	0.53	642	1,052	1,160	1,445
At Railroad	0.18	200	400	500	600

(U) Indicates the peak discharge determined utilizing HEC-RAS unsteady modeling when maximum stages occur.

TABLE 4 – SUMMARY OF DISCHARGES (continued)

Flooding Source and Location	Drainage Area (sq.mi)	10-Percent Annual Chance	Peak Discharges (cfs)		
			2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance
Coulee Fortune North (Cypress Bayou) –(U)					
At mouth	2.99	994	1,293	1,458	1,966
At Bayou Tortue Road	2.88	1,028	1,302	1,467	2,045
At N. Girouard Road	2.43	881	1,100	1,225	1,731
At US 90	1.96	769	986	1,094	1,602
At LA 182	1.41	243	307	345	502
At Albertson Parkway	1.24	133	205	228	314
At Southern Pacific Railroad	1.00	112	147	164	252
At St. DePorres Street	0.82	-27	-38	38	37
At Morgan Street	0.60	93	146	182	348
Coulee Fortune South–(U)					
At US 90	3.06	805	1,152	1,355	2,300
At Young Street	2.47	636	915	1,079	1,981
At 1,800 ft downstream from Fairfield Drive	2.16	567	818	971	1,843
At Fairfield Drive	1.42	202	391	493	1,225
At N. Larriviere Road	1.32	168	325	410	1,088
At Heart D. Farm Road	0.82	78	149	191	778
Coulee Ile Des Cannes–(U)					
At confluence with Vermilion River	52.56	361	361	361	361
At US Hwy 167	49.61	7,817	10,462	11,510	13,853
At Bourque Road	35.35	5,450	7,166	7,838	9,251
At Ellias G Road	33.83	5,318	7,030	7,712	9,176
At Below confluence with Lateral 2	28.43	4,080	5,396	5,897	7,072
At LA 342	23.89	3,119	4,074	4,418	5,177
At W. Congress Street	17.08	2,040	2,765	3,081	4,270
At Le Violon Road	10.17	2,082	2,946	3,240	3,983
At I-10	7.00	1,090	1,506	1,617	2,146
At Below confluence with Lateral 5	6.34	445	608	672	1,108
At Rue Des Babineaux	4.00	365	490	532	473
At Cocodril Road	2.00	316	481	515	787
Coulee Ile Des Cannes – Lateral 1–(U)					
At confluence with Ile Des Cannes	12.94	661	908	1,088	1,451
At Petite Road	12.80	662	930	1,115	1,490
At Leblanc Road	3.00	538	836	1,004	1,370
At Sellers Road	2.80	275	428	499	655
At S. Fieldspan Road	1.00	168	262	306	399

(U) Indicates the peak discharge determined utilizing HEC-RAS unsteady modeling when maximum stages

TABLE 4 – SUMMARY OF DISCHARGES (continued)

<u>Flooding Source and Location</u>	Drainage Area (sq.mi)	Peak Discharges (cfs)			
		10-Percent <u>Annual</u> <u>Chance</u>	2-Percent <u>Annual</u> <u>Chance</u>	1-Percent <u>Annual</u> <u>Chance</u>	0.2-Percent <u>Annual</u> <u>Chance</u>
Coulee Ile Des Cannes – Lateral 2–(U)					
At confluence with Ile Des Cannes	4.54	978	1,324	1,480	1,895
At Broussard Road	4.00	1,089	1,488	1,595	1,995
At WTP Entrance Road	3.00	1,130	1,560	1,712	2,042
At Ridge Road	2.00	975	1,323	1,455	1,774
Coulee Ile Des Cannes–Lateral F (L3)–(U)					
At confluence with Ile Des Cannes	6.80	1,041	1,476	1,649	2,066
At W. Congress St.	6.00	1,008	1,397	1,595	2,056
At LA 93 Ru Belier Rd	5.00	917	1,275	1,426	1,813
At Ole Colony Road	3.00	387	471	534	626
At US 90	1.50	245	308	325	374
At Southern Pacific Railroad	1.40	236	294	307	345
At Mills Street	0.70	179	216	216	222
Coulee Ile Des Cannes – Lateral F2					
At confluence with Lateral F	1.57	229	328	340	446
Coulee Ile Des Cannes – Lateral 4–(U)					
At confluence with Ile Des Cannes	6.90	603	912	990	1,290
At Landry Road	2.49	392	472	497	591
At Jenkins Road	2.00	280	396	414	444
At SP Railroad	1.60	194	246	248	263
At Below I-10	1.20	108	168	193	207
Coulee Ile Des Cannes – Lateral 5					
At confluence with Ile Des Cannes	1.50	404	573	632	*
Coulee Lantier					
At confluence with Vermilion River	2.50	2,505	4,001	4,423	5,514
At 4,300 ft downstream of LA 726	1.39	1,850	2,600	2,900	3,700
At LA 726	0.62	1,000	1,300	1,600	2,000
At Arnaudville Rd	0.13	220	400	440	570
Coulee LaSalle–(U)					
At Le Triomphe Parkway	3.50	1,055	1,299	1,407	1,703
At Marteau Road	3.06	508	615	670	875
At S. Larriviere Road	2.35	247	332	397	562
At Young St (LA 92)	1.33	252	340	411	578
At Griffen Road	0.93	125	182	220	312
At Cane Brake Road	0.51	72	105	120	174

* Data not computed

(U) Indicates the peak discharge determined utilizing HEC-RAS unsteady modeling when maximum stages occur.

TABLE 4 – SUMMARY OF DISCHARGES (continued)

<u>Flooding Source and Location</u>	Drainage Area (sq.mi)	Peak Discharges (cfs)			
		10-Percent <u>Annual</u> <u>Chance</u>	2-Percent <u>Annual</u> <u>Chance</u>	1-Percent <u>Annual</u> <u>Chance</u>	0.2-Percent <u>Annual</u> <u>Chance</u>
Coulee Mine–(U)					
At confluence with Vermilion River	16.71	5,414	6,699	7,209	8,635
At US 167	16.00	4,587	5,633	6,061	7,321
At W. Congress Street	15.46	3,508	4,224	4,520	5,521
At Dulles Drive	11.66	1,953	1,533	1,563	1,756
At Eraste Landry Drive	11.20	1,989	2,346	2,551	3,640
At Ambassador Caffery Parkway	10.80	2,080	2,416	2,606	3,649
At Southern Pacific Railroad	10.40	2,086	2,425	2,618	3,523
At I-10	4.20	1,381	1,417	1,399	1,642
At LA 725 (Renaud Drive)	3.80	1,821	2,386	2,702	3,272
At LA 723 (Roper Drive)	3.32	1,637	2,066	2,355	2,942
At Lebesque Road	1.80	646	826	1,017	1,138
At N. Dugas Road	1.70	717	917	1,135	1,252
At Malapart Road	1.63	444	560	782	708
Coulee Mine – Lateral 1 (West Channel)					
At confluence with Coulee Mine	3.40	1,100	1,500	1,600	1,900
Coulee Mine Branch					
At confluence with Old Coulee Mine	5.0	1,800	2,900	3,300	3,900
Cypress Bayou Ditch					
At St. De Porres Street	0.24	*	*	143	*
Dan Dabaillion Coulee (Francois Coulee)					
At confluence with Vermilion River	10.45	3,845	5,670	6,529	8,597
At Louisiana Avenue	10.00	4,038	5,722	6,425	8,625
At I-10	9.20	4,382	6,073	6,781	8,315
At Moss Street	6.00	2,908	3,859	4,272	5,554
At I-49	5.30	2,253	3,167	3,505	4,522
At W. Pont Des Mouton Road	5.00	2,134	3,020	3,357	4,307
At I-49	3.50	1,432	2,062	2,300	2,970
At E. Butcher Switch Road	2.80	803	1,142	1,302	2,022
At Amesbury Drive	2.50	518	718	822	1,626
At E. Gloria Switch Road	2.10	314	402	509	1,182
At Thoroughbred Drive	0.90	135	149	166	273
At Guidry Lane	0.70	100	100	100	100

* Data not computed

(U) Indicates the peak discharge determined utilizing HEC-RAS unsteady modeling when maximum stages occur.

TABLE 4 – SUMMARY OF DISCHARGES (continued)

<u>Flooding Source and Location</u>	Drainage Area <u>(sq.mi)</u>	10-Percent <u>Annual</u> <u>Chance</u>	Peak Discharges (cfs)		
			2-Percent <u>Annual</u> <u>Chance</u>	1-Percent <u>Annual</u> <u>Chance</u>	0.2-Percent <u>Annual</u> <u>Chance</u>
Darby Coulee					
At confluence with Vermilion River	6.89	4,280	5,895	6,605	8,430
At 3,300 ft downstream of Gallett Road	6.23	4,000	5,600	6,250	8,000
At Gallett Road	5.41	3,750	5,300	5,900	7,600
At 3,000 ft upstream of Gallett Road	4.54	3,400	5,000	5,550	7,050
At LA 339	3.17	2,750	4,340	4,790	5,960
Duson Branch					
At Town of Duson corporate limit	*	819	1,017	1,182	1,421
At Cross Section C	*	*	*	1,780	*
At Cross Section K	*	*	*	1,400	*
At confluence of Bayou Queue de Tortue	1.72	445	611	703	953
Edith Coulee					
At Zothique Road	2.04	873	1,221	1,381	1,810
At Espasie Lane	1.25	567	793	898	1,177
At LA 92 (E. Milton Ave)	1.20	540	770	870	1,120
At E. Edith Road	1.03	500	700	780	1,000
At LA 733	0.83	429	598	670	862
Gaston Coulee (North)					
At confluence with Beau Basin Coulee	0.90	415	615	667	790
Gaston Coulee (South)					
At confluence with Coulee Bend	2.10	900	1,200	1,400	2,000
Grand Avenue Coulee					
At confluence with Vermilion River	2.10	1,569	2,166	2,406	3,057
At 2,000 ft downstream from US 167	1.75	1,459	2,005	2,216	2,805
At US 167 Johnson Street	1.54	1,356	1,851	2,045	2,612
At 600 ft downstream from Maple Drive	1.39	1,263	1,716	1,987	2,440
At Guilbeau Drive	1.00	935	1,271	1,400	1,797
At Crawford Street	0.58	648	867	956	1,248

* Data not computed

(U) Indicates the peak discharge determined utilizing HEC-RAS unsteady modeling when maximum stages occur.

TABLE 4 – SUMMARY OF DISCHARGES (continued)

<u>Flooding Source and Location</u>	Drainage Area (sq.mi)	10- Percent <u>Annual</u> <u>Chance</u>	Peak Discharges (cfs)		
			2-Percent <u>Annual</u> <u>Chance</u>	1-Percent <u>Annual</u> <u>Chance</u>	0.2- Percent <u>Annual</u> <u>Chance</u>
Isaac Verot Coulee/Lateral 2-(U)					
At confluence with Vermilion River	12.21	3,027	3,930	4,385	5,660
At E. Peck Boulevard	9.23	2,539	3,376	3,799	4,980
At Verot School Road	7.83	2,507	3,342	3,770	4,999
At La Neuville Road	3.91	1,694	2,252	2,482	3,162
At Failla Road	1.90	717	978	1,084	1,452
At Tolson Road	1.50	572	773	855	1,155
At Bonin Road	0.92	354	480	524	706
At Hwy 89	0.15	30	30	30	30
Isaac Verot Coulee – Lateral 2a-(U)					
At confluence with Isaac Verot Coulee	2.09	815	1,058	1,156	1,391
At LA 339	1.75	753	965	1,048	1,242
At W. Bluebird Street	0.78	433	564	611	709
At E. Martial Drive	0.60	305	395	429	491
At Long Plantation Drive	0.40	135	169	183	214
At Becky Lane	0.35	43	55	60	72
Isaac Verot Coulee – Lateral 3-(U)					
At confluence with Isaac Verot Coulee	3.23	804	1,068	1,257	1,797
At 2800 ft upstream from confluence with Isaac Verot Coulee	2.60	760	1,019	1,267	1,852
At Chemin Metairie Road	2.28	907	1,205	1,459	2,064
At Serenity Road	1.60	1,879	2,621	2,873	3,425
At Bonin Road	1.28	1,145	1,585	1,763	2,225
Jupiter Street Coulee -(U)					
At E. Pinhook Road	1.97	1,772	2,321	2,450	2,785
At Webb Street	1.64	517	669	705	780
At Amilcar Road	1.61	519	698	771	853
At Southern Pacific Railroad	0.96	522	710	787	1,000
Manor Park Coulee-(U)					
At confluence with Vermilion River	4.57	1,779	2,292	2,518	3,230
At Maryview Farm Road	2.53	854	1,105	1,250	1,769
At Butcher Switch Road	2.30	747	1,054	1,217	1,697
At Irby Road	2.00	537	827	990	1,412
At Parklane Road	1.14	259	549	721	1,296
At 1,000 ft upstream from Parklane Road	0.81	171	367	480	861
At Upstream study limit	0.60	95	201	264	476

(U) Indicates the peak discharge determined utilizing HEC-RAS unsteady modeling when maximum stages occur.

TABLE 4 – SUMMARY OF DISCHARGES (continued)

<u>Flooding Source and Location</u>	Drainage Area (sq.mi)	Peak Discharges (cfs)			
		10-Percent <u>Annual</u> <u>Chance</u>	2-Percent <u>Annual</u> <u>Chance</u>	1-Percent <u>Annual</u> <u>Chance</u>	0.2- Percent <u>Annual</u> <u>Chance</u>
North Branch					
At confluence with Bayou Queue de Tortue	4.90	702	990	1,150	1,585
Point Brule Coulee					
At East Parish Boundary	1.04	2,610	3,648	4,213	5,630
At Hwy 726 (Old LA 1252)	0.53	1,159	1,614	1,861	2,481
At North Parish Boundary	0.48	1,142	1,590	1,833	2,443
South Branch					
At confluence with Bayou Queue de Tortue	7.90	195	439	583	929
Vermillion River-(U)					
At W. Milton Avenue	*	9,077	13,326	15,686	21,474
At LA 733 (E. Broussard Road)	*	2,970	4,538	5,298	7,383
At LA 3073 Ambassador Caffery Pkwy	*	340	714	864	1,411
At Camellia Boulevard	*	-1,435	-1,828	-2,020	-2,492
At W. Pinhook Road	*	-5,300	-7,445	-8,421	-11,045
At General Mouton Road	*	-5,660	-7,913	-8,958	-11,668
At Railroad	*	-5,655	-7,913	-8,949	-11,655
At E. University Avenue	*	-5,655	-7,904	-8,949	-11,643
At US 90 (SW. Evangeline Thruway)	*	-5,650	-7,896	-8,939	-11,630
At Surry Street	*	-5,639	-7,873	-8,923	-11,602
At LA 353	*	3,315	3,156	2,745	541
At LA 94 (Carmel Drive)	*	6,325	8,075	9,371	13,147
At Union Pacific Railroad	*	6,364	8,130	9,567	13,443
At Lajaunie Road	*	6,387	8,180	9,609	14,040
At I-10	*	6,468	8,340	9,698	14,024
At E. Pont Des Mouton Road	*	6,476	8,353	9,689	13,620
At Maryview Farm Road	*	4,017	4,772	5,322	6,925
At E. Gloria Switch Road	*	4,040	4,764	5,311	6,894
At Beau Basin Road	*	4,291	4,817	5,356	6,892
At Private Bridge	*	5,701	5,059	5,470	6,896
At LA 1252	*	7,154	10,463	13,575	8,149
At Arnaudville Road	*	7,823	11,114	13,842	18,967
Webb Coulee (Lower) – (U)					
At confluence with Vermilion River	5.11	2,449	3,245	3,593	4,443
LA 94 (Carmel Drive)	4.11	1,976	2,558	2,757	3,070

* Data not computed

(U) Indicates the peak discharge determined utilizing HEC-RAS unsteady modeling when maximum stages occur.

TABLE 4 – SUMMARY OF DISCHARGES (continued)

<u>Flooding Source and Location</u>	Drainage Area (sq.mi)	10-Percent <u>Annual</u> <u>Chance</u>	Peak Discharges (cfs)		
			2-Percent <u>Annual</u> <u>Chance</u>	1-Percent <u>Annual</u> <u>Chance</u>	0.2- Percent <u>Annual</u> <u>Chance</u>
West Coulee Mine					
At confluence with Coulee Mine	3.70	666	803	1,001	1,316
At W. Willow Street	3.30	724	850	1,059	1,374
At I-10	3.22	1,037	1,117	1,281	1,640
At 6,800 ft upstream from I-10	2.13	179	175	184	232

* Data not computed

(U) Indicates the peak discharge determined utilizing HEC-RAS unsteady modeling when maximum stages occur.

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.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross-section locations are also shown on the Flood Insurance Rate Map (Exhibit 2).

All elevations are referenced to North American Vertical Datum of 1988 (NAVD 88). Elevation reference marks used in this study, and their descriptions, are shown on the maps.

Pre-parish-wide Analyses

Cross-sectional data were obtained by field surveys. All bridges and culverts were field surveyed to obtain elevation data and structural geometry. Cross-sectional data were also obtained from detailed ground surveys where concrete channels did not exist. Most of the major bridges and culverts were surveyed to obtain elevation data and structural geometry. Cross sections were located at close intervals upstream and downstream of bridges and culverts in order to compute significant backwater effects of these structures.

For the backwater analysis, 19 cross sections were obtained during field surveys carried out during September and October 1985. These cross sections were extended to encompass the entire floodplain, where necessary, using USGS topographic maps at a scale of 1:24,000, with a contour interval of 5 feet (Reference 17). An additional 25 cross sections were synthesized from the surveyed sections to aid in the step-backwater analysis. Bridge cross-sectional area, bridge geometry, and roadway elevations were also obtained from field surveys during September and October 1985.

The flooding determined for West Coulee Mine was obtained from the Flood Insurance Study for the City of Scott (Reference 12). The flooding determined for Beau Basin was obtained from the Flood Insurance Study for the City of Carencro (Reference 18). The flooding determined for Lateral 1 (West Channel) was obtained from the Flood Insurance Study for the City of Lafayette (Reference 19).

Water-surface elevations of floods of the selected recurrence intervals were computed using the USACE HEC-2 step-backwater computer program (Reference 15). Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence intervals.

Water-surface elevations of floods of the selected recurrence interval were also computed using USGS WSPRO step-backwater computer program (Reference 20). The step-backwater analysis used in this study was run using Coulee Des Poches and Grenovillieres Swamp as a one stream system. Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence interval. A starting discharge of 2,170 cubic feet per second (cfs) was computed by decreasing the 1-percent annual chance discharge computed for Coulee Des Poches at the mouth (3,300 cfs) by the ratio of the drainage areas. The starting elevation was based on published flood-profile information contained in the Flood Insurance Study for the unincorporated areas of Lafayette Parish (Reference 14).

Starting water-surface elevations were determined by stage-frequency analyses at their respective junctions with the main streams, by the slope/area method, and checked by approximating normal depth. Starting water-surface elevations for Beau Basin were determined by normal depth calculations at cross sections extrapolated downstream of the beginning of study. Starting water-surface elevations for Gaston Coulee (North) were determined from the computed Beau Basin profiles.

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.

Cross sections for Coulee Ile des Cannes and Lateral F were obtained by field surveys. Cross sections for Lateral F2 were obtained from the USACE. Overbanks of Lateral F2 were extended using a topographic map at a scale of 1:24,000 (Reference 28). Elevations and structural geometry for all bridges and culverts for Coulee Ile des Cannes and Lateral F were obtained by field surveys. Elevations and structural geometry for bridges and culverts for Lateral F2 were obtained from the USACE and modified by field observation.

Roughness coefficients (Manning's "n") for the hydraulic analysis were obtained by field inspection and engineering judgment. Channel "n" values ranged from 0.050 to 0.075 for Coulee Ile des Cannes, 0.013 to 0.050 for Lateral F, and 0.030 to 0.035 for Lateral F2. Overbank "n" values ranged from 0.060 to 0.110 for Coulee Ile Des Cannes, and 0.030 to 0.060 for Lateral F and Lateral F2. Water-surface elevations for the detailed-study streams were computed using the USACE HEC-2 step-backwater computer program (Reference 16). Starting water-surface elevations were obtained by using the slope-area method.

January 19, 1996, parish-wide Revision

Hydraulic analysis of Coulee Ile Des Cannes and Lateral F2 were studied for this latest parish-wide revision.

January 20, 1999, parish-wide Revision

Water-surface elevations of floods of selected recurrence intervals were computed using the USACE HEC-2 step-backwater computer program (Reference 16). Flood profiles were drawn showing computer water-surface elevations for floods of the selected recurrence intervals.

The approximate flooding on the north side of the Town of Duson was mapped by extrapolating the boundary of the 1-percent annual chance flood using the topographic maps for the Town of Duson (Reference 34).

Cross sections for Bayou Queue de Tortue, Duson Branch, North Branch and South Branch were obtained by field surveys. These cross sections were supplemented by data obtained from original field-survey notes used to prepare the January 19, 1996, FIS for Lafayette Parish (Reference 34), and 7.5-minute series topographic mapping at a scale of 1:24,000 with a contour interval of 5 feet, for the Town of Duson (Reference 35). All elevations are referenced to the NAVD. Elevations were adjusted by the National Geodetic Survey in 1994 and the original FIS field notes were adjusted accordingly.

This parish-wide Revision

Field surveys of 16 coulees were performed to provide a detailed representation of the channel features. The data from existing studies done for Bayou Carencro, Coulee Des Poches, Coulee Lantier, Darby Coulee and the Vermilion River was used, therefore no additional data was collected to re-model these flooding sources.

The gathering of cross section survey data involved three separate efforts. The first effort, a survey of river cross sections and bridges/culverts, was carried out through the use of real-time kinematic (RTK) surveying equipment that has the capability to record three-dimensional data in state plane coordinates, as well as to the North American Vertical Datum of 1988 (NAVD 88).

The second effort, conducted by the University of Louisiana at Lafayette, consisted of gathering survey information for Coulee Mine. A report entitled "Application for Project Funding of Coulee Mine Improvements," contained Coulee Mine cross section data at 17 locations upstream of West Congress Street Bridge. Since there was no cross section data available at the downstream section of West Congress Bridge, cross section surveys were conducted at seven locations starting from West Bayou Parkway Bridge to Cameron Street Bridge. Cross sectional geometry of Ile Des Cannes channel was corrected with surveyed section data the Flood Control Improvement Plans for Ile Des Cannes prepared by Domingue, Szabo & Associates, Inc.

The third survey effort was conducted by CDM for survey of additional structures which were initially excluded from the models. Additional bridge/culvert data were obtained from several sources including field survey and measurements.

Starting water surface elevations for all the coulees were computed using normal depth at the downstream boundary. Water surface elevations for the selected recurrence intervals were determined using the USACE HEC-RAS model (Reference 33).

The flooding for Beau Basin Coulee was created using an updated HEC-RES model.

Channel roughness factors (Manning's "n" Values) were determined by field inspection and engineering judgment and were adjusted to match high water elevations. Table 5, "Mannings "n" Values, presents the Manning's "n" ranges for the streams studied by detailed methods in this parish-wide study:

TABLE 5 – MANNING'S "n" VALUES

<u>Stream</u>	<u>Channel "n"</u>	<u>Overbank "n"</u>
Acadiana Coulee (Vermilion Lateral 2)	0.035	0.08
Bayou Carencro	0.045	0.10
Bayou Parc Perdue	0.04	0.06 – 0.08
Bayou Queue de Tortue	0.04	0.08
Beau Basin Coulee	0.035 – 0.06	0.07 – 0.10
Broadmoor Coulee	0.015 – 0.045	0.10
Coulee Bend	0.035	0.045 – 0.60
Coulee Des Poches / Grenovillieres Swamp	0.045	0.08 – 0.10
Coulee Fortune North (Cypress Bayou)	0.045	0.08
Coulee Fortune South	0.04	0.08
Coulee Ile Des Cannes	0.03 – 0.04	0.07 – 0.01
Coulee Ile Des Cannes Lateral 1	0.04	0.07 – 0.10
Coulee Ile Des Cannes Lateral 2	0.04	0.08
Coulee Ile Des Cannes Lateral F (Lateral 3)	0.04	0.07 – 0.10
Coulee Ile Des Cannes Lateral F2	0.035	0.055
Coulee Ile Des Cannes Lateral 4	0.04	0.06 – 0.07
Coulee Ile Des Cannes Lateral 5	0.05	0.08
Coulee Lantier	0.045	0.08 – 0.12
Coulee LaSalle	0.04	0.08
Coulee Mine	0.04	0.08
Coulee Mine Branch	0.035	0.045 – 0.60
Coulee Mine – Lateral 1 (East Channel)	0.035	0.045 – 0.08
Coulee Mine – Lateral 1 (West Channel)	0.035	0.045 – 0.08
Cypress Bayou Ditch	0.05	0.08
Dan Dabaillion Coulee (Francois Coulee)	0.045	0.08 – 0.12
Darby Coulee	0.045	0.07
Duson Branch	0.013 – 0.08	0.030 – 0.06
Edith Coulee	0.04	0.08
Gaston Coulee (North)	0.025 – 0.07	0.035 – 0.10

TABLE 5 – MANNING’S “n” VALUES (continued)

<u>Stream</u>	<u>Channel “n”</u>	<u>Overbank “n”</u>
Gaston Coulee (South)	0.035	0.045 – 0.60
Grand Avenue Coulee – Upper Reach	0.015	0.12
Isaac Verot Coulee / Lateral 2	0.04	0.12
Isaac Verot Coulee - Lateral 2A	0.04	0.12
Isaac Verot Coulee - Lateral 3	0.04	0.12
Jupiter Street Coulee	0.022 – 0.045	0.06 – 0.08
Manor Park Coulee	0.04	0.05
North Branch	0.013 – 0.06	0.03 – 0.08
Old Coulee Mine	0.035	0.045 – 0.60
Point Brule Coulee	0.04	0.10 – 0.15
Saint John Coulee	0.035	0.045 – 0.60
South Branch	0.027 – 0.06	0.030 – 0.08
Vermilion River	0.039 – 0.046	0.12 – 0.14
Webb Coulee	0.022 – 0.045	0.06 – 0.08
West Coulee Mine	0.04	0.12

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 NAVD88. 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 Lafayette Parish is 0.03 foot.

All base flood elevations computed in the FIS and indicated on the FIRM panels are derived using the NAVD 88 and referenced to the 1999 GEOID.

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:

Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
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 the 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. Therefore, each Flood Insurance Study 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 in developing floodplain management measures.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent annual chance (500-year) flood is employed to indicate additional areas of flood risk in the community. For the streams 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. Between cross sections, the boundaries were interpolated using topographic maps at scales of 1:24,000 and 1:62,500, with a contour interval of 5, 10, and 20 feet.

For this parish-wide FIS, between cross sections, boundaries were interpolated using topographic maps at scale of 1:6,000 with a contour interval of 2 feet.

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 correspond to the boundaries of the areas of special flood hazard (Zones A, AE, and AH), and the 0.2-percent annual chance floodplain boundaries correspond to the boundaries of areas of moderate flood hazard. 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 boundaries are shown on the FIRMs (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 a minimum standard 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 to achieve a one-foot increase in water-surface elevation. If the equal conveyance method could not achieve a one-foot increase, then the encroachment stations were specified. 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 6, "Floodway Data Table." The computed floodways are shown on the Flood Insurance Rate Map (Exhibit 2). In cases where the floodway and 1-percent annual chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

For the City of Scott, natural ground elevations within the City are generally the same elevation of lower than the alluvial banks and adjacent to the stream; therefore, floodwaters are not contained within the definite floodways.

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 6, "Floodway Data Table". 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.

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 by 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.

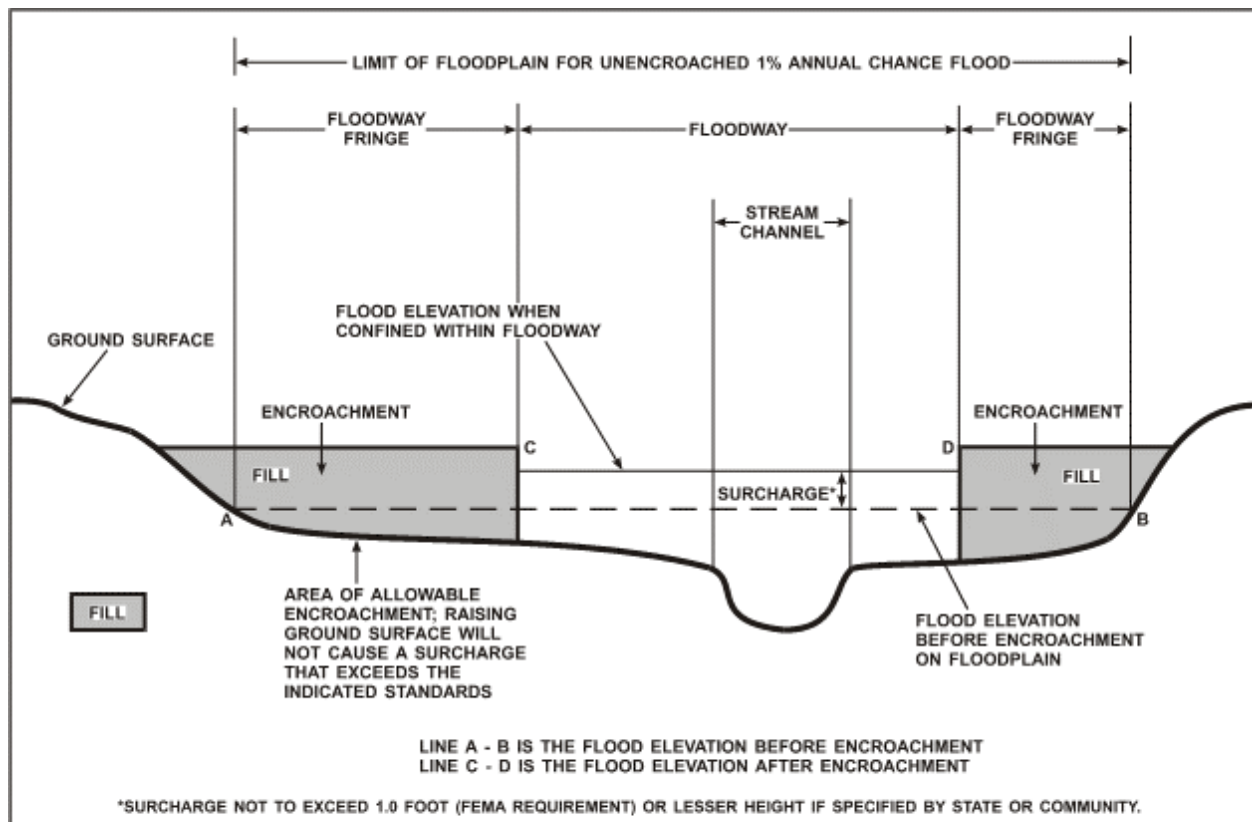


FIGURE 1 – FLOODWAY SCHEMATIC

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Beau Basin Coulee								
A	8,017	79	639	4.7	21.6	21.6	22.2	0.6
B	9,550	151	666	4.5	25.6	25.6	26.0	0.4
C	12,073	61	5665	4.0	29.6	29.6	30.3	0.7
D	15,324	89	642	3.3	32.9	32.9	33.4	0.5
E	16,044	74	565	3.7	33.6	33.6	34.0	0.4
F	17,481	69	561	3.8	35.0	35.0	35.4	0.4
G	18,772	82	814	2.4	36.0	36.0	36.4	0.4
H	19,825	70	686	2.5	36.9	36.9	37.4	0.5
I	20,844	73	684	2.4	37.3	37.3	37.8	0.5
J	22,686	297	1495	1.1	38.0	38.0	38.8	0.8
K	23,292	182	1441	0.9	38.2	38.2	39.2	1.0
L	24,005	350	1347	0.8	38.6	38.6	39.6	1.0
M	24,635	250	1189	0.9	39.1	39.1	40.0	0.9
N	25,824	220	941	1.1	39.7	39.7	40.6	0.9
O	26,912	68	359	1.7	40.2	40.2	41.0	0.8
P	27,811	44	226	2.4	40.9	40.9	41.8	0.9
Q	29,886	40	215	2.5	43.7	43.7	44.0	0.3
R	31,972	53	267	1.9	47.2	47.2	47.3	0.1
S	32,754	151	463	1.1	49.3	49.3	49.4	0.1
T	33,472	60	259	2.0	49.4	49.4	49.6	0.2

¹ Feet above confluence with Vermilion River

TABLE 6	FEDERAL EMERGENCY MANAGEMENT AGENCY Lafayette Parish, LA And Incorporated Areas	FLOODWAY DATA
		BEAU BASIN COULEE

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
Coulee Ile Des Cannes								
A	1,091	249 ³	2,678	5.2	16.4	13.0 ²	13.9	0.9
B	1,967	393 ³	3,732	4.2	16.4	13.7 ²	14.6	0.9
C	2,905	418 ³	3,880	4.4	16.4	14.3 ²	15.4	1.1
D	4,512	373 ³	3,321	4.4	16.4	14.9 ²	15.8	0.9
E	6,075	429 ³	3,803	4.4	16.4	15.6 ²	16.6	1.0
F	8,515	488 ³	3,827	4.1	16.5	16.5	17.4	0.9
G	9,757	448 ³	4,447	4.0	17.0	17.0	17.9	0.9
H	11,260	666 ³	5,349	2.8	17.8	17.8	18.6	0.8
I	12,038	601 ³	4,453	3.5	17.9	17.9	18.7	0.8
J	12,889	799	4,746	2.3	18.3	18.3	19.2	0.9
K	14,756	675	4,145	2.5	18.6	18.6	19.5	0.9
L	16,301	974	4,006	2.8	18.8	18.8	19.6	0.8
M	17,499	1,446	4,567	2.8	18.9	18.9	19.8	0.9
N	23,049	3,095	7,225	2.6	19.9	19.9	20.7	0.8
O	26,396	1,009	3,301	3.2	20.6	20.6	21.3	0.7
P	28,780	510	2,753	3.2	21.2	21.2	21.8	0.6
Q	29,723	613	3,261	2.7	21.6	21.6	22.1	0.5
R	34,241	1,773	6,596	1.6	22.8	22.8	23.4	0.6
S	35,655	1,898	6,809	1.4	22.9	22.9	23.5	0.6
T	36,597	1,517	4,687	2.0	23.0	23.0	23.5	0.5
U	37,845	1,329	3,841	2.4	23.2	23.2	23.7	0.5
V	41,928	820	2,429	1.9	23.9	23.9	24.4	0.5
W	43,183	1,171	2,482	2.2	24.0	24.0	24.6	0.6
X	44,980	1,256	2,728	2.4	24.3	24.3	25.2	0.9
Y	50,001	918	2,675	2.2	26.1	26.1	26.9	0.8

¹ Feet above confluence with Vermilion River

² Elevation computed without consideration of backwater effects from Vermilion River

³ Total width reported, floodway extends outside the Lafayette Parish boundary

⁴ Floodway width does not account for confluence with Coulee Ile Des Cannes Lateral 4

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

**Lafayette Parish, LA
And Incorporated Areas**

FLOODWAY DATA

COULEE ILE DES CANNES

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
Coulee Ile Des Cannes (continued)								
Z	50,544	291 ⁴	1,206	2.8	26.1	26.1	26.9	0.8
AA	51,819	1,166	3,055	2.0	26.3	26.3	27.2	0.9
AB	53,244	2,039	4,604	1.7	26.7	26.7	27.8	1.1
AC	54,262	2,116	4,720	1.5	26.9	26.9	27.9	1.0
AD	58,744	328	1,078	3.3	29.0	29.0	29.9	0.9
AE	60,249	889	2,009	2.2	30.3	30.3	31.2	0.9
AF	65,417	2,959	5,740	0.9	31.4	31.4	32.3	0.9
AG	67,325	4,265	11,039	0.4	33.1	33.1	33.8	0.7
AH	68,108	3,924	12,860	0.3	33.1	33.1	33.9	0.8
AI	70,113	3,888	12,911	0.3	33.1	33.1	33.9	0.8
AJ	75,572	3,188	8,848	0.4	34.6	34.6	35.3	0.7
AK	76,399	2,695	7,405	0.4	34.6	34.6	35.3	0.7
AL	78,682	3,761	11,672	0.1	34.6	34.6	35.3	0.7
AM	84,146	2,028	3,098	0.7	36.5	36.5	37.0	0.5
AN	87,070	2,281	2,893	0.4	37.0	37.0	37.6	0.6
AO	89,067	2,340	1,211	1.5	37.7	37.7	37.9	0.2

¹ Feet above confluence with Vermilion River

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

**Lafayette Parish, LA
And Incorporated Areas**

FLOODWAY DATA

COULEE ILE DES CANNES

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
Coulee Granges / Coulee Ile Des Cannes Lateral 1								
A	371	605 ²	3,386	1.8	18.3	18.3	19.2	0.9
B	3,488	536	2,905	1.6	18.8	18.8	19.7	0.9
C	3,848	388	2,149	0.7	18.8	18.8	19.7	0.9
D	4,990	469	2,264	0.8	18.8	18.8	19.8	1.0
E	6,926	1,251	3,833	0.4	18.9	18.9	19.8	0.9
F	7,991	1,676	4,069	0.5	19.0	19.0	19.9	0.9
G	10,405	1,136	2,690	0.4	19.2	19.2	20.0	0.8
H	12,169	172	392	2.0	19.9	19.9	20.7	0.8
I	14,347	91	284	2.4	21.8	21.8	22.6	0.8
J	16,420	50	266	2.0	23.7	23.7	24.3	0.6
K	18,163	43	259	1.9	24.7	24.7	25.3	0.6
L	21,094	112	322	1.5	25.6	25.6	26.7	1.1
M	23,351	119	397	1.2	26.4	26.4	27.4	1.0
N	24,871	40	238	1.3	27.1	27.1	27.8	0.7
O	27,558	74	336	0.8	27.2	27.2	28.2	1.0
P	27,925	147	632	0.4	27.2	27.2	28.2	1.0
Q	28,162	125	574	0.4	27.2	27.2	28.2	1.0

¹ Feet above confluence with Coulee Ile Des Cannes

² Floodway width combined with Coulee Ile Des Cannes

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

**Lafayette Parish, LA
And Incorporated Areas**

FLOODWAY DATA

**COULEE GRANGES / COULEE ILE DES CANNES –
LATERAL 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
Coulee Ile Des Cannes Lateral 2								
A	927	545	1,519	1.4	23.3	23.3	23.8	0.5
B	1,619	493	1,605	1.5	23.4	23.4	23.9	0.5
C	3,599	807	1,571	1.6	23.8	23.8	24.5	0.7
D	6,631	493	1,486	1.8	25.3	25.3	26.0	0.7
E	7,492	548	1,548	1.8	25.5	25.5	26.2	0.7
F	8,131	545	1,844	1.7	25.6	25.6	26.3	0.7
G	8,934	389	1,336	1.3	26.2	26.2	26.6	0.4
H	9,256	339	1,056	1.7	26.2	26.2	26.7	0.5
I	9,977	235	844	1.8	26.4	26.4	26.9	0.5
J	11,545	134	696	1.6	27.0	27.0	27.3	0.3
K	12,148	134	601	2.0	27.2	27.2	27.5	0.3
L	12,363	97	467	2.1	27.4	27.4	27.6	0.2
M	14,461	204	885	1.6	27.9	27.9	28.3	0.4
N	14,795	226	836	1.8	27.9	27.9	28.4	0.5
O	15,167	259	1,010	1.3	28.0	28.0	28.5	0.5

¹ Feet above confluence with Coulee Ile Des Cannes

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

**Lafayette Parish, LA
And Incorporated Areas**

FLOODWAY DATA

COULEE ILE DES CANNES LATERAL 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
Coulee Ile Des Cannes Lateral 3								
A	305	330	1,013	2.2	23.7	23.7	24.2	0.5
B	5,225	281	1,095	2.4	26.9	26.9	27.4	0.5
C	5,461	310	1,138	2.5	27.0	27.0	27.5	0.5
D	6,118	441	1,561	2.0	27.4	27.4	27.9	0.5
E	6,320	343	1,277	1.9	27.6	27.6	28.0	0.4
F	6,905	350	1,405	1.6	28.0	28.0	28.4	0.4
G	8,837	372	1,157	2.2	28.9	28.9	29.2	0.3
H	10,284	282	1,065	1.9	29.5	29.5	29.7	0.2
I	12,568	406	1,300	0.7	29.9	29.9	30.1	0.2
J	14,116	324	805	1.0	29.9	29.9	30.3	0.4
K	17,128	81	316	1.5	30.7	30.7	31.3	0.6
L	20,054	441	468	1.1	32.4	32.4	32.8	0.4
M	21,569	439	530	1.1	32.7	32.7	33.2	0.5
N	23,852	736	1,561	0.2	33.7	33.7	33.9	0.2
O	24,724	400	769	0.6	33.8	33.8	34.0	0.2
P	25,197	166	466	0.8	33.9	33.9	34.1	0.2
Q	26,177	778	1,541	0.3	33.9	33.9	34.7	0.8
R	27,804	961	1,403	0.2	34.0	34.0	34.7	0.7
S	28,948	635	896	0.3	34.1	34.1	34.7	0.6
T	29,852	357	883	0.2	34.3	34.3	34.9	0.6
U	30,747	297	930	0.2	35.3	35.3	35.4	0.1
V	32,767	193	363	1.0	35.4	35.4	35.5	0.1

¹ Feet above confluence with Coulee Ile Des Cannes

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

**Lafayette Parish, LA
And Incorporated Areas**

FLOODWAY DATA

COULEE ILE DES CANNES LATERAL 3

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
Coulee Ile Des Cannes Lateral 4								
A	1,178	1,172	3,162	0.7	26.2	26.2	27.0	0.8
B	1,901	1,167	3,443	0.6	26.2	26.2	27.0	0.8
C	3,687	2,084	6,144	0.2	26.2	26.2	27.0	0.8
D	4,382	2,234	6,484	0.2	26.2	26.2	27.1	0.9
E	4,873	2,276	5,648	0.2	26.2	26.2	27.1	0.9
F	5,592	2,226	5,221	0.2	26.3	26.3	27.1	0.8
G	6,640	1,982	3,753	0.3	26.3	26.3	27.1	0.8
H	7,325	1,039	2,314	0.5	26.3	26.3	27.1	0.8
I	8,451	638	1,236	0.7	26.4	26.4	27.2	0.8
J	10,205	524	584	1.4	26.5	26.5	27.3	0.8
K	12,781	78	175	1.9	28.6	28.6	28.6	0.0
L	16,811	99	227	1.2	33.6	33.6	33.6	0.0
M	17,228	140	248	1.1	33.8	33.8	33.8	0.0
N	26,231	173	162	0.9	36.5	36.5	36.6	0.1
O	26,263	144	171	0.9	36.6	36.6	36.6	0.0

¹ Feet above confluence with Coulee Ile Des Cannes

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

**Lafayette Parish, LA
And Incorporated Areas**

FLOODWAY DATA

COULEE ILE DES CANNES LATERAL 4

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. The zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 1-percent annual chance floodplains that are determined in the Flood Insurance Study by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no 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 Flood Insurance Study by detailed methods. In most instances, whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone AH

Zone AH is the flood insurance rate zone that corresponds to the areas of 1-percent annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot 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 500-year floodplain, areas within the 500-year floodplain, and to 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 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 the zones and base flood elevations 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 are shown where applicable.

The current FIRM presents flooding information for the entire geographic area of Lafayette Parish. Historical data relating to the maps prepared for each community prior to their inclusion in this parish-wide Flood Insurance Study are presented in Table 7, “Community Map History.”

7.0 OTHER STUDIES

The preparation of an updated FIS has been recently completed for Acadia, Iberia, St. Landry, St. Martin and Vermilion Parishes, Louisiana. The Lafayette Parish study is in agreement with these studies.

Information pertaining to revised and unrevised flood hazards for each jurisdiction within Lafayette Parish has been compiled into this FIS report. Therefore, this FIS supersedes or is compatible with all previously printed FIS reports, and FIRMs for all jurisdictions with Lafayette Parish.

Because it is based on more up-to-date analyses, this Flood Insurance Study supersedes the previously printed Flood Insurance Studies for the unincorporated areas of Lafayette Parish; the Cities of Carencro, Scott, and Lafayette; and the Towns of Broussard and Duson (References 12, 14, 18, 19, 25 and 26).

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting FEMA Region 6, Federal Insurance and Mitigation, 800 North Loop 288, Denton, Texas 76209.

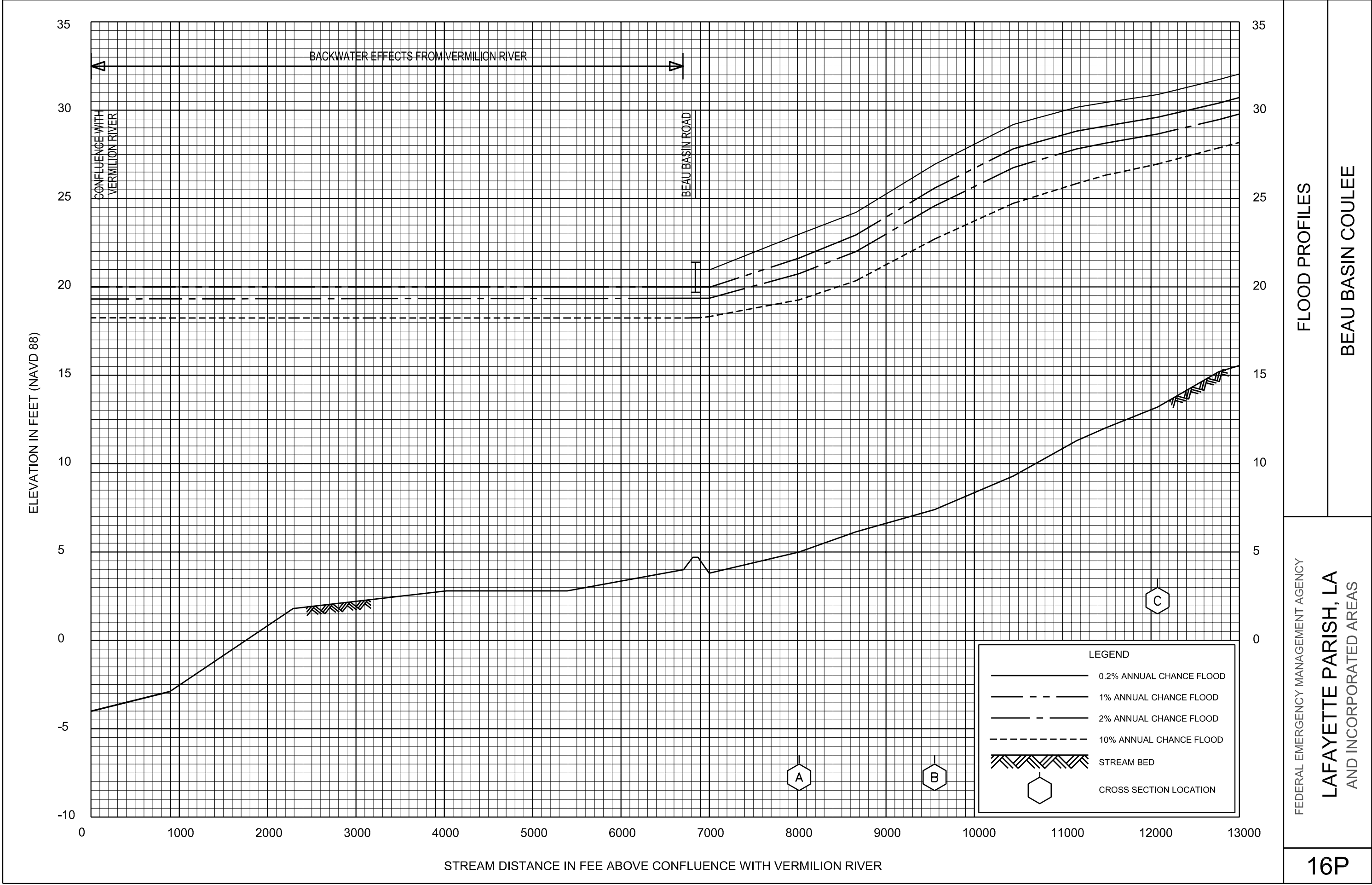
COMMUNITY NAME		INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE(S)	FLOOD INSURANCE RATE MAP EFFECTIVE DATE	FLOOD INSURANCE RATE MAP REVISION DATE(S)
Broussard, Town of		April 12, 1974	November 7, 1975 June 11, 1976 February 27, 1979	March 16, 1988	December 4, 1984
Carencro, City of		March 26, 1976	None	November 5, 1980	
Duson, Town of		April 5, 1974	February 27, 1976	September 30, 1981	
Lafayette Parish (Unincorporated Areas)		November 15, 1977	None	August 1, 1980	
Lafayette, City of		March 1, 1974	May 14, 1976 July 17, 1979	September 30, 1980	
Scott, City of		June 14, 1974	None	April 4, 1983	
Youngsville, City of		April 5, 1974	November 7, 1975	March 30, 1982	
TABLE 7	FEDERAL EMERGENCY MANAGEMENT AGENCY			COMMUNITY MAP HISTORY	
	LAFAYETTE PARISH, LA AND INCORPORATED AREAS				

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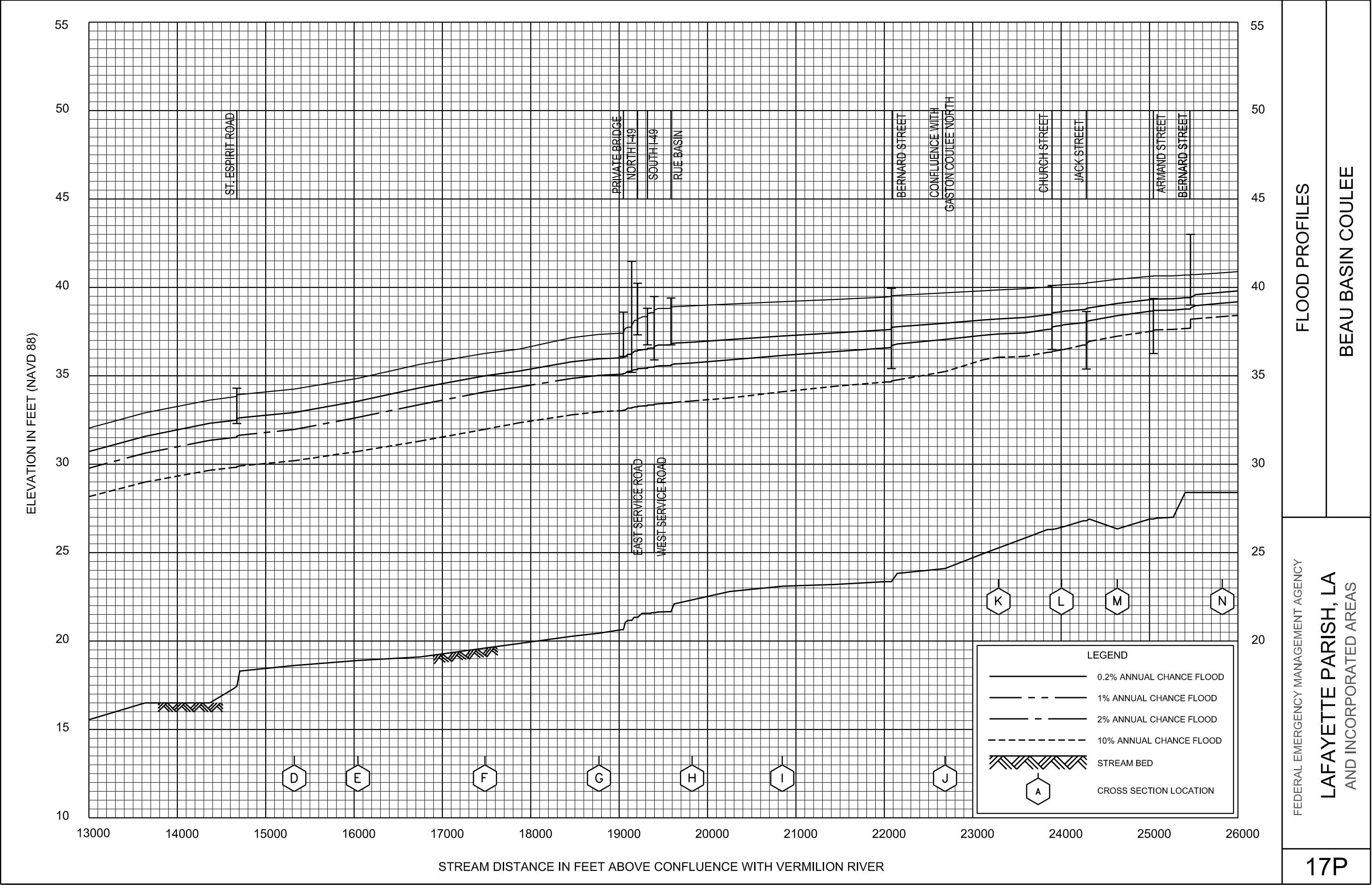
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36. U.S. Census Bureau, Census 2010 Summary File 1 (SF 1) 100-Percent Data, Washington, D.C., 2010.
37. Public Law 228, 77th Congress, Flood Control Act of 1941, Washington, D.C., August 18, 1941.



FLOOD PROFILES
BEAU BASIN COULEE

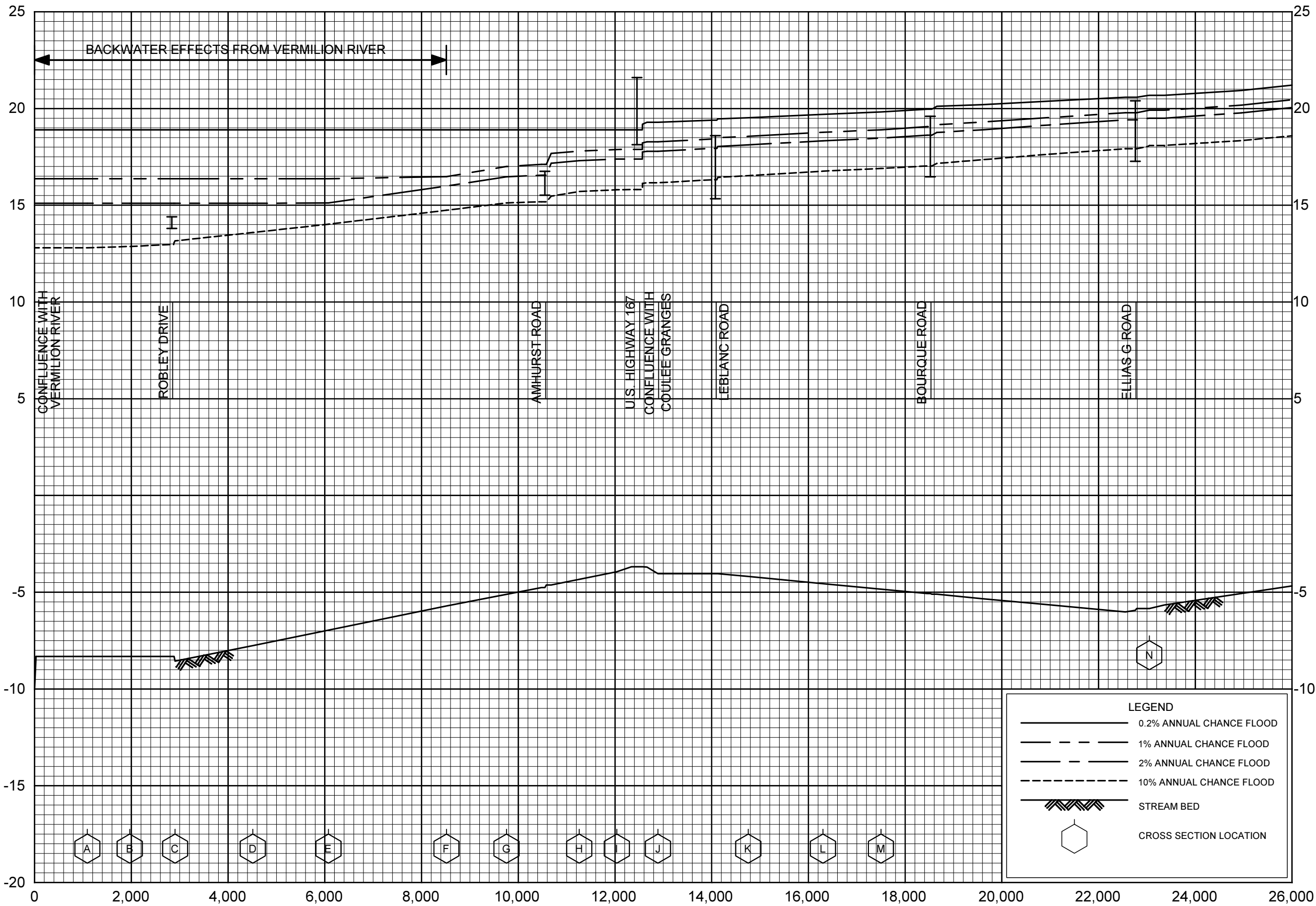
FEDERAL EMERGENCY MANAGEMENT AGENCY
LAFAYETTE PARISH, LA
AND INCORPORATED AREAS



FLOOD PROFILES
BEAU BASIN COULEE

FEDERAL EMERGENCY MANAGEMENT AGENCY
LAFAYETTE PARISH, LA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



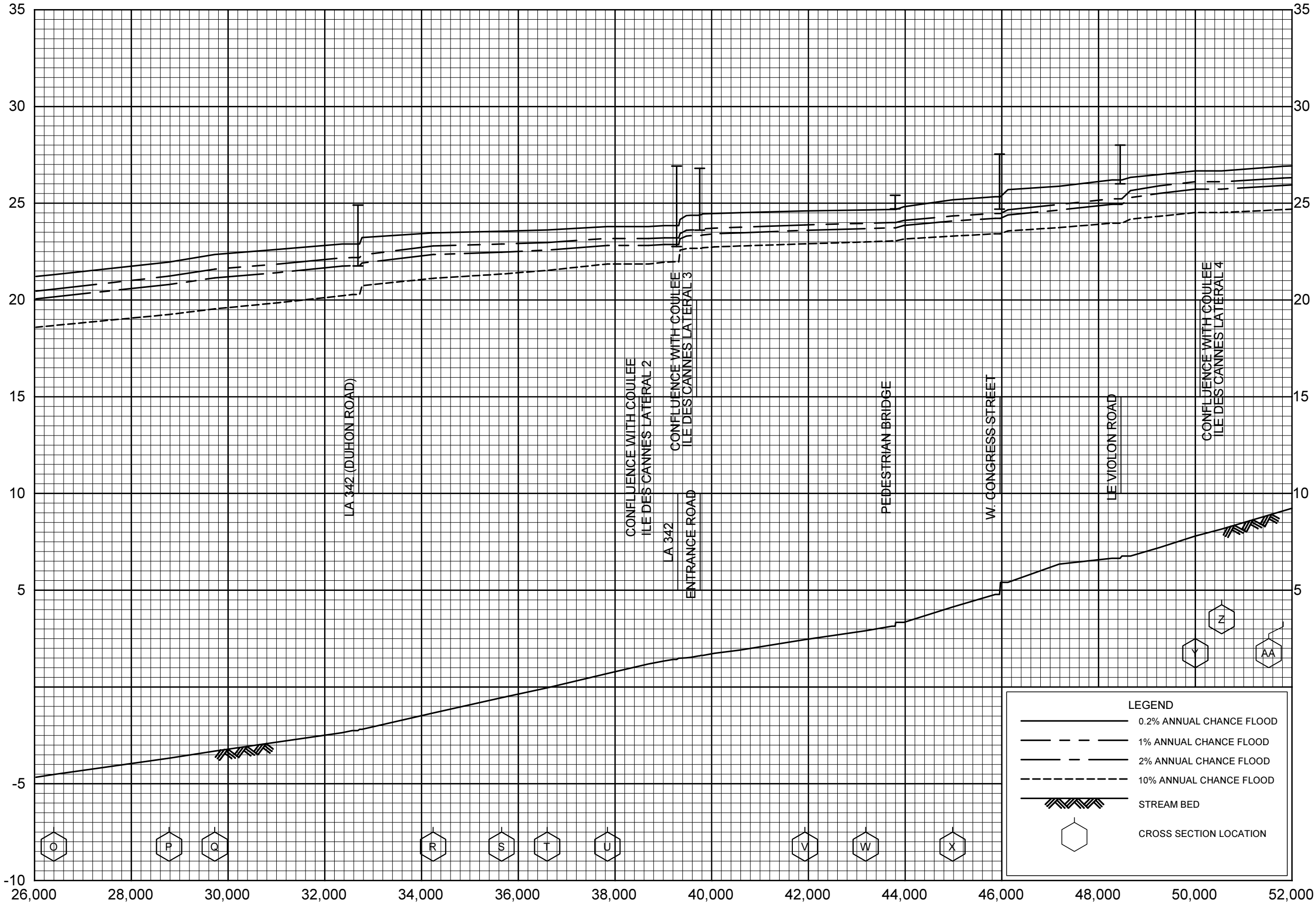
FLOOD PROFILES

COULEE ILE DES CANNES

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAFAYETTE PARISH, LA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



FLOOD PROFILES

COULEE ILE DES CANNES

FEDERAL EMERGENCY MANAGEMENT AGENCY
LAFAYETTE PARISH, LA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)

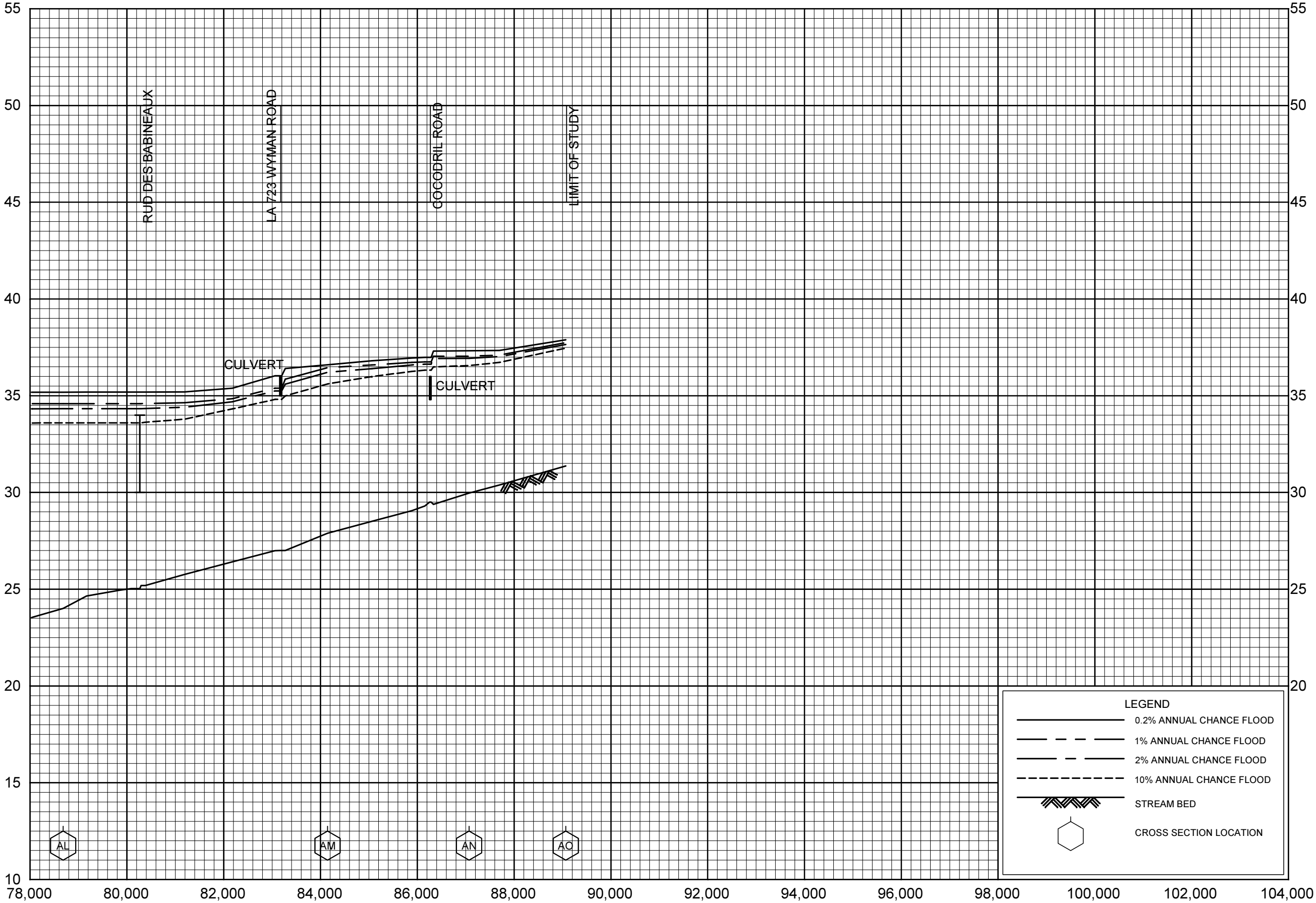


STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH VERMILION RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
LAFAYETTE PARISH, LA
AND INCORPORATED AREAS

FLOOD PROFILES
COULEE ILE DES CANNES

ELEVATION IN FEET (NAVD)



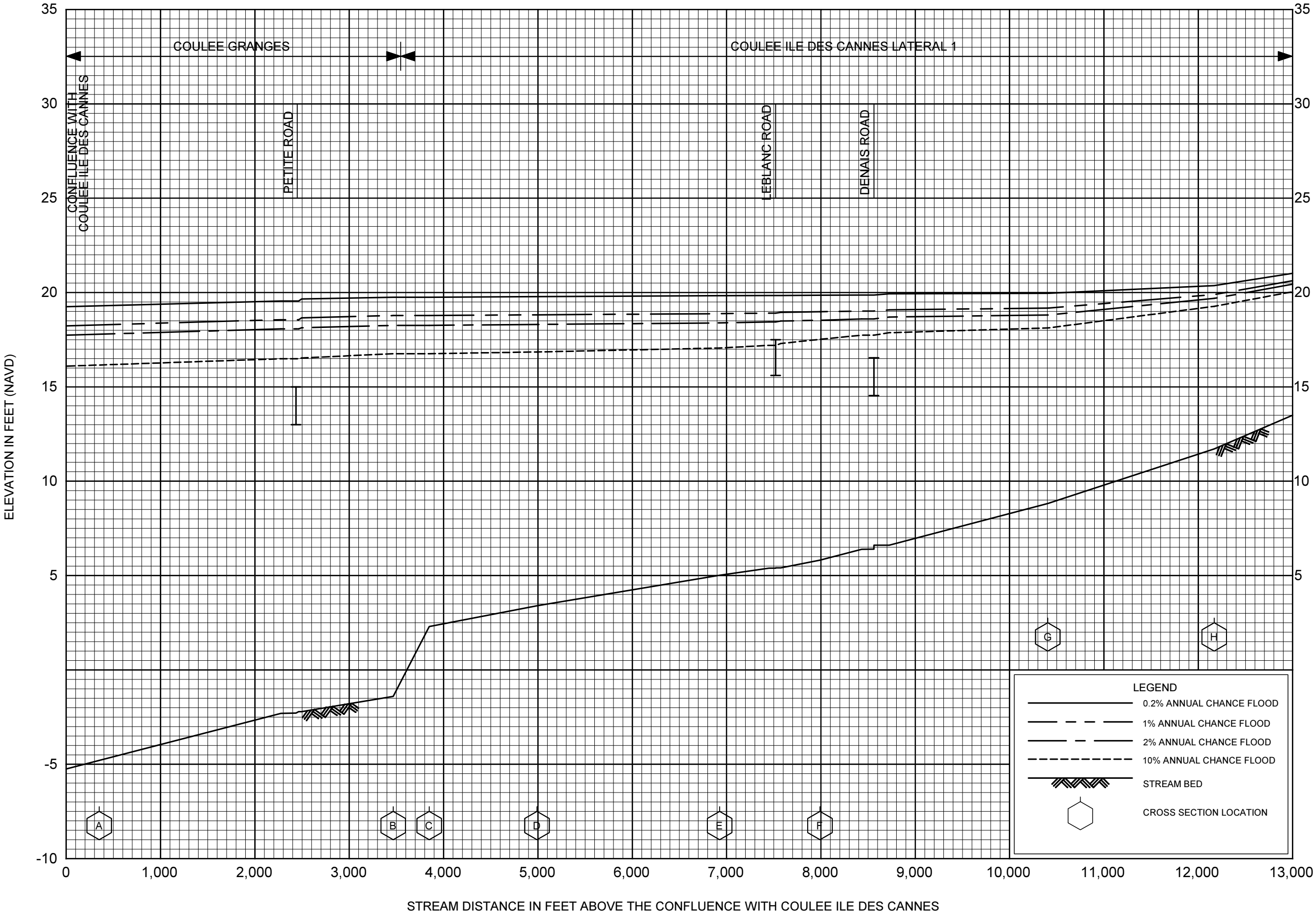
STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH VERMILION RIVER

FLOOD PROFILES

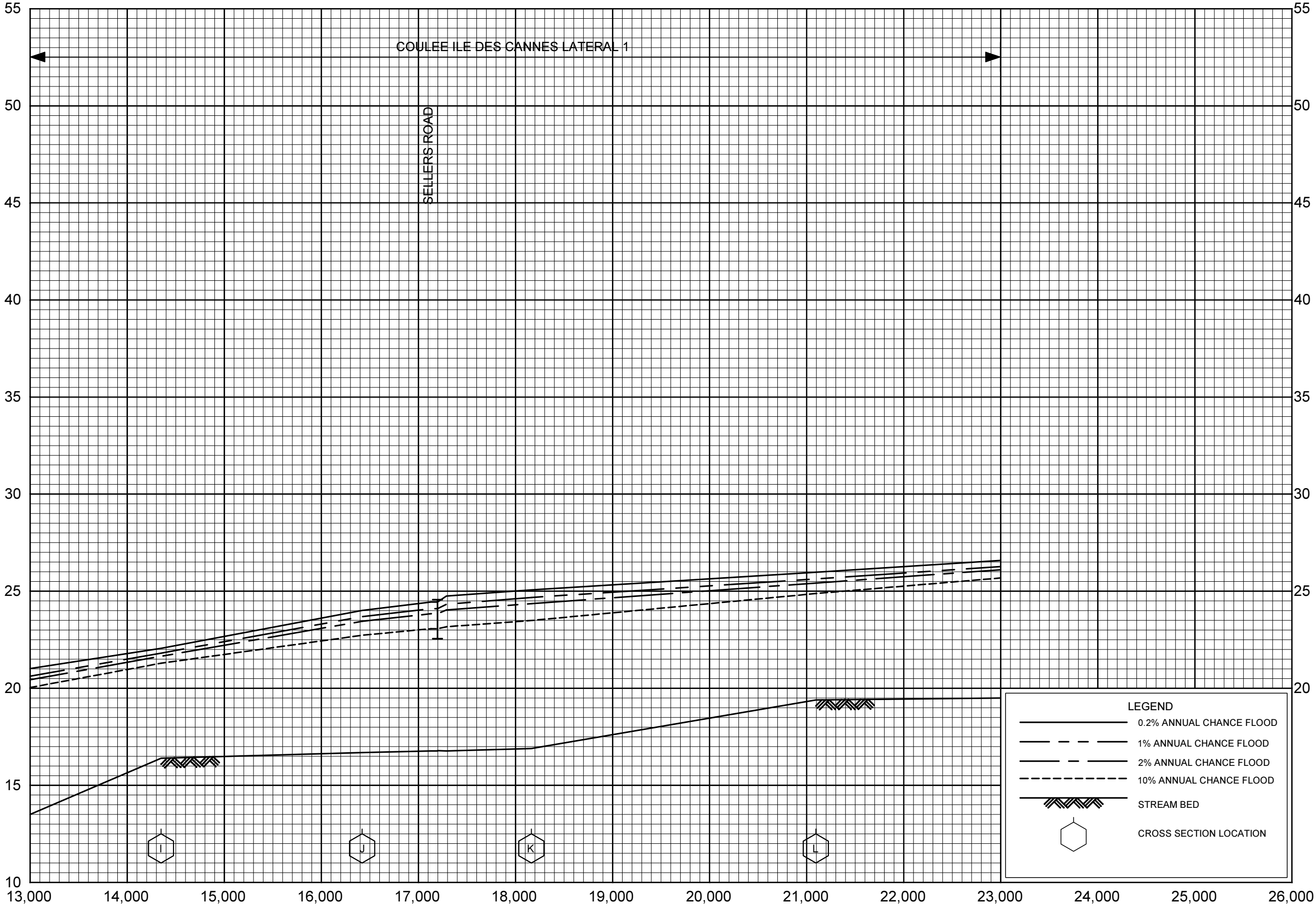
COULEE ILE DES CANNES

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAFAYETTE PARISH, LA
AND INCORPORATED AREAS



ELEVATION IN FEET (NAVD)



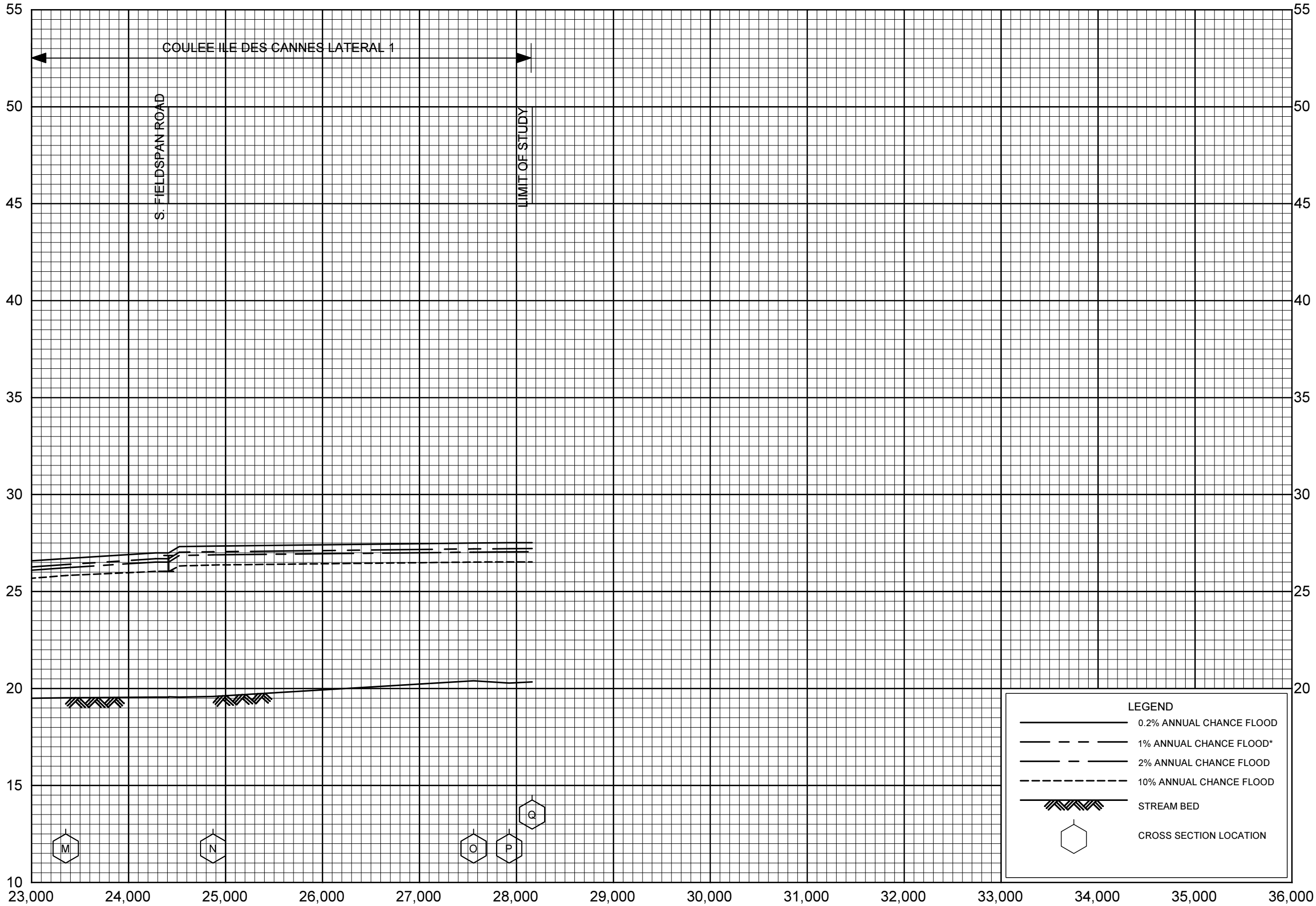
STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH COULEE ILE DES CANNES

FLOOD PROFILES

COULEE GRANGES/COULEE ILE DES CANNES LATERAL 1

FEDERAL EMERGENCY MANAGEMENT AGENCY
LAFAYETTE PARISH, LA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH COULEE ILE DES CANNES

FLOOD PROFILES

COULEE GRANGES/COULEE ILE DES CANNES LATERAL 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

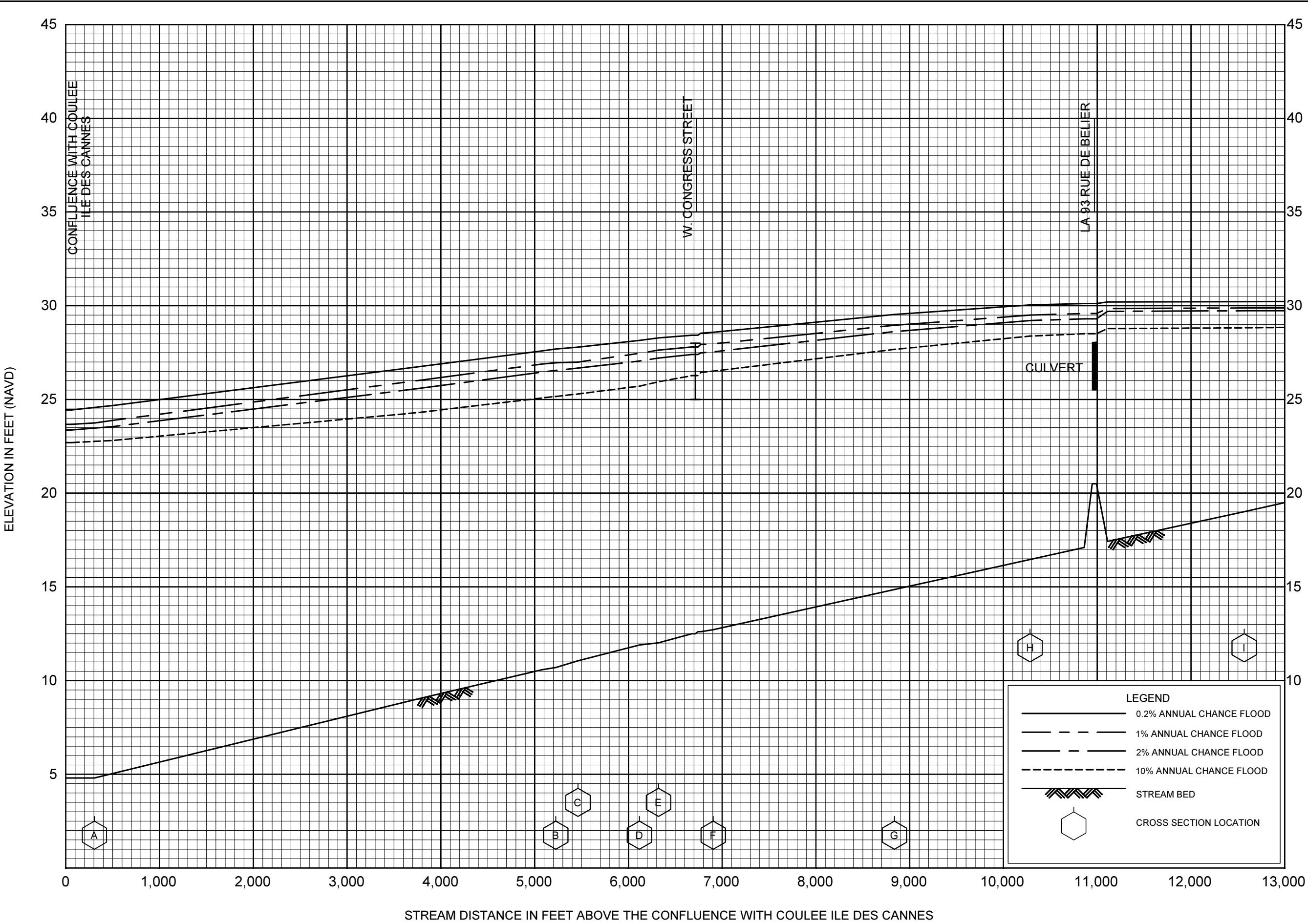
LAFAYETTE PARISH, LA
AND INCORPORATED AREAS

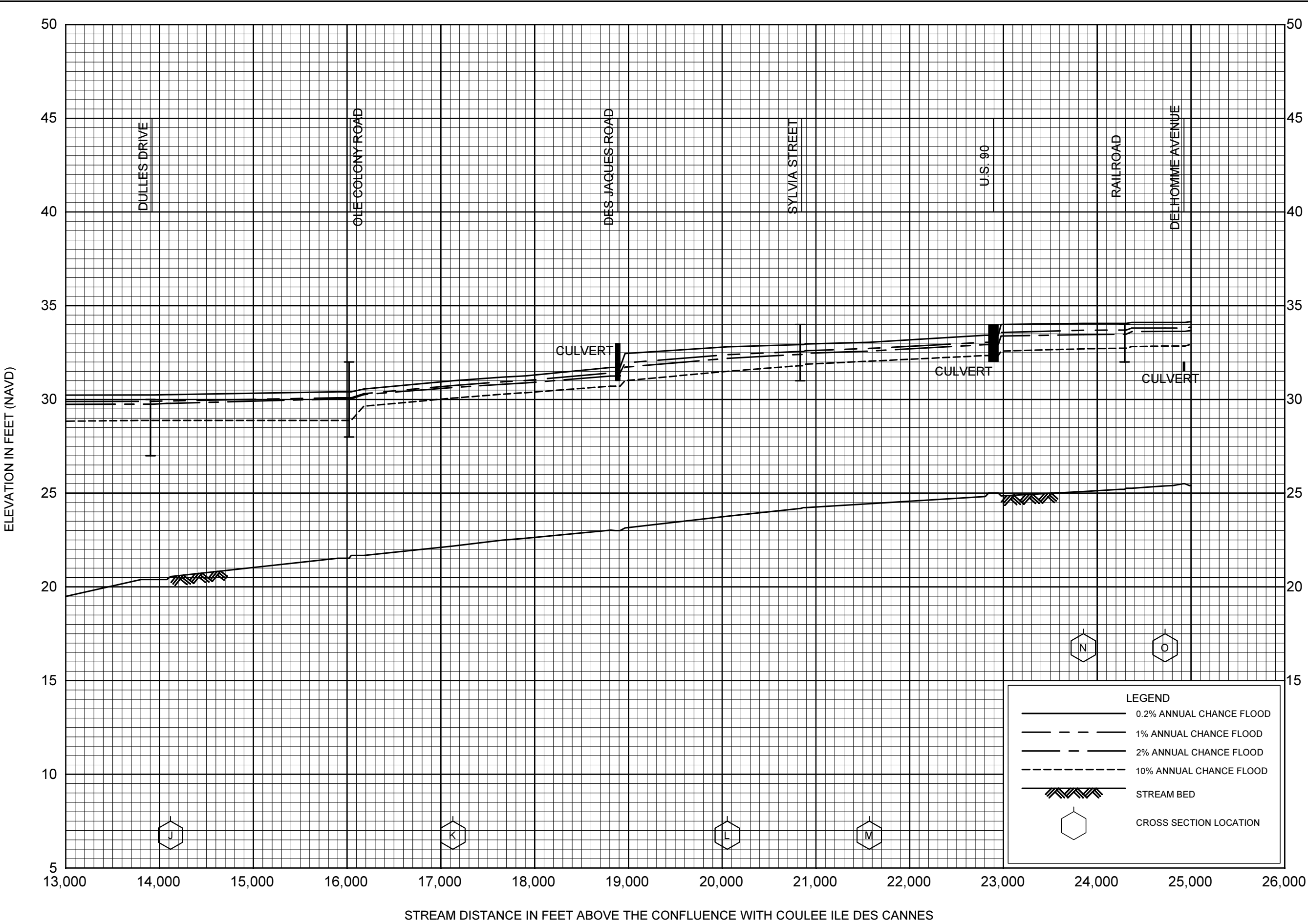


FEDERAL EMERGENCY MANAGEMENT AGENCY
LAFAYETTE PARISH, LA
AND INCORPORATED AREAS

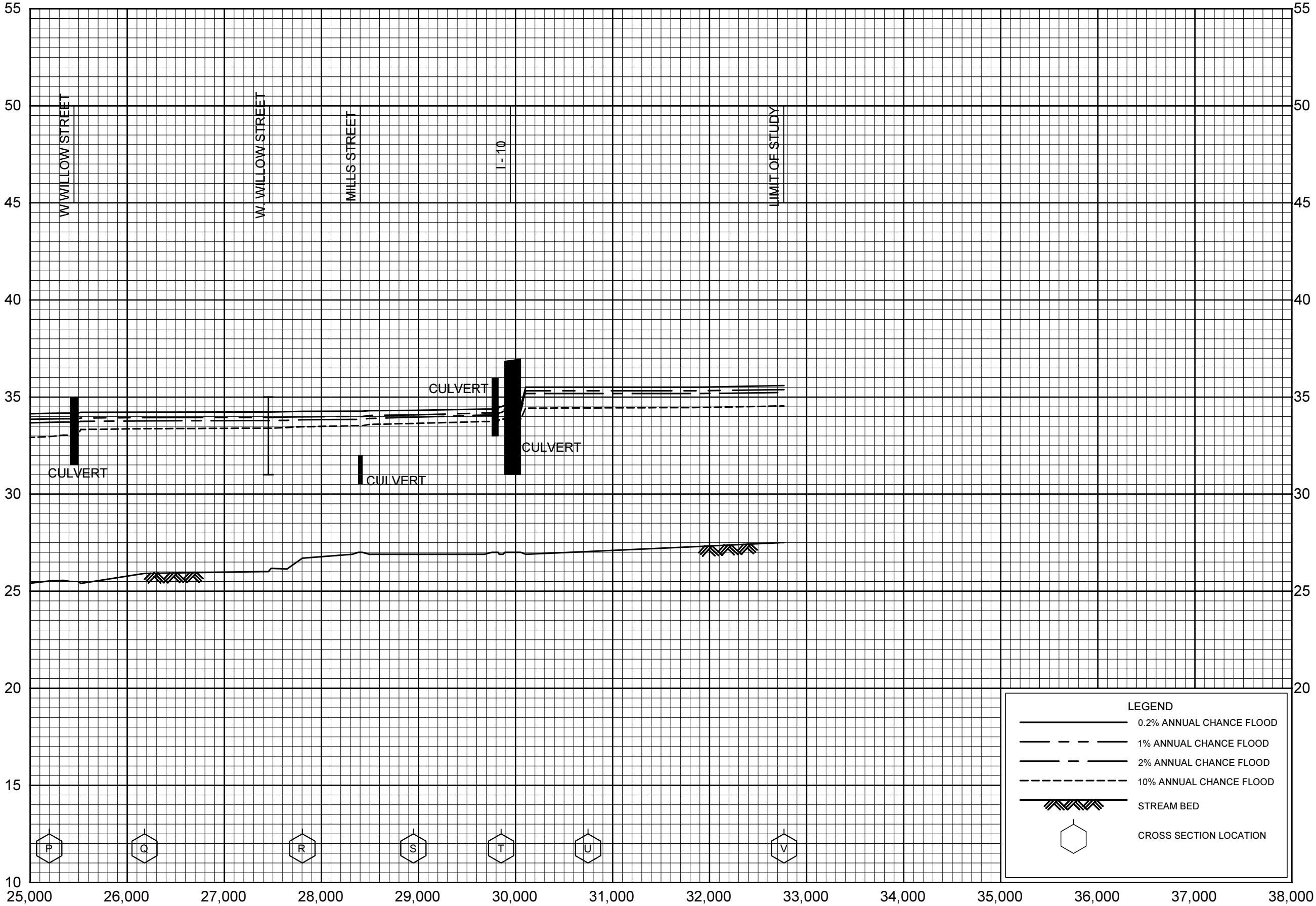
FLOOD PROFILES
COULEE ILE DES CANNES LATERAL 2







ELEVATION IN FEET (NAVD)



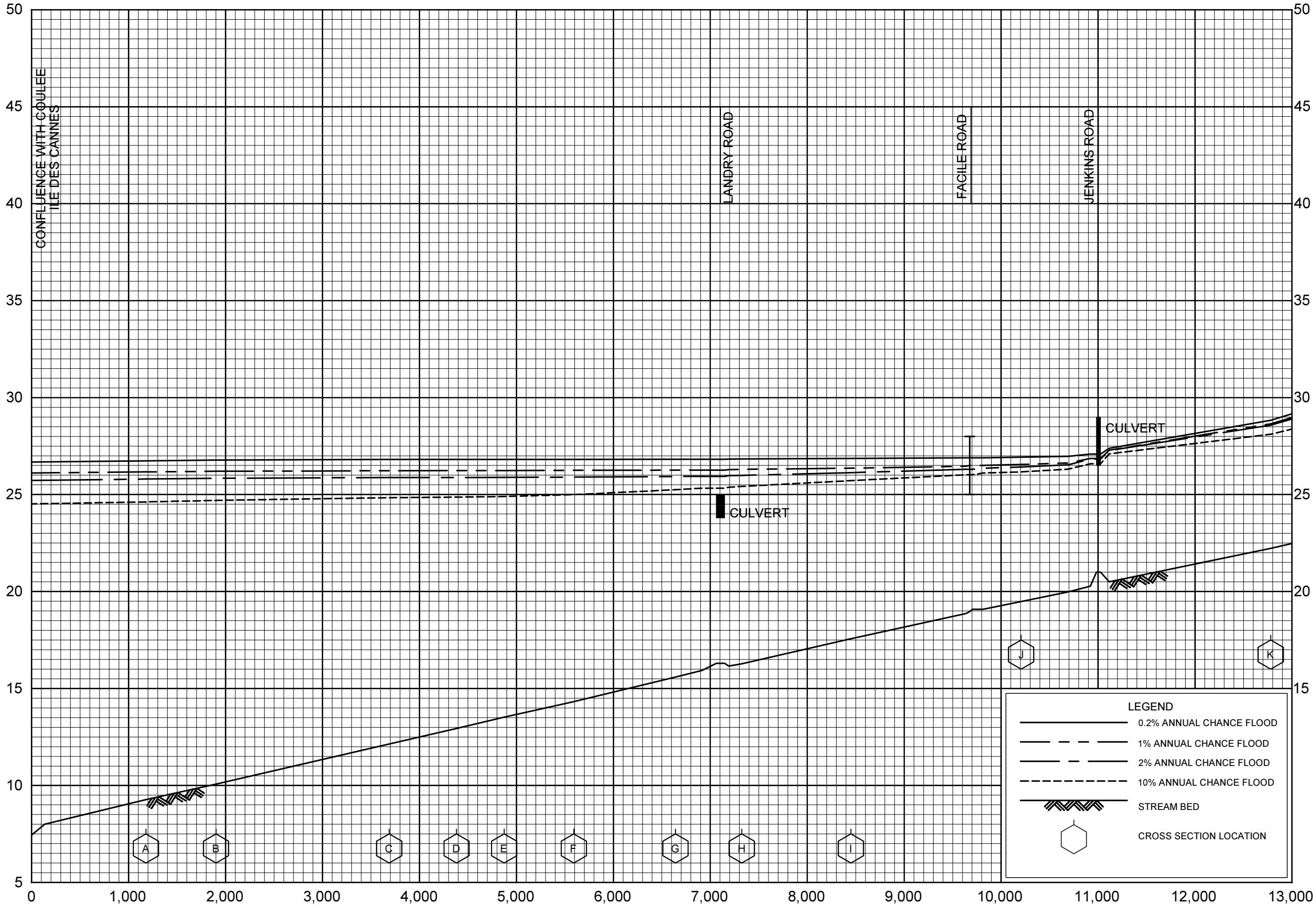
STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH COULEE ILE DES CANNES

FLOOD PROFILES

COULEE ILE DES CANNES LATERAL 3

FEDERAL EMERGENCY MANAGEMENT AGENCY
LAFAYETTE PARISH, LA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)

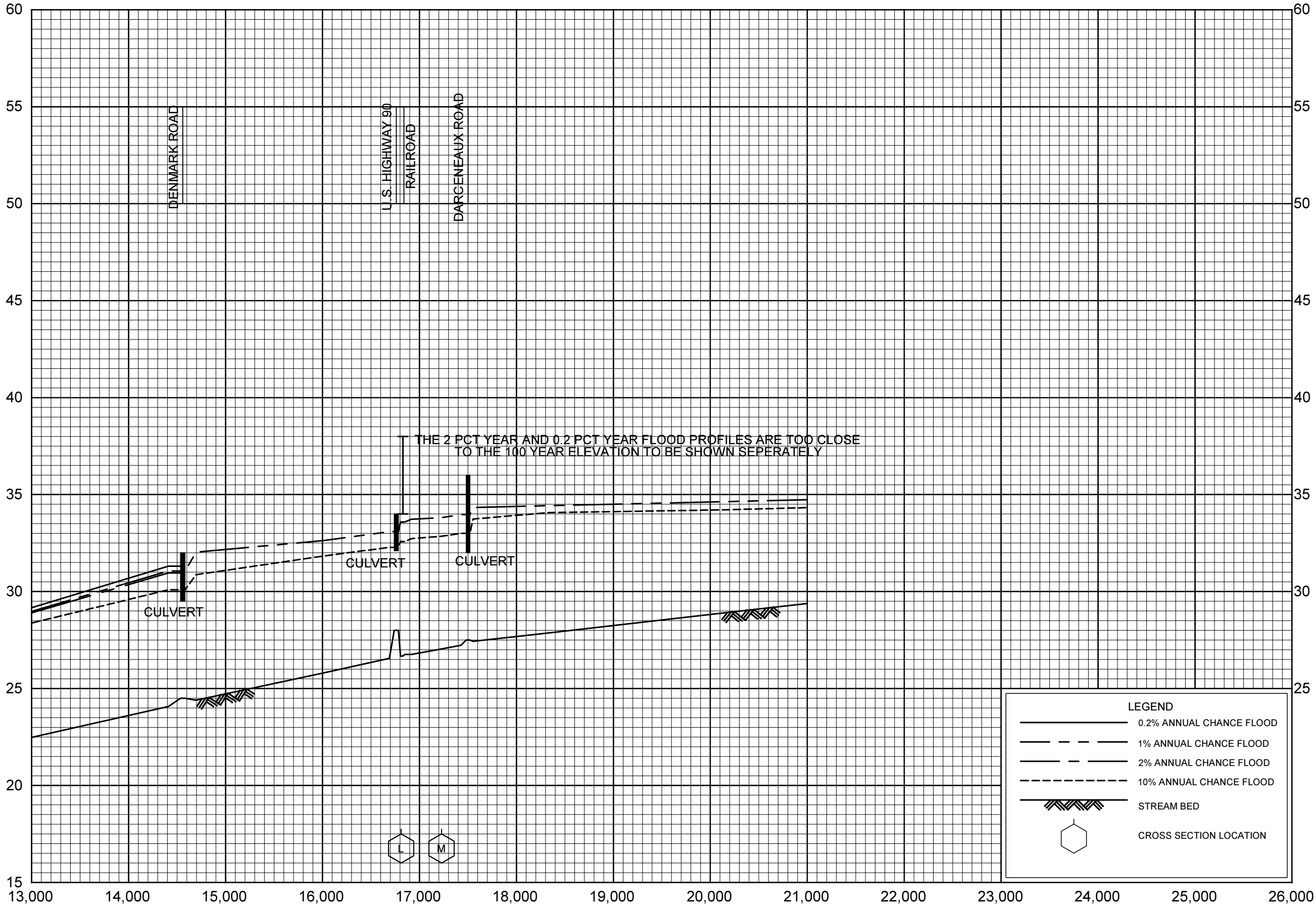


FLOOD PROFILES

COULEE ILE DES CANNES LATERAL 4

FEDERAL EMERGENCY MANAGEMENT AGENCY
LAFAYETTE PARISH, LA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH COULEE ILE DES CANNES

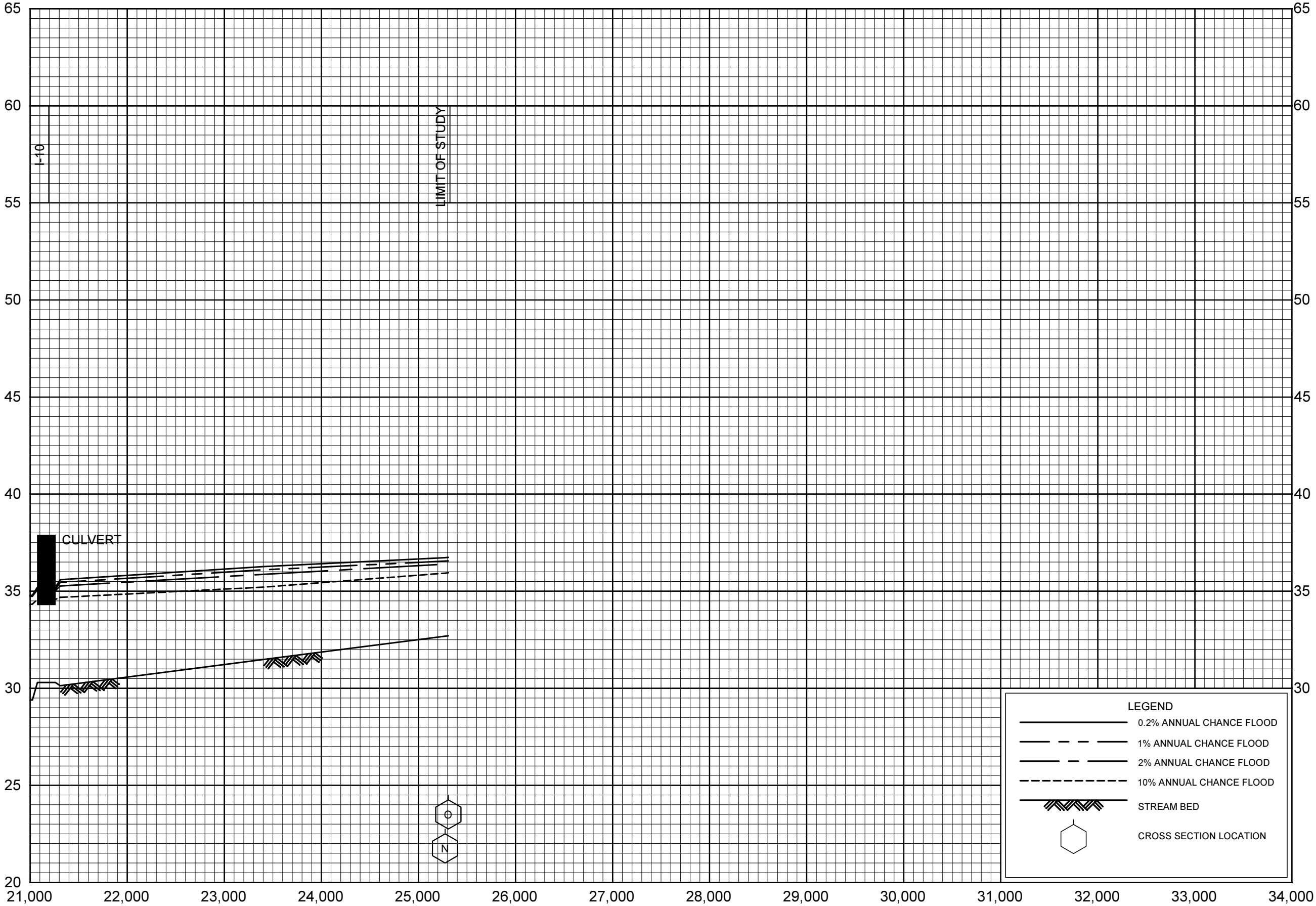
FLOOD PROFILES

COULEE ILE DES CANNES LATERAL 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAFAYETTE PARISH, LA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)



STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH COULEE ILE DES CANNES

FLOOD PROFILES

COULEE ILE DES CANNES LATERAL 4

FEDERAL EMERGENCY MANAGEMENT AGENCY
LAFAYETTE PARISH, LA
AND INCORPORATED AREAS