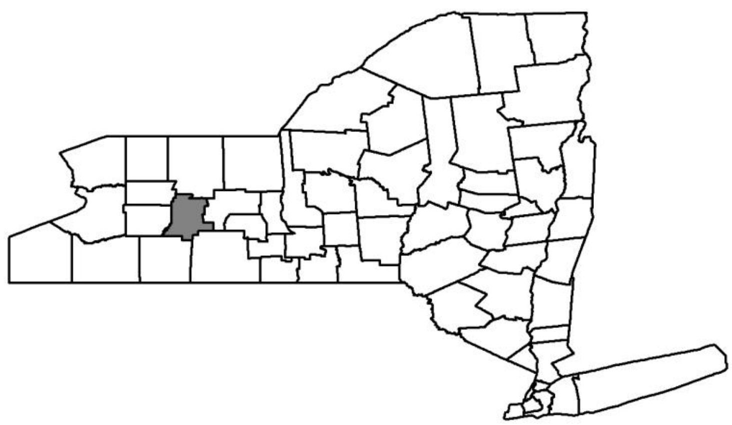
FLOOD INSURANCE STUDY

TOWN OF NORTH DANSVILLE, NEW YORK

LIVINGSTON COUNTY



REVISED:
April 5, 2010

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
360388V000A

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

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

Old Zone	New Zone
A1 through A30	AE
V1 through V30	VE
B	X
C	X

Part or all of this Flood Insurance Study may be revised and republished at any time. In addition, part of this Flood Insurance Study may be revised by the Letter of Map Revision process, which does not involve republication or redistribution of the Flood Insurance Study. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current Flood Insurance Study components.

Effective Date: June 1979
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PUBLISHED SEPARATELY:

Flood Insurance Rate Map Index
Flood Insurance Rate Map

FLOOD INSURANCE STUDY
TOWN OF NORTH DANSVILLE, LIVINGSTON COUNTY, NEW YORK

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and updates a previous FIS/Flood Insurance Rate Map (FIRM) for the Town of North Dansville, New York. This information will be used by the town to update existing floodplain regulations as part of the Regular Phase of the National Flood Insurance Program (NFIP). The information will also be used by local and regional planners to further promote sound land use and floodplain development.

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

1.2 Authority and Acknowledgments

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

The hydrologic and hydraulic analyses for the original May 1978 study were performed by Goodkind & O'Dea, Inc., for the Federal Emergency Management Agency (FEMA), under Contract No. H-3831. That study, completed in January 1977, included all significant flooding sources in the Town of North Dansville.

This revision did not include any updates to the original hydrologic or hydraulic analyses. The purpose of this restudy was to update the corporate limits between the Village of Dansville, the Town of North Dansville and the Town of Sparta and to update the base map data for the Town of North Dansville. New base map data was obtained from the New York State Office of Cyber Security and Critical Infrastructure and is dated April 2002.

1.3 Coordination

On October 31, 1975, a meeting attended by representatives of the Town of North Dansville, FEMA, and Goodkind & O'Dea, Inc. (study contractor) was held to explain the nature and purpose of the FIS. A legal notice was placed in the local newspaper for a period of three weeks announcing the beginning of the study and stating its objectives.

A search for basic data was made in both the public and private sectors in order to obtain all relevant information. Maps indicating the approximate flooding limits of a

1-perent-annual-chance flood event based on limited information, rather than from detailed field surveys and inspections, were obtained from both FEMA and the U.S. Geological Survey (USGS). Several reports obtained from the U.S. Army Corps of Engineers (USACE) provided both qualitative and quantitative data regarding past floods, in addition to general background information. The Town of North Dansville furnished the study contractor with a copy of its comprehensive master plan, which provided some descriptive information about the community. Additional publications containing pertinent information were sought from the community and various public agencies. Local residents supplied high water mark data for the June 1972 flood. This data was utilized in the development of a model used for the determination of water-surface profiles for the computed flows.

On June 9, 1977, the results of the work were reviewed at a final Consultation and Coordination Officers (CCO) meeting attended by representatives of the Town of North Dansville, FEMA, and the study contractor.

An initial CCO meeting was not held for this restudy of the Town of North Dansville. Representatives of the Village of Dansville attended a final CCO meeting held on August 14, 2007, for the restudy effort for the Town of Sparta where concerns were raised regarding the corporate limits for those two communities. Those concerns resulted in FEMA initiating a restudy of the FIRM and FIS for both the Village of Dansville and the Town of North Dansville.

The results of the above mentioned study were reviewed at the final CCO meeting held on February 23, 2009, and attended by representatives of FEMA, the New York State Department of Environmental Conservation and the Town of North Dansville. All problems raised at that meeting have been addressed in this study.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS report covers the incorporated areas of the Town of North Dansville, New York.

For the initial study in 1975, it was agreed by the Town of North Dansville, FEMA, and the study contractor that Canaseraga Creek, Mill Creek from its confluence with Canaseraga Creek to its confluence with Little Mill Creek (excluding the segment within the Village of Dansville), and Little Mill Creek from its mouth to State Route 63, would be studied in detail.

The areas studied in detail were chosen with priority given to all known flood hazard areas and areas of projected development or proposed construction for the next five years, through January 1982. Approximate methods of analysis were used to study those areas having low development potential and/or minimal flood hazards as identified at the initiation of the study. The scope and methods of study were proposed to and agreed upon by FEMA.

2.2 Community Description

The Town of North Dansville is located in the northwestern part of New York State, in the southern portion of Livingston County, and in the eastern section of the Genesee River Basin. It is bounded on the north by the Town of Sparta, on the east by the Town of Wayland, on the south by the Village of Dansville, and on the west by the Towns of Ossian and West Sparta.

In 1970 the population of the Town of North Dansville was 922, an increase of 287 (45 percent) from the year 1960 (Reference 1). In 2000, the population was 5,738 (Reference 2).

Canaseraga Creek is the largest tributary of the Genesee River, with a drainage area of 335 square miles at its mouth. It flows in a northwesterly direction to a confluence with the Genesee River about four miles below the Mount Morris Dam. The Canaseraga Creek Basin, situated within the Genesee River Basin, approximates a square of about 20 miles per side. The upper reaches, from Cumminsville (in the northwest corner of the Town of North Dansville) upstream, are steep and rugged, with a main stem slope of about 40 feet per mile. The lower Canaseraga Valley, from Cumminsville downstream to the confluence with the Genesee River, is a flat alluvial plain, with a main stem slope of about three feet per mile. The valley is about 15 miles in length, and varies from one to three miles in width (Reference 3). Within the Town of North Dansville, the floodplains east of Canaseraga Creek are generally flat, while those west of the creek rise at a moderate slope. Canaseraga Creek, within the study area, is characterized by a uniform, well-defined channel of moderate width. The annual mean flow of Canaseraga Creek (for 56 years of record) at the Dansville gage is 150 cubic feet per second (cfs) (Reference 3).

Mill Creek flows in a west-northwesterly direction through the Town of North Dansville; Little Mill Creek flows through the eastern part of the town in a west-southwesterly direction before adopting a west-northwesterly path just prior to its confluence with Mill Creek. Both of these streams are characterized by narrow, gravelly channels which are uniform and well-defined.

The vast majority of the land within the Town of North Dansville is open space and parkland. There is industrial and commercial development in the Cumminsville area. Canaseraga Creek meanders through the open space and parkland of the western part of North Dansville and alongside the aforementioned development in the northwestern section. Mill and Little Mill Creeks traverse areas of the town primarily characterized by open space and parkland with some residential development.

The geologic base of the Genesee River Basin consists of bedrock composed of shale, limestone, dolomite, and sandstone. The Canaseraga Valley plain is composed generally of alluvial soils consisting of sands, silts, and clays in various mixtures with localized mixtures of organic materials. These soils are underlain with a thick, dense deposit of lacustrine blue clay. Beneath this layer, the material consists of glacial till deposits of gravel, sand, clay, and silt. The subsurface drainage is poor and the absorptive capacity is limited. The side slopes of the valley consist of alluvial, lacustrine, and glacial till deposits. These materials are, in general, coarser and heavier textured than the valley soils (Reference 3). It is likely that none of the original vegetation persists in the basin because of more than a century of agriculture and logging (Reference 4).

The climate of the Genesee Valley is generally that of the humid or forest climate, which prevails over most of the United States east of the Mississippi River. The basin has cold winters and mild summers. Average temperatures for the months of December, January, and February remain below freezing. This fact becomes important as a contributor to water availability for runoff. Historical occurrences of warming spells, particularly during January, have been the prime reason for a number of serious floods (Reference 5). The average annual temperatures across the Genesee Valley are fairly uniform; generally within the range of 45 to 48 degrees Fahrenheit (Reference 6). The Town of North Dansville receives approximately 29 inches of rainfall per year (Reference 5); mean annual total snowfall ranges from 48 to 80 inches for the region (Reference 7).

2.3 Principal Flood Problems

Damaging floods on the Genesee River Basin have occurred in all months of the year except August. Summer floods are, in general, localized in a part of the watershed and are usually the result of convectively unstable air conditions. Winter and spring floods are usually the result of frontal precipitation on saturated or frozen ground or on melting snow cover, although floods have occurred from melting snow cover alone. Large magnitude floods have occurred on the basin eight times during the 50-year period from 1917 to 1967, causing extensive damage to businesses, utilities, transportation, and homes. These floods occurred in 1927, 1935, 1942, 1950 (two floods), 1956, 1960, and 1961 (Reference 8). The floods of 1927, 1935, and 1961 were particularly damaging to the communities in the Canaseraga Creek Basin (Reference 5).

The banks of Canaseraga Creek in the Canaseraga Valley are overtopped almost every year causing agricultural and nursery damage. Flooding of the area in the upper reaches of the basin, from Cumminsville upstream, is relatively infrequent because of steep channel slopes and high banks (Reference 3). Average annual flood damages on Canaseraga Creek are estimated to be $207,000 (Reference 8).

The most recent and severe flood, resulting from tropical storm "Agnes" during June 1972, subjected the Genesee River Basin to approximately $50 million in damages. The magnitude of this flood in the lower basin ranged from a 10-year storm at Rochester, to a 60-year storm at the Jones Bridge gage; in the upper basin, the flood's magnitude ranged from a 35-year storm at Shongo to a 285-year storm at Portageville. Estimated damages on Canaseraga Creek were approximately $2.3 million. In the lower reaches of the Canaseraga Creek Basin, the frequency of occurrence of this flood was approximately 125 years. Tropical storm "Agnes" produced the largest flood flow recorded in the area. A discharge of 9,600 cfs was recorded at the Dansville gage. The corresponding recurrence interval is estimated at 40 years. The total recorded rainfall in the study area was 7.79 inches, with a maximum daily amount of 3.0 inches (Reference 8). This storm produced excessive damages to the property of the Foster Wheeler Company. In Cumminsville, one of the two bridges along Poags Hole Road collapsed, and several mobile homes flooded along Poags Hole Road.

2.4 Flood Protection Measures

The banks of Canaseraga Creek in the vicinity of the Foster Wheeler Company have been lined with stones, and, in some places, covered with cement. The bridge along Poags Hole Road over Canaseraga Creek, which collapsed during the 1972 storm, was rebuilt; a sheet-pile wall was constructed along the eastern bank for a distance of approximately 100 feet on each side of the bridge. Discussions with local representatives, extensive field reconnaissance, and in-depth reviews of available mapping reveal that, other than those measures enumerated above, appreciable flood protection measures have neither been employed nor are proposed along the various floodplains being studied in this report.

3.0 ENGINEERING METHODS

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

3.1 Hydrologic Analyses

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

Five gaging stations were the sources of data for defining discharge-frequency relationships for Canaseraga Creek. These stations and the year in which their operation began are as follows: the Dansville gage on Canaseraga Creek (1911); the Scio gage on the Genesee River (1917); the Portageville gage on the Genesee River (1909); the Jones Bridge gage on the Genesee River (1904); and the Linden gage on Little Tonawanda Creek (1913) (References 9 and 10).

Values of the 10-, 2-, 1-, and 0.2-percent-annual-chance peak discharges at the various gages were obtained from a log-Pearson Type III distribution of annual peak flow data, with adjustments for expected probability. A plot of mean annual flow versus drainage area for these gages resulted in a reasonably straight line because of the similar topographic characteristics of their basins. A subsequent plot of discharges for the selected recurrence intervals versus drainage area for the various gages was done. A line of best fit was determined for each recurrence interval by the method of least squares. A series of equations of the form $Q=cA^n$, relating peak discharge to the drainage area at ungaged sites, were developed from these lines of best fit (Reference 12). These equations were used as the source for determining discharges for the selected recurrence intervals on Canaseraga Creek upstream from the creek's confluence with Mill Creek through the town boundary. Downstream from this confluence, within the community, the discharges determined by the log-Pearson Type III analysis at the Dansville gage were utilized.

There are no gaging stations in operation along either Mill Creek or Little Mill Creek. For Mill Creek and for the segment of Little Mill Creek being studied in detail, discharges for the 10and 2-percent-annual-chance floods were determined by two methods: 1) a method developed by the USGS based on regional relationships primarily dependent on watershed area (Reference 9); 2) a method developed by the Bureau of Public Roads based upon areal relationships for geology, precipitation, topography, and storage (Reference 13). Discharges for the 1- and 0.2-percent-annual-chance floods were determined by using a straight line extrapolation of the log-probability plot of the computed discharges. For each of the selected recurrence intervals, the results of the two methods used were averaged and the averaged values used in the subsequent hydraulic analyses.

Peak discharges for the 10-, 2-, 1-, and 0.2-percent-annual-chance floods of those streams studied in detail in the community are summarized in Table 1. Summary of Discharges.

Table 1. Summary of Discharges

Flooding Source and Location	Drainage Area (sq miles)	Peak Discharges (cfs) 10% Annual Chance Flood	2% Annual Chance Flood	1% Annual Chance Flood	0.2% Annual Chance Flood
Mill Creek					
At Mouth	34.8	1,675	2,294	2,561	3,195
Little Mill Creek					
At Mouth	13.9	929	1,282	1,436	1,805
Canaseraga Creek					
At USGS gage	153.0	7,397	10,962	12,573	16,598
Upstream of confluence with Mill Creek	116.0	6,604	9,761	11,217	14,859
Downstream of confluence with Stony Brook	115.0	6,562	9,700	11,148	14,767
Upstream of confluence with Stony Brook	90.3	5,485	8,140	9,366	12,435
Upstream corporate limits	90.0	5,472	8,121	9,344	12,406

For the segment of Little Mill Creek studied by approximate methods, the discharge-frequency relationship for the 100-year flood was established by the two methods defined above. The results of the two methods were averaged and the averaged values were used in the subsequent approximate hydraulic analyses.

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data tables in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS in conjunction with the data shown on the FIRM.

Cross-section data for those streams being studied in detail were obtained from the interpretation of aerial photographs, except for the below-water portions, which were field surveyed (Reference 14). All bridges and culverts were surveyed to obtain elevation data and structural geometry. Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1).

Roughness coefficients (Manning's "n") for Canaseraga Creek, Mill Creek, and Little Mill Creek were estimated by field inspection at each cross section (References 14 and l5). For Canaseraga Creek, roughness values of 0.05 and 0.09 were utilized for the main channel and floodplain, respectively. For Mill Creek, a roughness value of

0.045 was utilized for the main channel, while values for the floodplain ranged from 0.06 to 0.08. For that segment of Little Mill Creek being studied in detail, roughness values of 0.045 and 0.07 were used for the main channel and floodplain, respectively.

Flood profiles were drawn showing computed water-surface elevations to an accuracy of 0.5 foot for floods of the selected recurrence intervals. Water-surface elevations of floods of the selected recurrence intervals were computed using the USACE HEC-2 step-backwater computer program (Reference 16).

The Canaseraga Creek, Mill Creek, and Little Mill Creek starting water-surface elevations for floods of the selected recurrence intervals were established by analyzing the downstream hydraulic characteristics of the existing cross-section data such as the stream gradient, roughness coefficients, and channel geometry.

All elevations are referenced to the National Geodetic Vertical Datum of 1929 (NGVD), formerly referred to as Sea Level Datum of 1929. Elevation reference marks used in this study are shown on the maps.

For that segment of Little Mill Creek studied by approximate methods, normal depth calculations were used to determine the water-surface elevation of the 100-year storm.

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 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 NGVD. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the NGVD and NAVD, visit the National Geodetic Survey (NGS) website at www.ngs.noaa.gov, or contact the NGS at the following address:

NGS Information Services, NOAA, N/NGS12
National Geodetic Survey SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
Fax: (301) 713-4172, or
Telephone: (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. To assist in this endeavor, each FIS report provides 1-percent-annual-chance floodplain data, which may include a combination of the following: 10-, 2-, 1-, and 0.2-percent-annual-chance flood elevations; delineations of the 1- and 0.2-percent-annual-chance floodplains; and a 1-percent-annual-chance floodway. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles, Floodway Data tables, and Summary of Stillwater Elevation tables. Users should reference the data presented in the FIS report, as well as additional information that may be available at the local community map repository, before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to indicate additional areas of flood risk in the community. For each stream studied by detailed methods, the 1- and 0.2-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps at a scale of 1:2,400, with a contour interval of 5 feet (Reference 14). These maps were also used to delineate the 1-percent-annual-chance flood boundary for streams studied by approximate methods.

The 1- and 0.2-percent-annual-chance floodplain boundaries are shown on the FIRM. On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A and AE), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations, but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

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

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 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or used as a basis for additional floodway studies.

The floodways presented in this study were computed for certain stream segments on the basis of equal-conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections (see Table 2, Floodway Data). In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 1-percent-annual-chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 1.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY (Feet (NGVD))	WITH FLOODWAY (Feet (NGVD))	INCREASE
Canaseraga Creek								
A	0.000[1]	1,064[3]	1,301	5.3	614.7	614.7	615.7	1.0
B	0.281[1]	764[3]	933	9.5	620.3	620.3	620.5	0.2
C	0.587[1]	601[3]	1,161	8.7	628.3	628.3	629.3	1.0
D	0.737[1]	140[3]	1,621	7.8	632.4	632.4	632.9	0.5
E	1.170[1]	301[3]	1,205	7.8	640.5	640.5	641.5	1.0
F	1.546[1]	346	1,279	7.6	647.2	647.2	648.2	1.0
G	1.695[1]	258	1,461	7.7	649.8	649.8	650.8	1.0
H	2.144[1]	280	1,191	8.2	663.0	663.0	664.0	1.0
I	2.530[1]	438	2,468	5.1	670.5	670.5	671.4	0.9
J	2.932[1]	180	1,025	10.9	680.9	680.9	681.3	0.4
K	3.173[1]	286	1,020	7.8	690.2	690.2	691.1	0.9
L	3.325[1]	135	953	11.7	695.3	695.3	695.9	0.6
M	3.635[1]	132	896	10.4	705.3	705.5	705.5	0.0
N	3.905[1]	87	583	16.1	721.1	721.1	721.1	0.0
O	4.170[1]	142	1,347	6.9	730.1	730.1	730.4	0.3
Mill Creek								
A	0.078[2]	99	304	8.4	673.9	673.9	673.9	0.0
B	1.492[2]	54	215	11.9	788.4	788.4	788.4	0.0
C	1.557[2]	62	243	10.6	794.8	794.8	794.8	0.0

[1] Miles above corporate limits
[3] This width extends beyond the corporate limits
[2] Miles above mouth

Table 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF NORTH DANSVILLE, NY

(LIVINGSTON CO.)

FLOODWAY DATA

CANASERAGA CREEK AND MILL CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
						FEET (NGVD)		
Little Mill Creek								
A	0.055	37	137	10.4	801.3	801.3	801.3	0.0
B	0.080	52	359	4.0	815.4	815.4	815.4	0.0
C	0.105	57	228	6.3	817.6	817.6	817.6	0.0
D	0.220	72	148	9.7	829.0	829.0	829.0	0.0
E	0.242	62	239	6.0	837.2	837.2	837.2	0.0
F	0.375	42	132	10.9	853.5	853.5	853.5	0.0

[1] Miles above mouth

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF NORTH DANSVILLE, NY

(LIVINGSTON CO.)

FLOODWAY DATA

LITTLE MILL CREEK

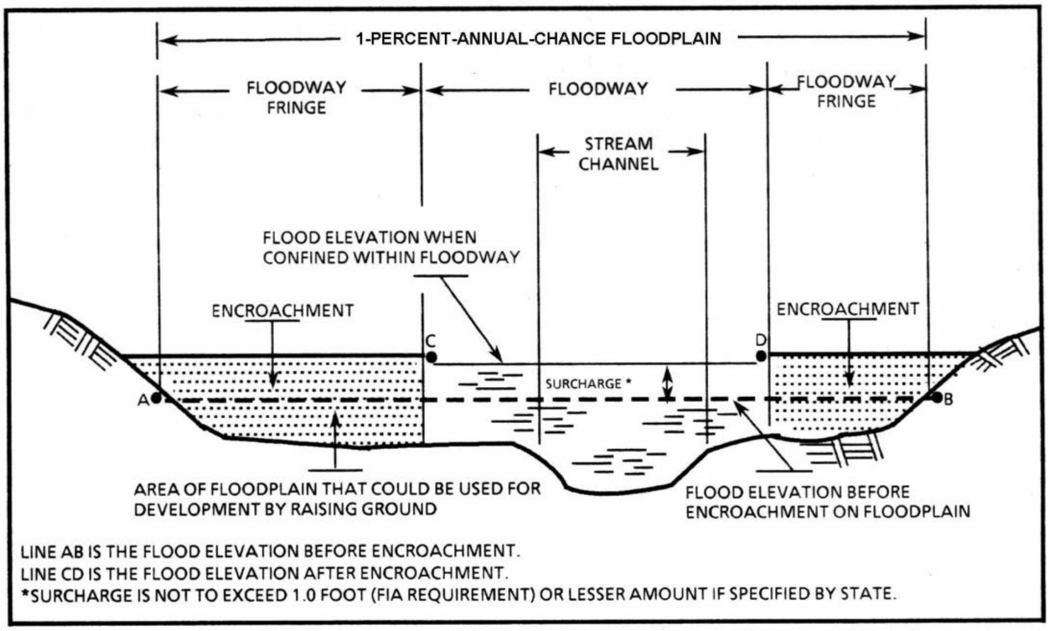

Figure 1. Floodway Schematic

5.0 INSURANCE APPLICATION

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

Zone A

Zone A is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS report by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no Base (1-percent-annual-chance) Flood Elevations (BFEs) or depths are shown within this zone.

Zone AE

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

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than

1 square mile (sq. mi.), and areas protected from the 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 zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

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

7.0 OTHER STUDIES

Studies obtained from the USACE developed discharge versus drainage area equations for the 10-, 50-, 100- and 500- year floods and for the mean annual flood for the Upper Canaseraga Creek Basin (References 3 and 6). Equations developed by the study contractor correlated excellently with those established by the USACE. There were no studies of Mill Creek or Little Mill Creek done prior to the June 1979 study.

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

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting: Federal Insurance and Mitigation Division, FEMA Region II, 26 Federal Plaza, Room 1351, New York, NY, 10278.

9.0 BIBLIOGRAPHY AND REFERENCES

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HYDR/SEC/AN	Hydraulic Section Analysis
HYPLO	Hydraulic Cross Section Plot
STRCH	Selection of Study Reaches

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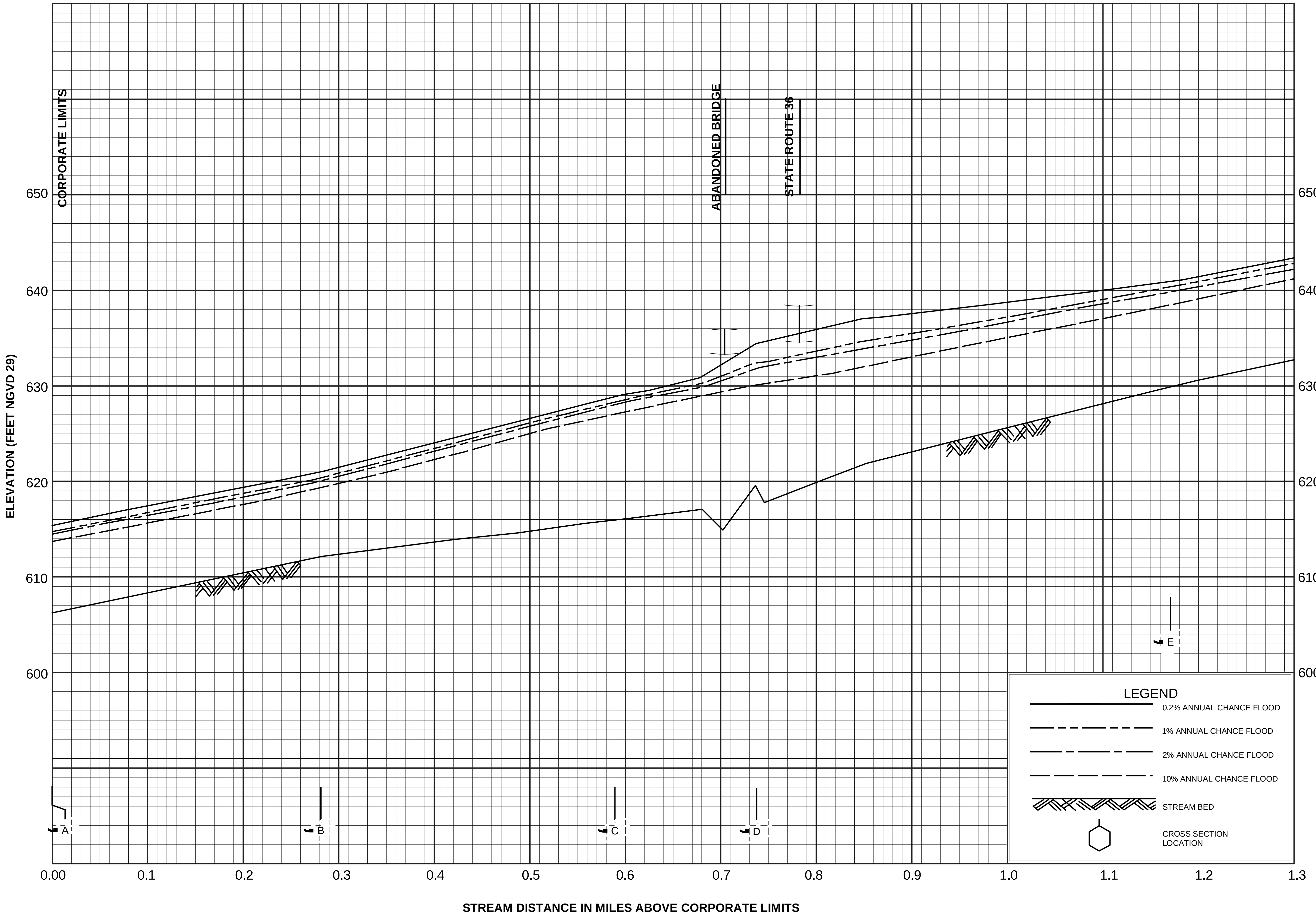


FLOOD PROFILES

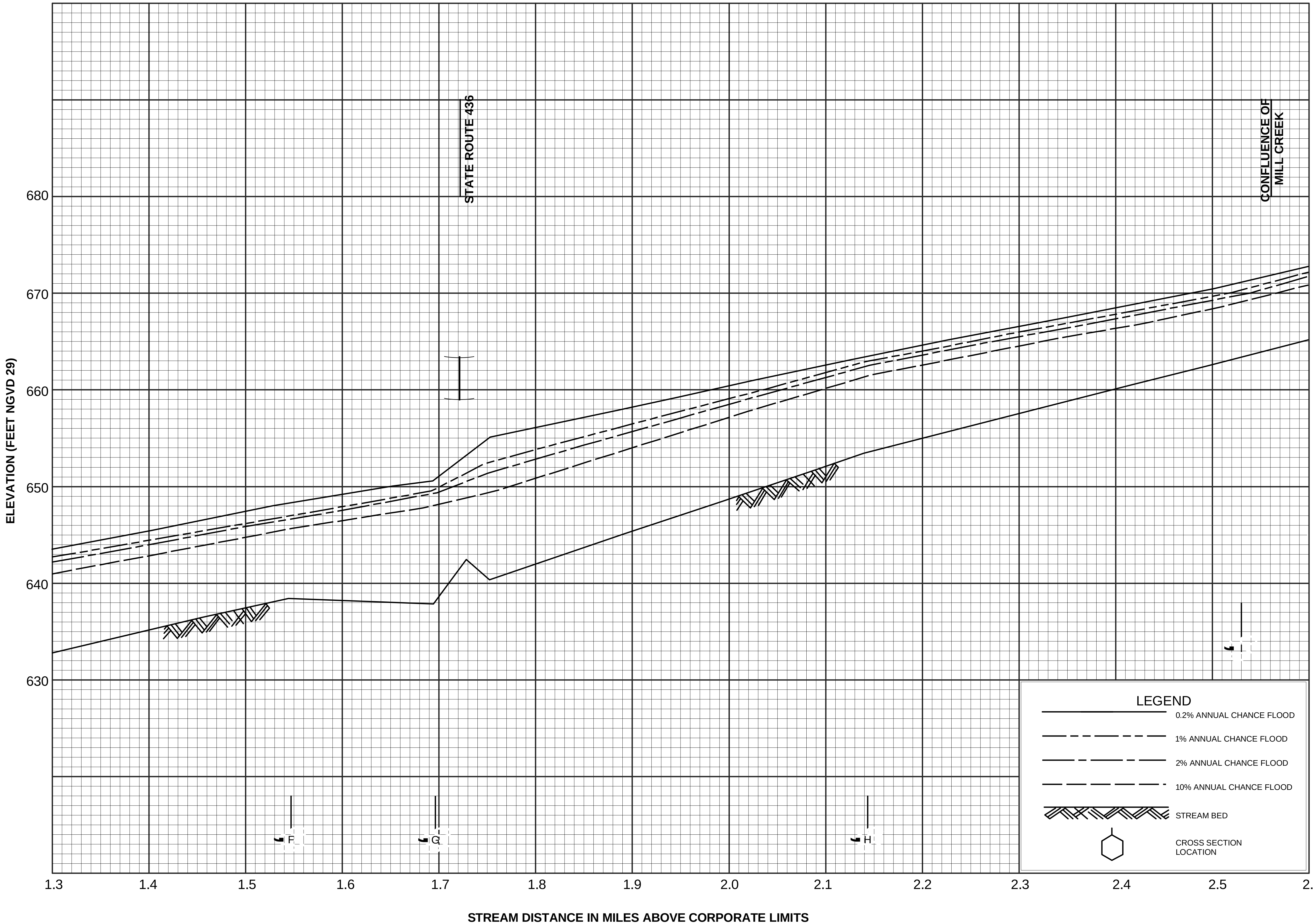
CANASERAGA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF NORTH DANSVILLE, NY

(LIVINGSTON CO.)

01P



FLOOD PROFILES

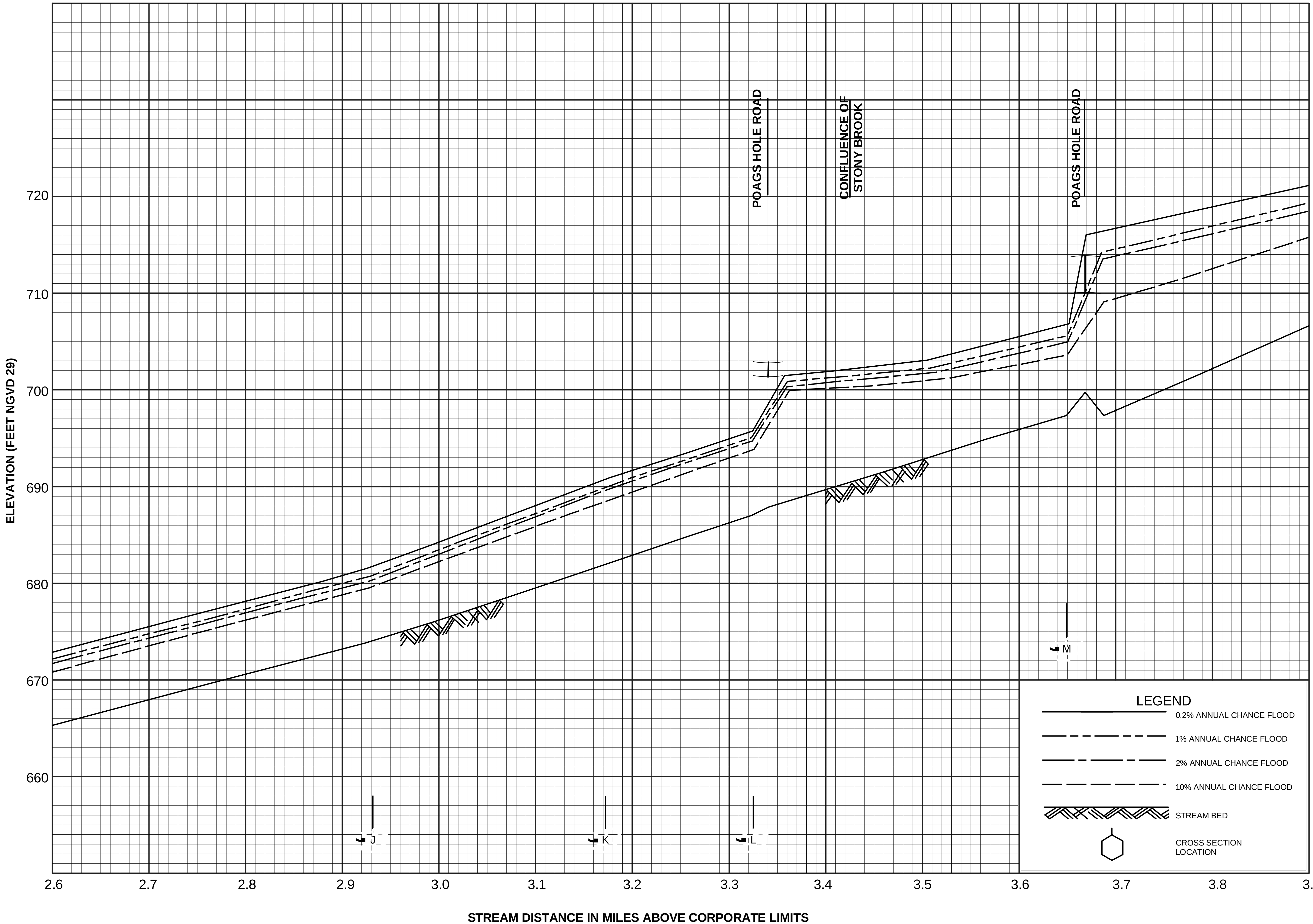
CANASERAGA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF NORTH DANSVILLE, NY

(LIVINGSTON CO.)

02P



FLOOD PROFILES

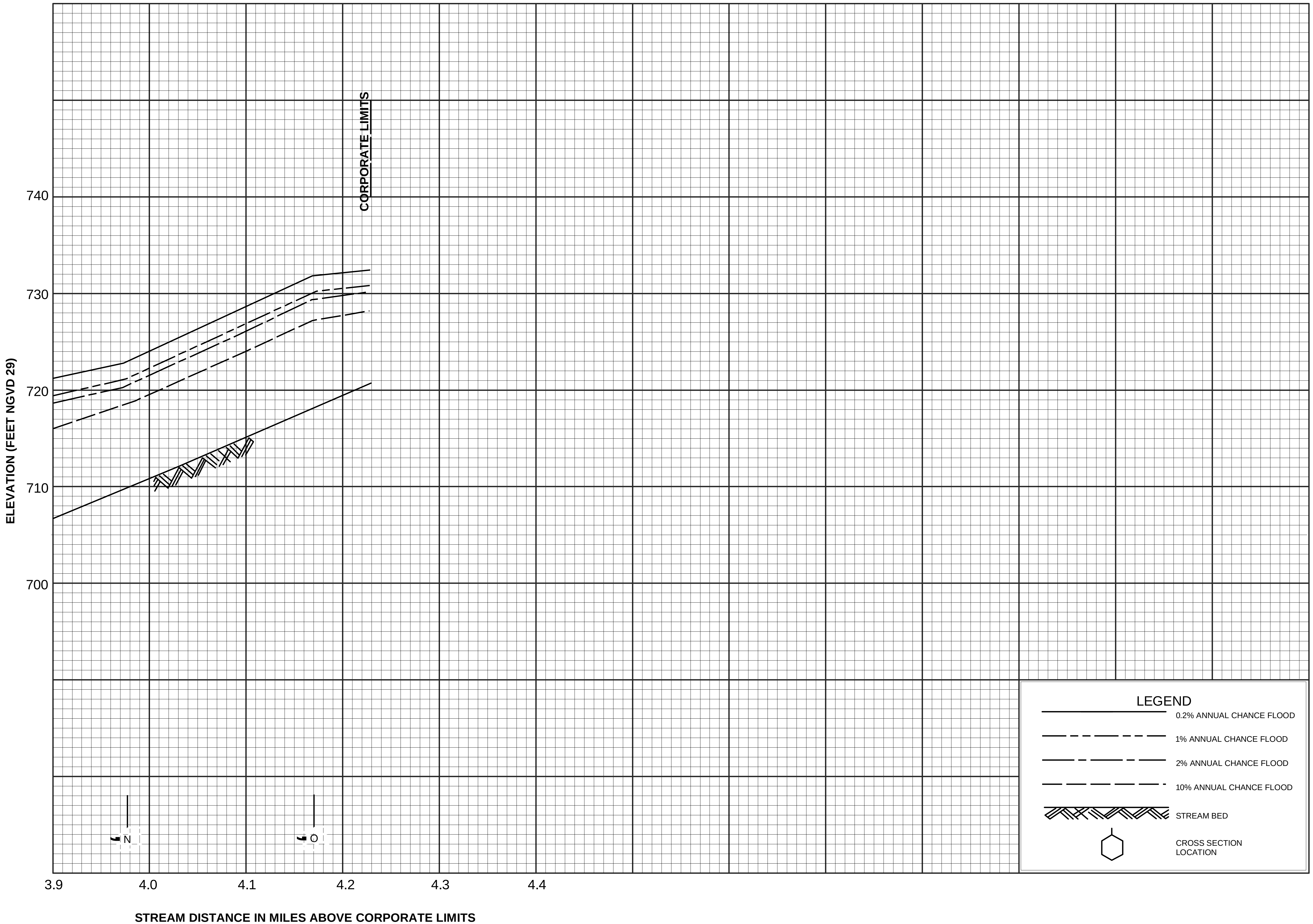
CANASERAGA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF NORTH DANSVILLE, NY

(LIVINGSTON CO.)

03P



FLOOD PROFILES

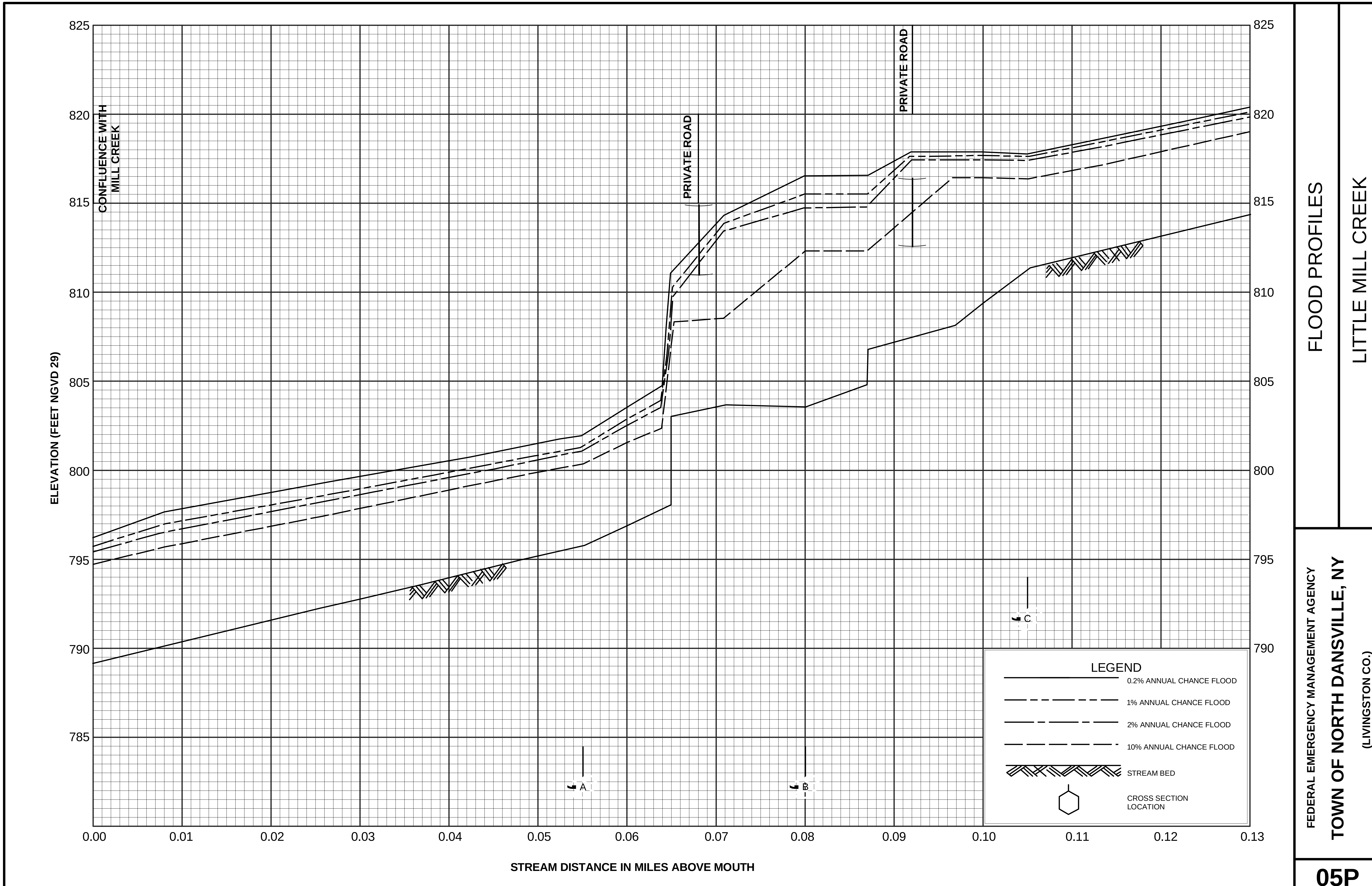
CANASERAGA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

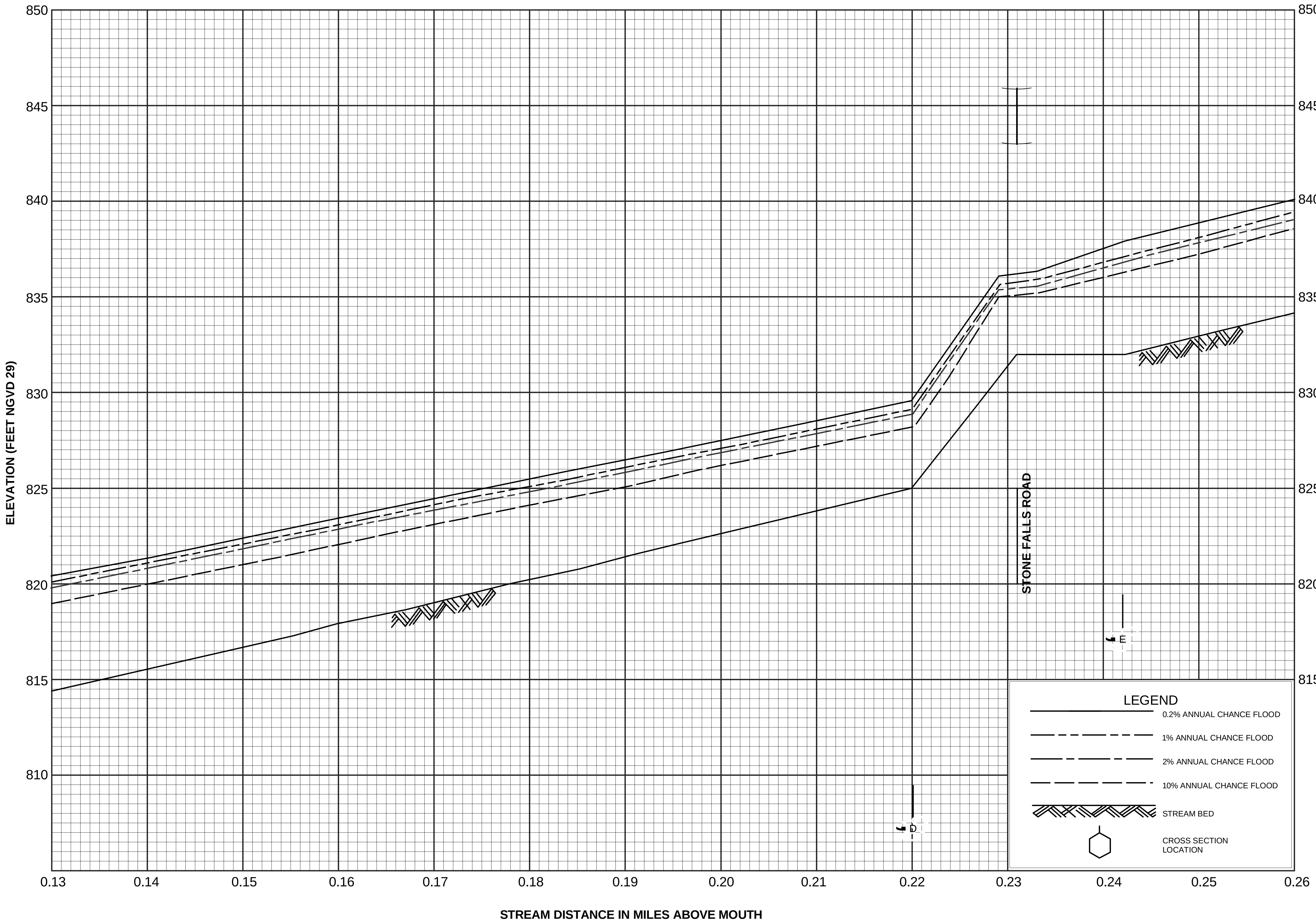
TOWN OF NORTH DANSVILLE, NY

(LIVINGSTON CO.)

04P



825
820
815
810
805
800
795
790
785
ELEVATION (FEET NGVD 29)
CONFLUENCE WITH MILL CREEK
PRIVATE ROAD
PRIVATE ROAD
A
B
C
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
0.11
0.12
0.13
STREAM DISTANCE IN MILES ABOVE MOUTH
LEGEND
0.2% ANNUAL CHANCE FLOOD
1% ANNUAL CHANCE FLOOD
2% ANNUAL CHANCE FLOOD
10% ANNUAL CHANCE FLOOD
STREAM BED
CROSS SECTION LOCATION
FLOOD PROFILES
LITTLE MILL CREEK
FEDERAL EMERGENCY MANAGEMENT AGENCY
TOWN OF NORTH DANSVILLE, NY
(LIVINGSTON CO.)
05P



FLOOD PROFILES

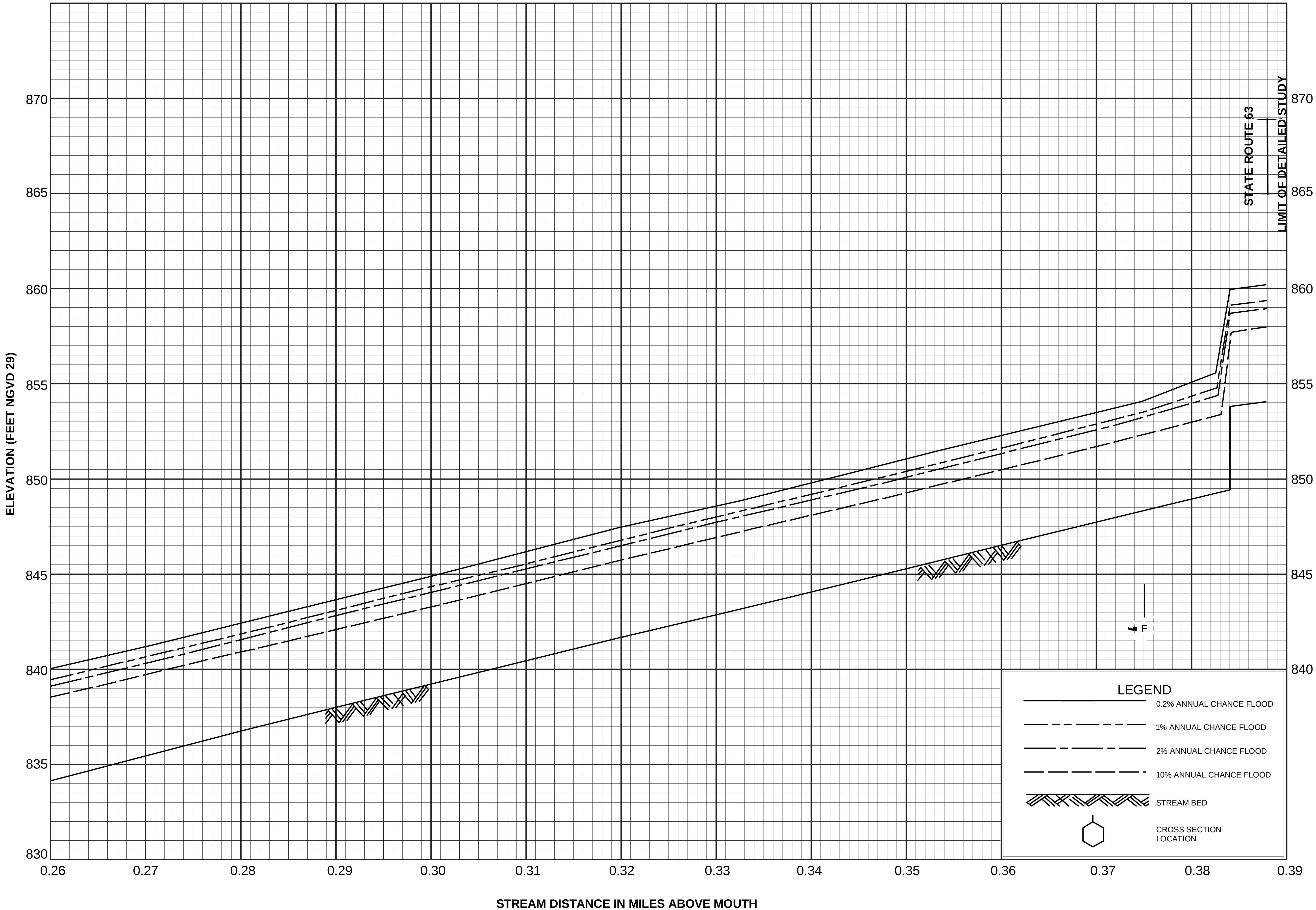
LITTLE MILL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF NORTH DANSVILLE, NY

(LIVINGSTON CO.)

06P



FLOOD PROFILES

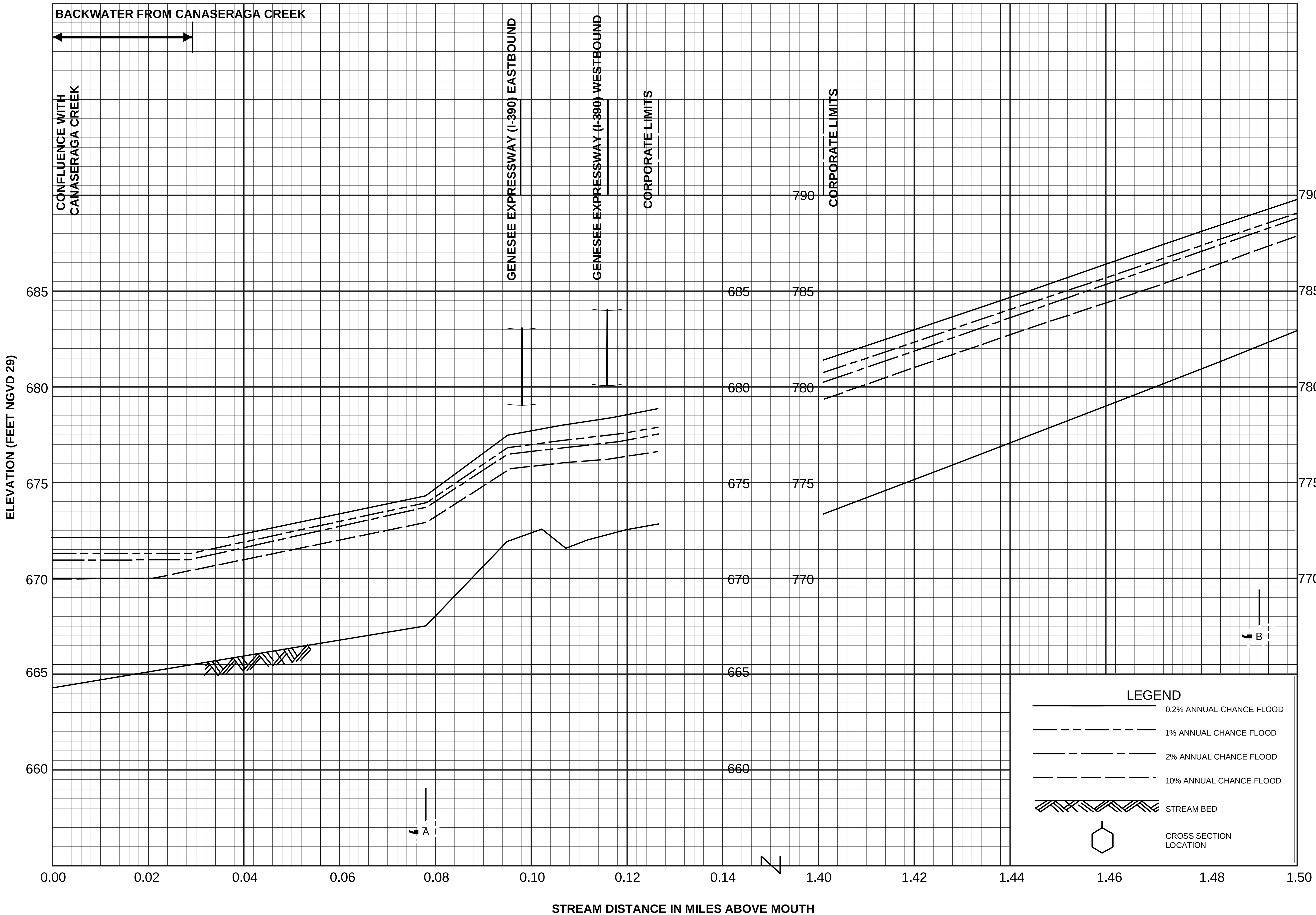
LITTLE MILL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF NORTH DANSVILLE, NY

(LIVINGSTON CO.)

07P



FLOOD PROFILES

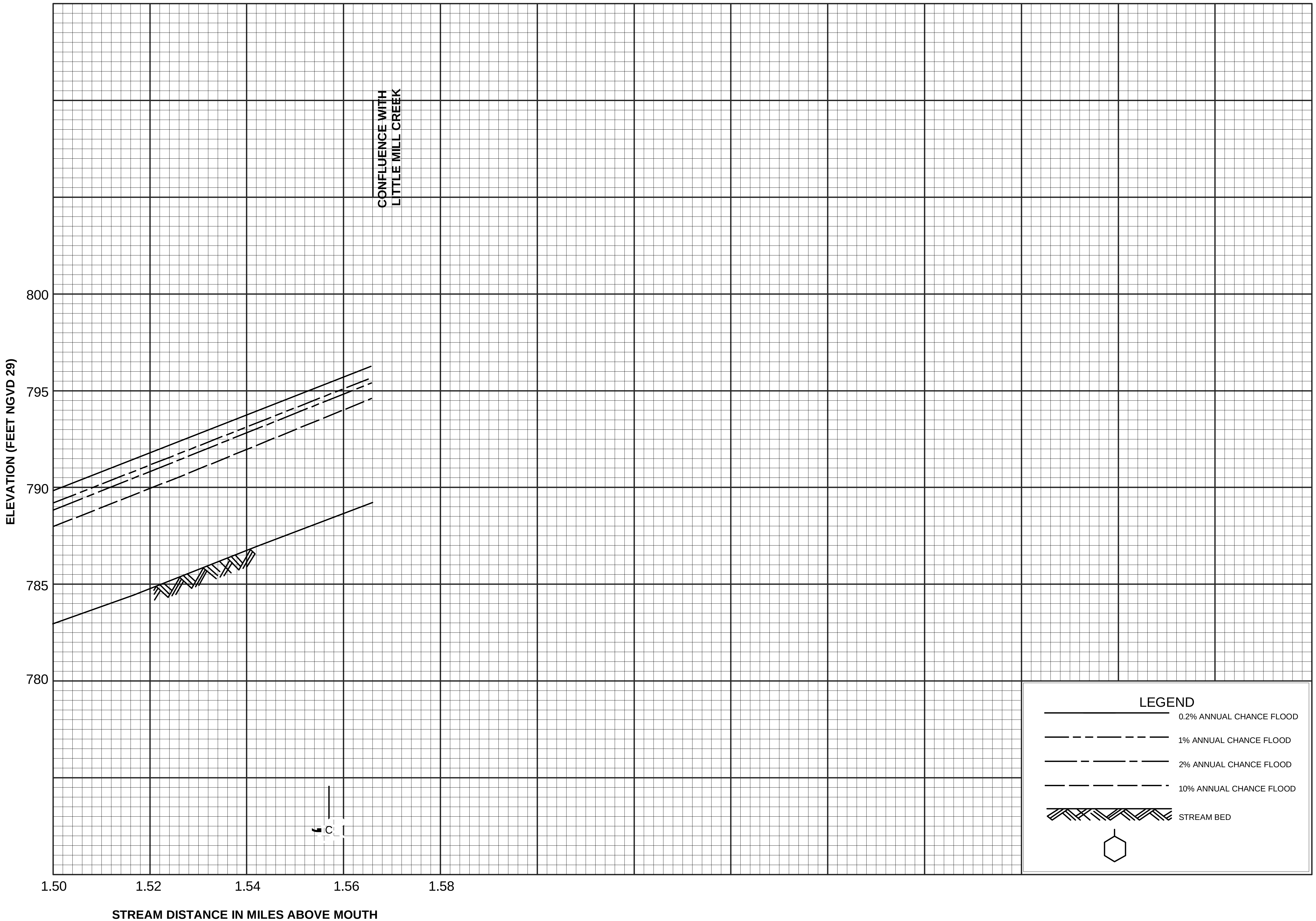
MILL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF NORTH DANSVILLE, NY

(LIVINGSTON CO.)

08P



FLOOD PROFILES

MILL CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TOWN OF NORTH DANSVILLE, NY

(LIVINGSTON CO.)

09P