



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	Town of Concord Middlesex County Massachusetts	NO PROJECT	BASE MAP CHANGES FLOODWAY HYDRAULIC ANALYSIS HYDROLOGIC ANALYSIS UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 250189		
IDENTIFIER	Cambridge Turnpike Reconstruction	APPROXIMATE LATITUDE AND LONGITUDE: 42.454, -71.338 SOURCE: Precision Mapping Streets DATUM: NAD 83	
ANNOTATED MAPPING ENCLOSURES		ANNOTATED STUDY ENCLOSURES	
TYPE: FIRM* NO.: 25017C0378F DATE: July 7, 2014 TYPE: FIRM* NO.: 25017C0379F DATE: July 7, 2014		DATE OF EFFECTIVE FLOOD INSURANCE STUDY: July 7, 2014 FLOOD PROFILES: 336P, 337P AND 616P FLOODWAY DATA TABLE: 12 SUMMARY OF DISCHARGES TABLE: 8	

Enclosures reflect changes to flooding sources affected by this revision.

* FIRM - Flood Insurance Rate Map

FLOODING SOURCES AND REVISED REACHES

See Page 2 for Additional Flooding Sources

Mill Brook 2 - Approximately 250 feet downstream of Main Street to approximately 1,300 feet upstream of Cambridge Turnpike
Unnamed Tributary to Mill Brook 2 - from the confluence of Mill Brook 2 to approximately 3,350 feet upstream of Lexington Road

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Mill Brook 2	Zone AE	Zone AE	YES	YES
	Zone X (shaded)	Zone X (shaded)	YES	YES
	BFEs*	BFEs	YES	YES
Unnamed Tributary to Mill Brook 2	Zone A	Zone AE	YES	NONE

* BFEs - Base Flood Elevations

DETERMINATION

This document provides the determination from the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regarding a request for a Letter of Map Revision (LOMR) for the area described above. Using the information submitted, we have determined that a revision to the flood hazards depicted in the Flood Insurance Study (FIS) report and/or National Flood Insurance Program (NFIP) map is warranted. This document revises the effective NFIP map, as indicated in the attached documentation. Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals in your community.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our Web site at <http://www.fema.gov/nfip>.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency
Washington, D.C. 20472

**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

OTHER FLOODING SOURCES AFFECTED BY THIS REVISION

FLOODING SOURCES AND REVISED REACHES

Unnamed Tributary to Mill Brook 2 - from the confluence of Mill Brook 2 to approximately 3,350 feet upstream of Lexington Road

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Unnamed Tributary to Mill Brook 2	No BFEs*	BFEs	YES	NONE

* BFEs - Base Flood Elevations

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our Web site at <http://www.fema.gov/nfip>.

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

COMMUNITY INFORMATION

APPLICABLE NFIP REGULATIONS/COMMUNITY OBLIGATION

We have made this determination pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria, including adoption of the FIS report and FIRM, and the modifications made by this LOMR, are the minimum requirements for continued NFIP participation and do not supersede more stringent State/Commonwealth or local requirements to which the regulations apply.

We provide the floodway designation to your community as a tool to regulate floodplain development. Therefore, the floodway revision we have described in this letter, while acceptable to us, must also be acceptable to your community and adopted by appropriate community action, as specified in Paragraph 60.3(d) of the NFIP regulations

COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance discharges computed in the submitted hydrologic model. Future development of projects upstream could cause increased discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on discharges and could, therefore, indicate that greater flood hazards exist in this area.

Your community must regulate all proposed floodplain development and ensure that any permits required by Federal or State/Commonwealth law have been obtained. State/Commonwealth or community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction or may limit development in floodplain areas. If your State/Commonwealth or community has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

We will not print and distribute this LOMR to primary users, such as local insurance agents or mortgage lenders; instead, the community will serve as a repository for the new data. We encourage you to disseminate the information in this LOMR by preparing a news release for publication in your community's newspaper that describes the revision and explains how your community will provide the data and help interpret the NFIP maps. In that way, interested persons, such as property owners, insurance agents, and mortgage lenders, can benefit from the information.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our Web site at <http://www.fema.gov/nfip>.

A handwritten signature in black ink, appearing to read "Luis Rodriguez".

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Mr. Kevin Merli
Director, Mitigation Division
Federal Emergency Management Agency, Region I
99 High Street, Sixth Floor
Boston, MA 02110
(617) 832-4761

STATUS OF THE COMMUNITY NFIP MAPS

We will not physically revise and republish the FIRM and FIS report for your community to reflect the modifications made by this LOMR at this time. When changes to the previously cited FIRM panels and FIS report warrant physical revision and republication in the future, we will incorporate the modifications made by this LOMR at that time.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional Information about the NFIP is available on our Web site at <http://www.fema.gov/nfip>.

A handwritten signature in black ink, appearing to read "Luis Rodriguez".

Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

TABLE 8 - SUMMARY OF DISCHARGES – continued

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs)			
		10-PERCENT	2-PERCENT	1-PERCENT	0.2-PERCENT
MILL BROOK 2					
At Main Street	0.4	151	180	188	200
At Cambridge Turnpike (State Route 2A)	0.2	108	125	128	150
UNNAMED TRIBUTARY TO MILL BROOK 2					
At Lexington Road	0.4	*	*	77	*
MILL BROOK 3					
At Mystic Valley Parkway	5.5	210	370	480	900
At Mill Street	5.0	150	310	450	730
At Brattle Street	4.3	120	210	260	820
At Park Avenue	3.6	80	150	200	390
MILL POND TRIBUTARY					
At confluence with Beaver Brook 4	0.9	37	62	76	117
Upstream of Boston & Maine Railroad	0.5	18	29	36	55
MILL RIVER					
At confluence with Saugus River	3.6	150	260	300	350
At Water Street bridge above Crystal Lake Storm Drain	0.8	75	130	145	170
At Salem Street bridge	0.4	34	58	66	78
MINEWAY BROOK					
At confluence with Pantry Brook	1.5	100	160	190	285
Approximately 1,500 feet upstream of confluence with Pantry Brook	1.3	85	140	165	250
Approximately 1,500 feet upstream of Morse Road	0.9	70	115	140	210
Approximately 3,100 feet upstream of Morse Road	0.7	60	100	120	180
At Abandon Railroad line	0.4	40	65	80	125
At Concord Road and Candy Hill Road Intersection	0.3	30	50	60	95
MONGO BROOK					
At confluence with Elm Brook	0.6	26	41	50	63
MORSE BROOK					
At confluence with the Nashua River	1.0	50	70	80	100

Revised Data

**REVISED TO
REFLECT LOMR
EFFECTIVE: August 14, 2015**

70

Revised Data

→ *Data Not Available

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mill Brook 2								
A	1,290 ¹	14	17	6.3	120.2	112.8 ³	112.8	0.0
B	1,496 ¹	100	270	0.4	120.3	118.3 ⁴	118.3	0.0
C	1,786 ¹	140	819	0.1	120.3	118.4 ⁴	118.4	0.0
D	3,006 ¹	25	54	10.5	120.3	119.7 ⁴	119.9	0.2
E	3,395 ¹	125	246	2.7	123.4	123.4	123.4	0.0
F	3,905 ¹	242	458	0.2	123.7	123.7	123.7	0.0
G	4,305 ¹	146	455	0.7	123.7	123.7	124.6	0.0
H	5,455 ¹	216	580	0.2	124.6	124.6	124.6	0.0
I	5,908 ¹	632	1,254	0.1	124.7	124.7	124.7	0.0
J	10,499 ¹	691	1,064	0.2	126.4	126.4	126.4	0.0
K	11,194 ¹	947	1,609	0.1	126.5	126.5	126.5	0.0
L	13,026 ¹	389	432	0.5	126.7	126.7	126.7	0.0
M	14,335 ¹	374	361	0.6	127.2	127.2	127.2	0.0
N	14,831 ¹	468	3,070	0.1	133.1	133.1	133.1	0.0
Mill Brook 3								
A	30 ²	78*	374	1.4	7.2	0.6 ⁵	0.6	0.0
B	890 ²	44*	227	2.1	7.3	6.8 ⁵	6.8	0.0
C	930 ²	48	375	1.3	7.3	6.9 ⁵	7.0	0.1
D	2,000 ²	37*	126	5.3	7.4	6.2 ⁵	6.2	0.0
E	3,090 ²	63*	115	5.5	10.8	10.8	10.9	0.1
F	3,550 ²	39	111	5.0	17.3	17.3	17.6	0.3
G	4,930 ²	23	86	5.8	33.2	33.2	33.4	0.2
H	5,390 ²	29	67	7.4	38.0	38.0	38.0	0.0
I	5,610 ²	113*	197	2.3	42.3	42.3	42.4	0.1
J	6,670 ²	26*	180	2.6	50.6	50.6	50.7	0.1

↑
DATA
REVISED

¹ Feet above confluence with Concord River

³ Elevation computed without consideration of backwater effects from Concord River

² Feet above confluence with Lower Mystic Lake

⁴ Elevation computed without consideration of flooding controlled by Sudbury River

⁵ Elevation computed without consideration of backwater effects from Lower Mystic Lake

* The measured top width on the FIRM may differ due to the effects of ineffective flow, the exclusion of small pocket areas due to map scale limitations, or is estimated due to HEC-RAS modeling limitations

TABLE 12

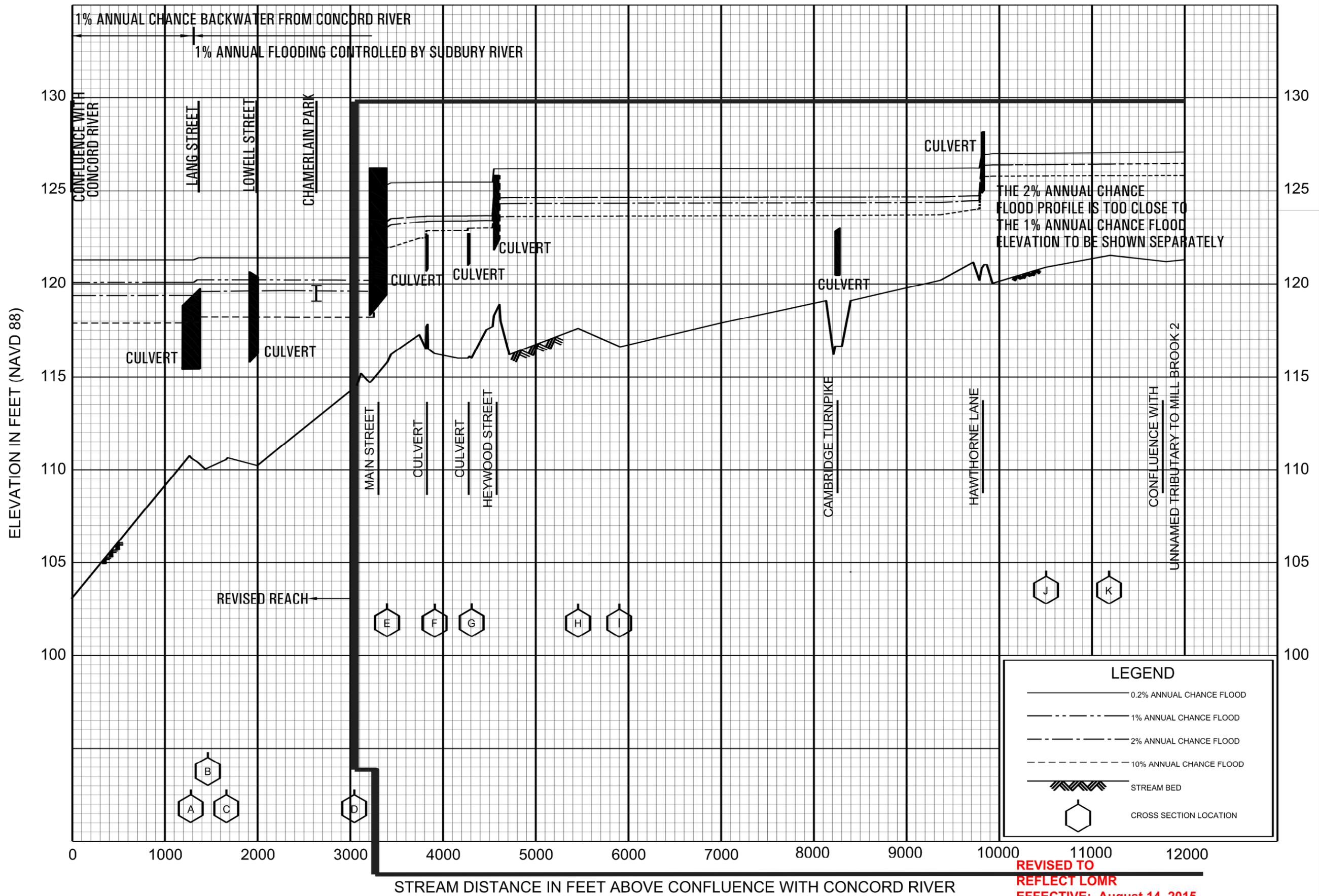
FEDERAL EMERGENCY MANAGEMENT AGENCY

MIDDLESEX COUNTY, MA
(ALL JURISDICTIONS)

REVISED TO
REFLECT LOMR
EFFECTIVE: August 14, 2015

FLOODWAY DATA

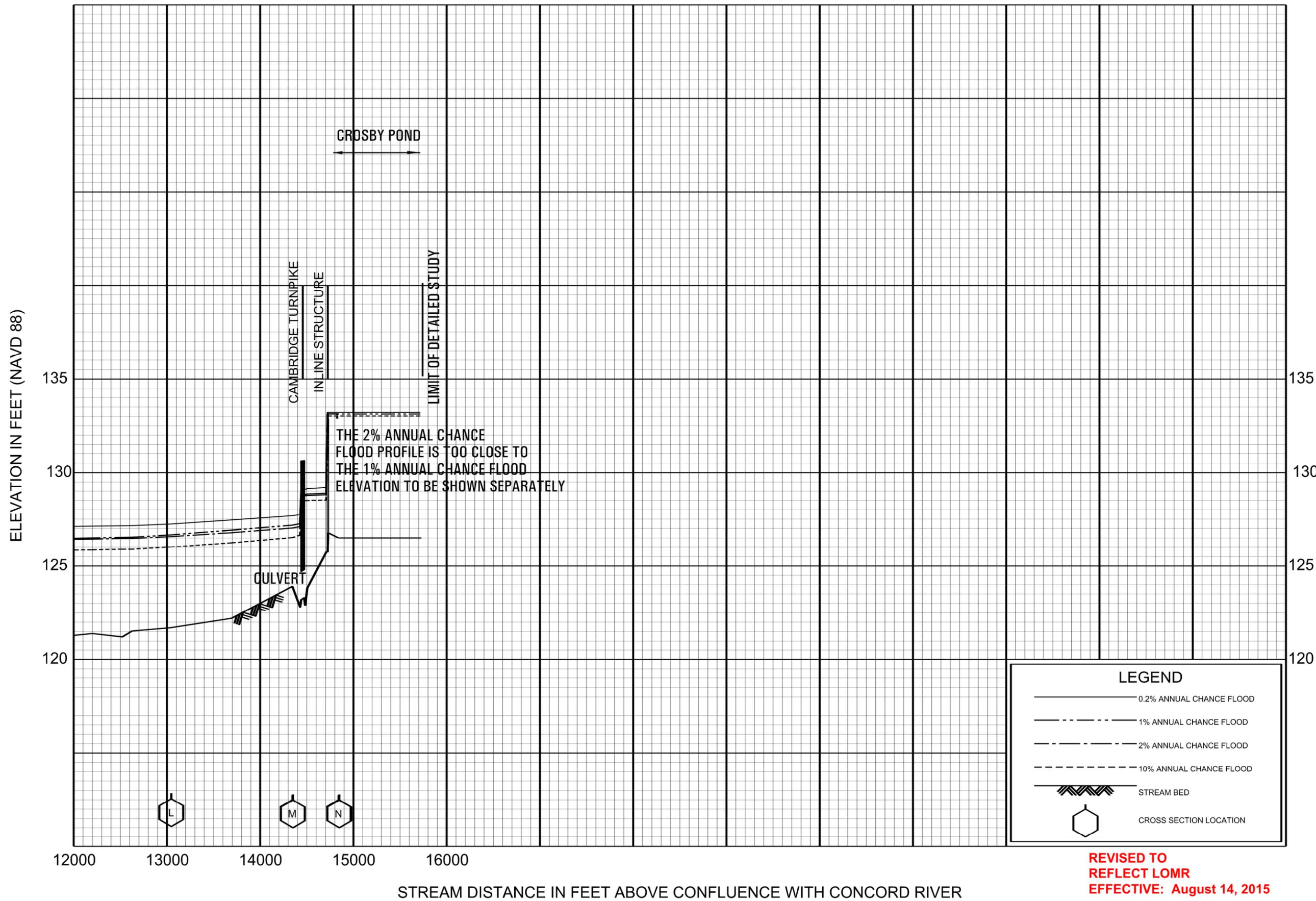
MILL BROOK 2 – MILL BROOK 3



REVISED TO REFLECT LOMR EFFECTIVE: August 14, 2015

FLOOD PROFILES
MILL BROOK 2

FEDERAL EMERGENCY MANAGEMENT AGENCY
MIDDLESEX COUNTY, MA
(ALL JURISDICTIONS)



REVISED TO REFLECT LOMR EFFECTIVE: August 14, 2015

FLOOD PROFILES

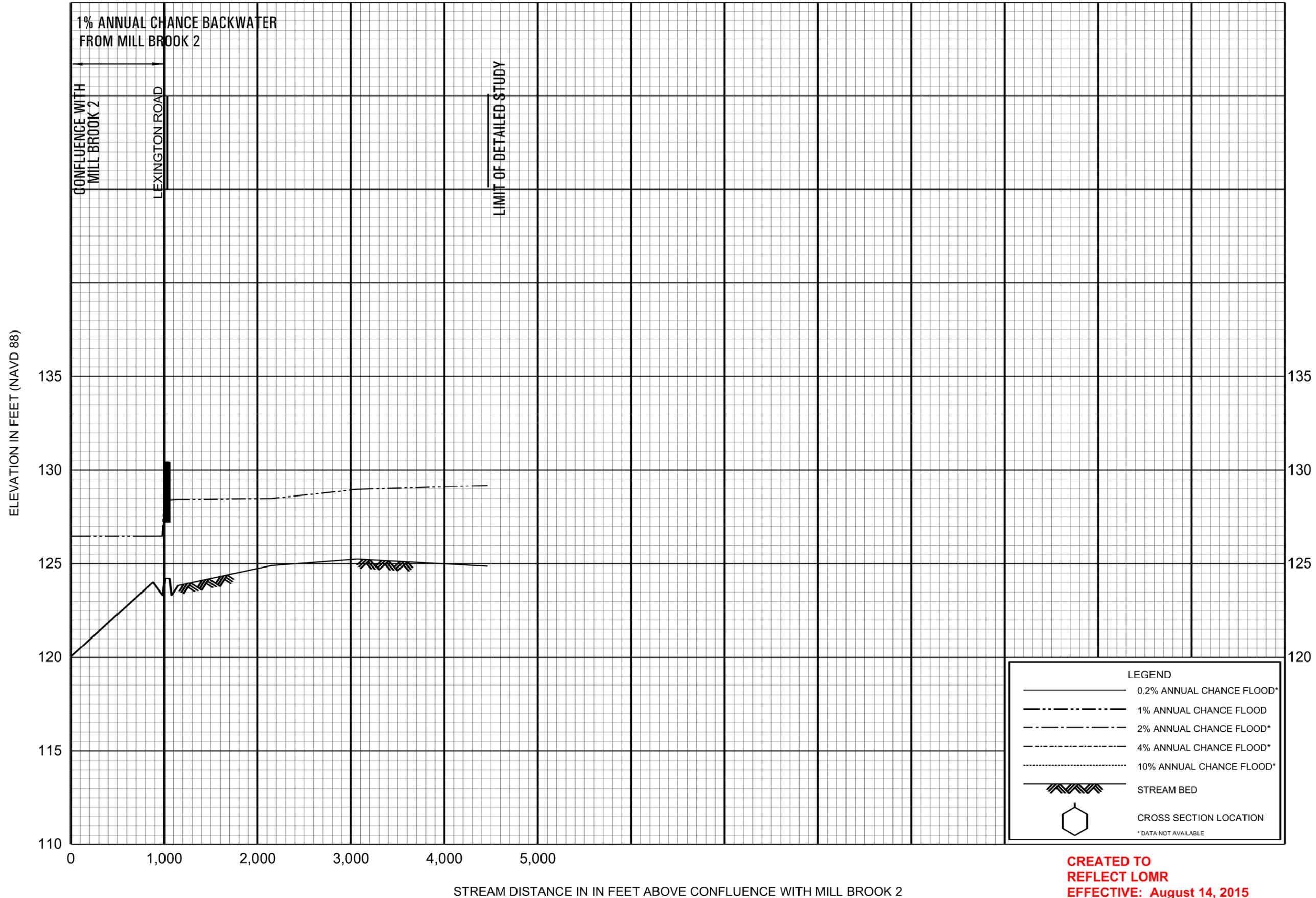
MILL BROOK 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

MIDDLESEX COUNTY, MA

(ALL JURISDICTIONS)

337P



CREATED TO REFLECT LOMR
EFFECTIVE: August 14, 2015

FLOOD PROFILES

UNNAMED TRIBUTARY TO MILL BROOK 2

FEDERAL EMERGENCY MANAGEMENT AGENCY
MIDDLESEX COUNTY, MA
 (ALL JURISDICTIONS)