Page 1 of 6 Issue Date: April 6, 2018 Effective Date: August 20, 2018 Case No.: 17-03-2459P LOMR-APP



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT

	COMMUNITY AND REVISION INFORMATION	PROJECT DESCRIPTION BASIS OF REQUEST			
COMMUNITY	Logan County West Virginia (Unincorporated Areas)	BRIDGE CHANNELIZATION	FLOODWAY HYDRAULIC ANALYSIS UPDATED TOPOGRAPHIC DATA		
	COMMUNITY NO.: 545536				
IDENTIFIER	USACE Huntington District – Island Creek Local Protection Project	APPROXIMATE LATITUDE AND LONGITUDE: 37.847, -82.003 SOURCE: Precision Mapping Streets DATUM: NAD 83			
	ANNOTATED MAPPING ENCLOSURES	ANNOTATED STUDY ENCLOSURES			
TYPE: FIRM* TYPE: FIRM TYPE: FIRM	NO.: 54045C0182E DATE: February 6, 2008 NO.: 54045C0184E DATE: February 6, 2008 NO.: 54045C0201E DATE: February 6, 2008	DATE OF EFFECTIVE FLOOD INSURANCE STUDY: February 6, 2008 PROFILES: 23P, 39P, AND 44P FLOODWAY DATA TABLE: 2			

Enclosures reflect changes to flooding sources affected by this revision.

FLOODING SOURCE AND REVISED REACH

See Page 2 for Additional Flooding Sources

Island Creek - from the confluence with the Guyandotte River to a point approximately 970 feet upstream of the 1st Street/ Access Road bridge

SUMMARY OF REVISIONS						
Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases		
Island Creek	Zone AE	Zone AE	YES	YES		
	Zone X (shaded)	Zone X (shaded)	YES	YES		
	BFEs*	BFEs	YES	YES		
	Floodway	Floodway	YES	YES		
* BFFs - Base Flood Flevations						

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, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at https://www.fema.gov/national-flood-insurance-program.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief Engineering Services Branch

^{*} FIRM - Flood Insurance Rate Map

Page 2 of 6 Issue Date: April 6, 2018 Effective Date: August 20, 2018 Case No.: 17-03-2459P LOMR-APP



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

Coal Branch - from the confluence with Island Creek to approximately 1,430 feet upstream of the confluence with Island Creek
Copperas Mine Fork - from the confluence with Island Creek to a point approximately 1,700 feet upstream of the confluence of Mud Fork
Mud Fork - from the confluence with Copperas Mine Fork to a point approximately 2,460 feet upstream of the confluence with Copperas Mine Fork

	SUMMARY OF REV	SUMMARY OF REVISIONS					
Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases			
Coal Branch	Zone AE	Zone AE	NONE	YES			
	BFEs*	BFEs	NONE	YES			
	Zone X (shaded)	Zone X (shaded)	YES	YES			
Copperas Mine Fork	Zone AE	Zone AE	YES	YES			
	BFEs	BFEs	NONE	YES			
Mud Fork	Zone AE	Zone AE	YES	YES			
	BFEs	BFEs	NONE	YES			
* 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, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at https://www.fema.gov/national-flood-insurance-program.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief Engineering Services Branch

Page 3 of 6 Issue Date: April 6, 2018 Effective Date: August 20, 2018 Case No.: 17-03-2459P LOMR-APP



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

OTHER COMMUNITIES AFFECTED BY THIS REVISION

CID Number: 545535 Name: City of Logan, West Virginia

TYPE: FIRM NO.: 54045C0201E DATE: February 6, 2008

AFFECTED PORTIONS OF THE FLOOD INSURANCE STUDY REPORT

DATE OF EFFECTIVE FLOOD INSURANCE STUDY: February 6, 2008

PROFILE: 39P FLOODWAY DATA TABLE: 2

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, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at https://www.fema.gov/national-flood-insurance-program.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief Engineering Services Branch Federal Insurance and Mitigation Administration

17-03-2459P 102-I-A-C



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.

NFIP regulations Subparagraph 60.3(b)(7) requires communities to ensure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management ordinances; therefore, responsibility for maintenance of the altered or relocated watercourse, including any related appurtenances such as bridges, culverts, and other drainage structures, rests with your community. We may request that your community submit a description and schedule of maintenance activities necessary to ensure this requirement.

COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance flood discharges computed in the FIS for your community without considering subsequent changes in watershed characteristics that could increase flood discharges. Future development of projects upstream could cause increased flood discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on flood discharges subsequent to the publication of the FIS report for your community and could, therefore, establish greater flood hazards in this area.

Your community must regulate all proposed floodplain development and ensure that permits required by Federal and/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, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at https://www.fema.gov/national-flood-insurance-program.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief Engineering Services Branch

Page 5 of 6 Issue Date: April 6, 2018 Effective Date: August 20, 2018 Case No.: 17-03-2459P LOMR-APP



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. Eugene K. Gruber
Director, Mitigation Division
Federal Emergency Management Agency, Region III
One Independence Mall, Sixth Floor
615 Chestnut Street
Philadelphia, PA 19106-4404
(215) 931-5512

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, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at https://www.fema.gov/national-flood-insurance-program.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief Engineering Services Branch

Page 6 of 6 Issue Date: April 6, 2018 Effective Date: August 20, 2018 Case No.: 17-03-2459P LOMR-APP



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

PUBLIC NOTIFICATION OF REVISION

A notice of changes will be published in the *Federal Register*. This information also will be published in your local newspaper on or about the dates listed below, and through FEMA's Flood Hazard Mapping website at https://www.floodmaps.fema.gov/fhm/bfe_status/bfe_main.asp.

LOCAL NEWSPAPER Name: Logan Banner

Dates: April 13, 2018 and April 20, 2018

Within 90 days of the second publication in the local newspaper, any interested party may request that we reconsider this determination. Any request for reconsideration must be based on scientific or technical data. Therefore, this letter will be effective only after the 90-day appeal period has elapsed and we have resolved any appeals that we receive during this appeal period. Until this LOMR is effective, the revised flood hazard determination presented in this LOMR may be changed.

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, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at https://www.fema.gov/national-flood-insurance-program.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief Engineering Services Branch

Federal Insurance and Mitigation Administration 17-03-2459P 102-I-A-C

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NGVD)		WATER SURFACE ELEVATION (FEET NGVD)	
CROSS SECTION	DISTANCE1	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Island Creek	0.02	107 ²				662.4 *	662.4	0.0
B C D E F	0.11 0.25 0.64 1.22 1.43	128 ² 314 ³ 404 175 271	2,411 4,617 5,539 1,731 2,840 2,063	11.0 5.8 4.8 9.9 6.1	665.9 669.0 670.1 677.6 681.6	665.9 669.0 670.1 677.6 681.6 685.3	666.3 669.2 670.6 677.6 681.8	0.4 0.2 0.5 0.0 0.2
9H-JKLMROPQRSTUVVXYVAAB	2.02 2.38 2.54 2.93 3.36 3.59 4.02 4.45 4.79 5.34 5.69 5.29 6.58 6.83 7.33 7.57 7.96 8.18	132 292 582 466 530 272 278 237 460 459 362 192 374 486 343 351 470 230 217 126 162 294	2,063 4,031 2,411 1,538 5,378 3,024 1,691 2,745 3,148 4,179 3,908 1,988 2,916 2,851 2,851 2,031 4,370 1,367 1,367 1,363 1,379 1,279 2,374	6.4 4.3 7.2 11.2 3.2 5.7 10.2 6.3 5.5 4.1 4.4 8.7 5.2 6.1 8.5 4.0 10.5 7.7 10.5 5.6	688.4 690.3 691.8 697.3 701.3 705.2 713.8 719.5 723.0 730.1 731.5 737.4 741.6 751.5 755.2 760.2 768.6 776.3 780.3 783.4 793.8	683.3 688.4 690.3 691.8 697.3 701.3 705.2 713.8 719.5 723.0 730.1 731.5 737.4 741.6 751.5 755.2 760.2 768.6 776.3 780.3 780.3	689.3 689.3 690.9 691.8 697.6 701.4 705.2 714.2 719.8 723.5 731.0 732.2 737.8 742.1 751.5 755.8 760.5 768.6 777.0 780.8 783.9 794.4	0.8 0.9 0.6 0.3 0.1 0.4 0.3 0.5 0.7 0.4 0.5 0.6 0.7 0.5 0.6 0.3

REVISED TO REFLECT LOMR

REVISED DATA

EFFECTIVE: August 20, 2018

ISLAND CREEK

FLOODWAY DATA

TABLE N

LOGAN COUNTY, WV **AND INCORPORATED AREAS**

FEDERAL EMERGENCY MANAGEMENT AGENCY

<sup>Miles above confluence with Guyandotte River

Width extends beyond corporate limits

Width includes high ground not included in floodway conveyance calculation

Elevation computed without consideration of backwater effects from Guyandotte River</sup>

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NGVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Crawley Creek (continued) X Y Z AA AB AC AD AE AF AG AH AI	2.858 ¹ 2.998 ¹ 3.203 ¹ 3.383 ² 3.503 ¹ 3.685 ¹ 3.779 ¹ 3.944 ¹ 4.094 ¹ 4.233 ¹ 4.417 ¹ 4.503 ¹	169 60 111 103 94 108 155 120 113 105 132 122	1,057 602 748 878 743 1,021 1,645 894 944 1,130 1,133 670	4.4 7.8 6.3 5.4 6.3 4.6 2.9 5.3 5.0 4.2 4.1 7.0	658.1 659.9 664.8 670.0 671.4 679.8 680.3 681.2 682.8 690.7 691.5 691.9	658.1 659.9 664.8 670.0 671.4 679.8 680.3 681.2 682.8 690.7 691.5 691.9	659.0 660.3 665.2 670.9 672.3 680.8 680.7 681.6 683.7 690.7 691.7 692.1	0.9 0.4 0.9 0.9 0.2 0.4 0.9 0.0 0.2 0.2
Mud Fork A B C D E F G	85 ² 321 ² 427 ² 485 ² 638 ² 842 ² 1,098 ²	120 92 88 99 139 90 115	693 618 658 700 996 641 806	7.0 7.9 7.4 6.9 4.9 7.6 6.0	674.4 674.4 674.4 674.4 674.4 674.4 674.4 REVISED DATA	666.1 ³ 666.3 ³ 667.0 ³ 667.4 ³ 668.3 ³ 668.6 ³ 669.9 ³	666.1 667.3 667.9 668.2 669.1 669.3 670.7	0.0 1.0 0.9 0.8 0.8 0.7

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOGAN COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA REVISED TO

REFLECT LOMR

EFFECTIVE: August 20, 2018

CRAWLEY CREEK AND MUD FORK

TABLE

¹ Miles above confluence with Guyandotte River

² Feet above confluence with Copperas Mine Fork

³ Elevations computed without consideration of backwater effects from Copperas Mine Fork

FLOODING SOURCE					BASE FLOOD WATER SURFACE ELEVATION (FEET NGVD)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mud Fork (continued) H J K L M N O P Q R S T U V W X Y Z AA AB AC	1,365 1,573 1,776 1,940 2,177 2,935 3,580 4,150 4,444 4,734 5,151 5,666 5,903 6,447 6,684 7,064 7,461 7,735 8,053 8,554	126 148 60 78 39 161 50 82 80 94 86 75 88 154 75 175 175 125 9	879 897 486 504 355 743 317 421 1,220 647 675 773 793 575 655 658 1,137 491 624 758 671 373	5.5 5.4 10.0 9.6 13.7 6.5 12.8 9.6 3.3 6.0 5.1 7.1 6.2 3.6 8.5 4.7 5.5	674.4 674.4 674.4 674.4 680.6 683.1 687.2 689.5 689.7 692.4 696.8 697.1 697.2 700.8 701.4 705.8 709.3 710.8 714.9	670.8 ² 671.3 ² 671.3 ² 673.2 ² 674.4 ² 680.6 683.1 687.2 689.5 689.7 692.4 696.8 697.1 697.2 700.8 701.4 705.8 709.3 710.8 712.6 714.3 714.9	671.5 672.0 672.1 673.2 674.9 681.2 683.4 687.8 690.1 690.2 693.2 697.0 697.5 697.7 701.3 702.4 706.2 709.3 711.0 712.8 714.4 715.1	0.7 0.8 0.5 0.6 0.5 0.5 0.5 0.5 0.5 0.4 0.0 0.2 0.2 0.2 0.2

REVISED DATA

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOGAN COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA REFLECT LOMR EFFECTIVE: August 20, 2018

REVISED TO

MUD FORK

TABLE N

Feet above confluence with Copperas Mine Fork
Elevations computed without consideration of backwater effects from Copperas Mine Fork

FLOODING SOURCE			FLOODWAY		BASE FLOOD WATER SURFACE ELEVATION (FEET NGVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Mud Fork (continued) BV BW BX BY BZ CA CB CC CD CC	26,582¹ 27,247¹ 27,712¹ 28,446¹ 29,048¹ 29,718¹ 30,420¹ 31,255¹ 31,624¹ 32,068¹ 32,738¹	73 60 68 45 42 70 40 56 44 26 37	301 261 373 199 187 384 157 390 197 881 265	5.9 6.8 4.8 9.0 9.5 4.6 11.3 4.6 9.0 0.3 4.7	849.5 853.2 861.6 864.8 871.0 879.6 886.9 894.6 895.5 829.5	849.5 853.2 861.6 864.8 871.0 879.6 886.9 894.6 895.5 829.5 910.4	849.9 853.7 861.9 865.4 871.7 879.9 886.9 895.6 896.1 829.5 910.5	0.4 0.5 0.3 0.6 0.7 0.3 0.0 1.0 0.6 0.0
Copperas Mine Fork A B C D E F	0.071 ² 0.105 ² 0.155 ² 0.295 ² 0.382 ² 0.591 ² 0.643 ²	385 270 155 234 234 129 185	1,733 1,427 2,462 3,219 3,379 1,690 1,225	8.9 10.9 6.3 4.8 4.6 6.4 8.8	673.0 673.0 673.0 673.7 674.4 675.4 675.8 REVISED DATA	669.2 ³ 669.6 ³ 671.8 ³ 673.7 ⁵ 674.4 ³ 675.4 ³	670.2 670.6 672.8 674.5 675.1 676.4 676.8	1.0 1.0 1.0 0.8 0.7 1.0

FEDERAL EMERGENCY MANAGEMENT AGENCY

LOGAN COUNTY, WV AND INCORPORATED AREAS

FLOODWAY DATA

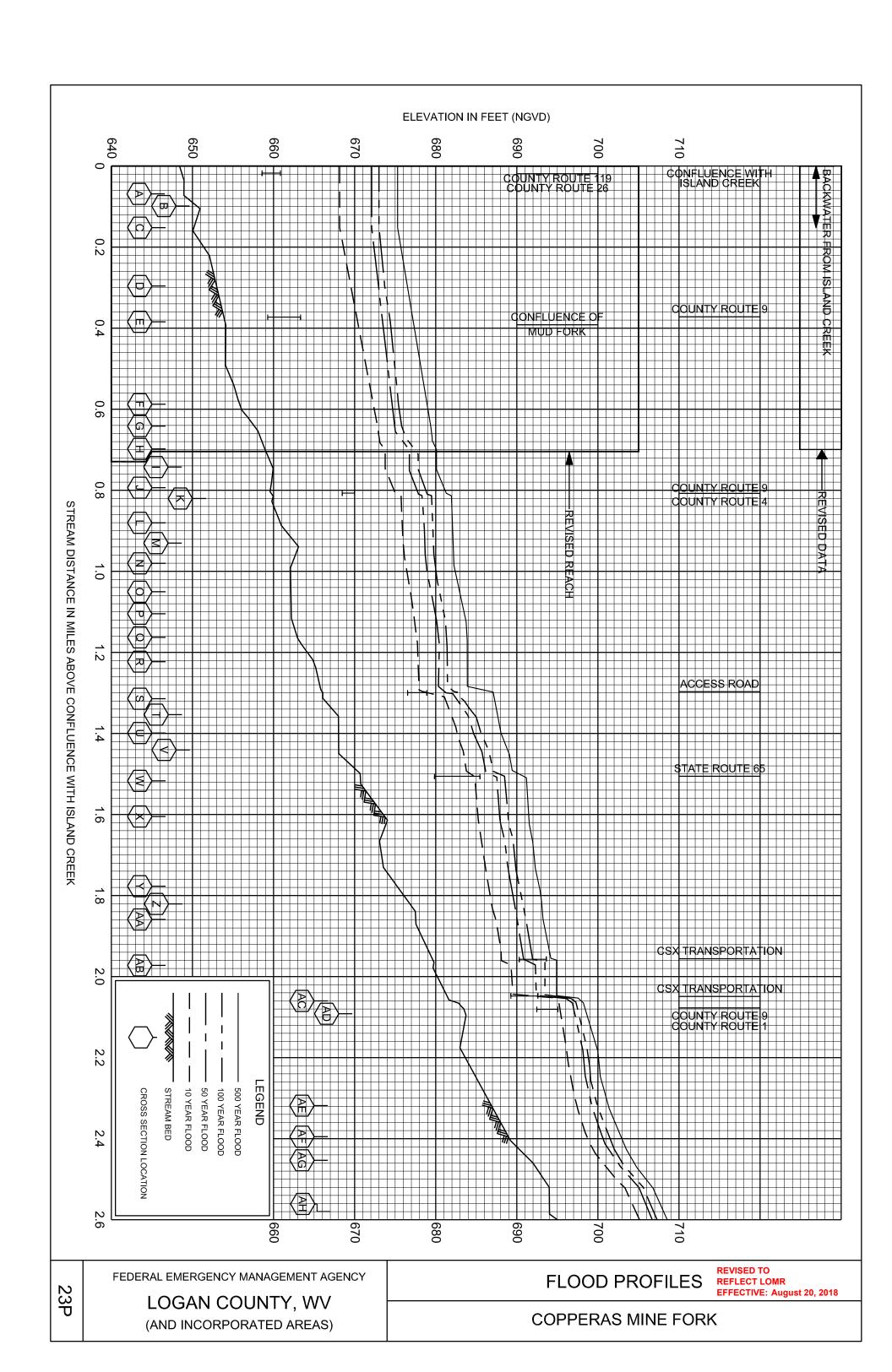
REVISED TO REFLECT LOMR EFFECTIVE: August 20, 2018

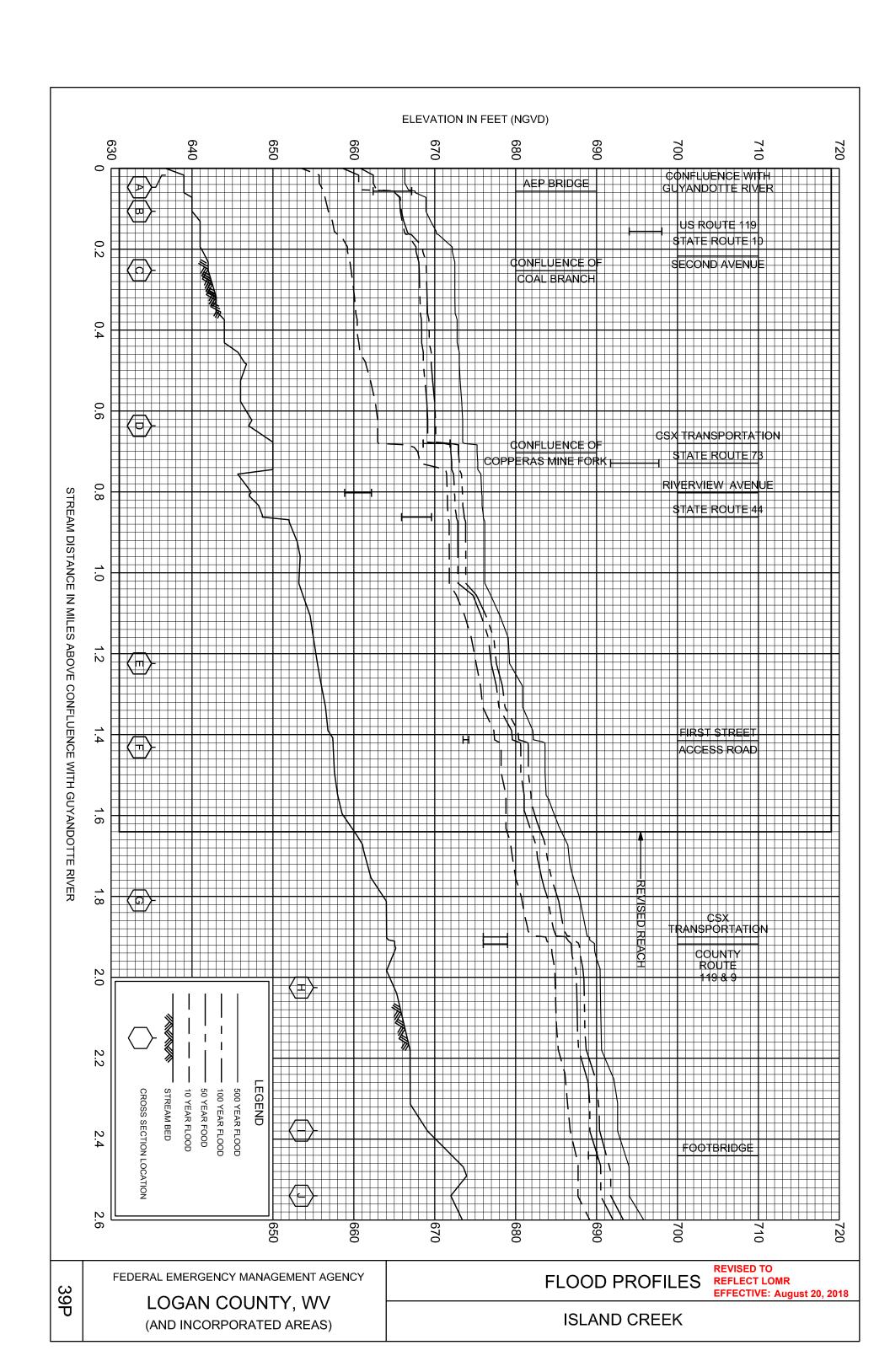
MUD FORK - COPPERAS MINE FORK

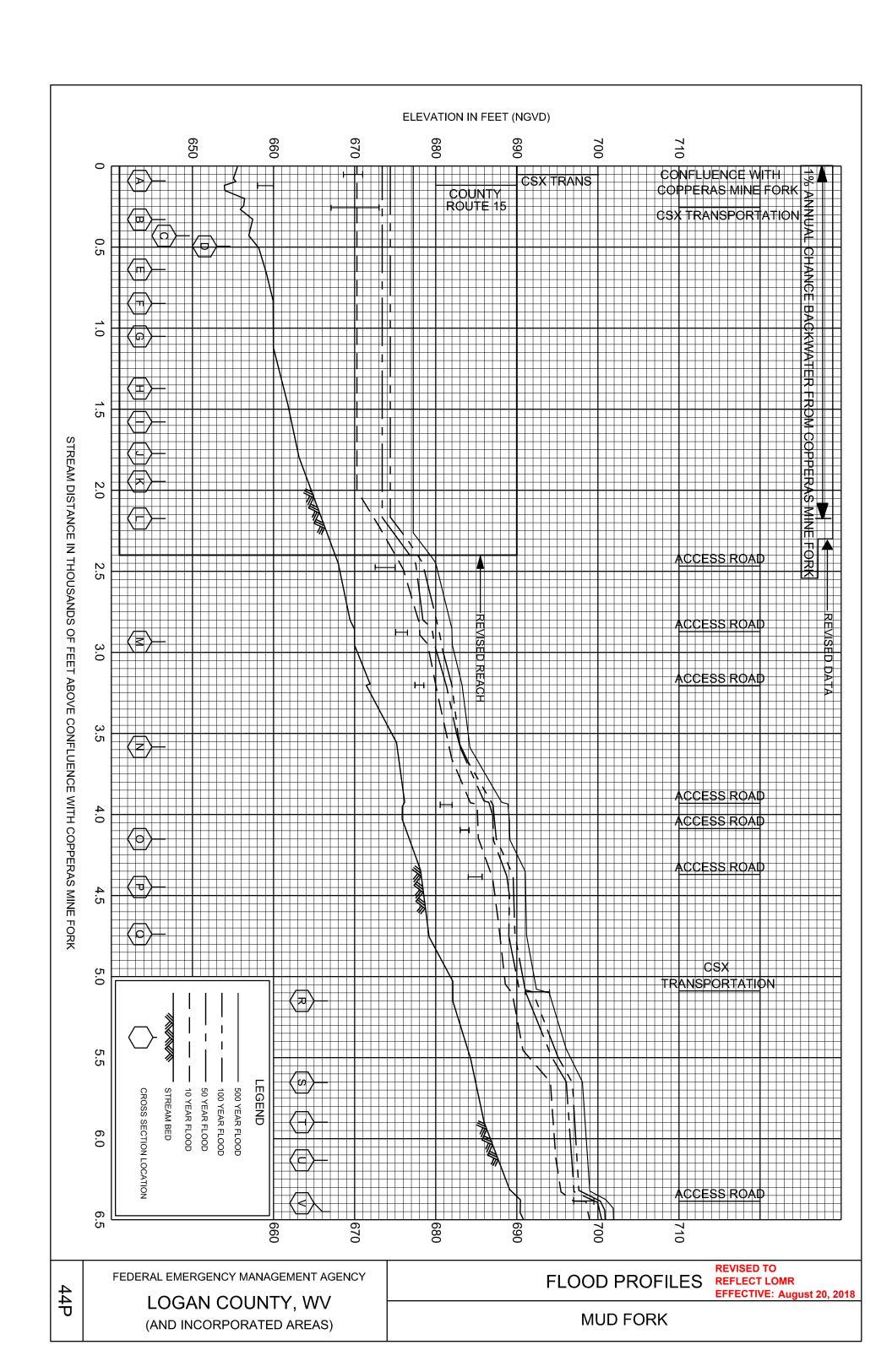
Feet above confluence with Copperas Mine Fork

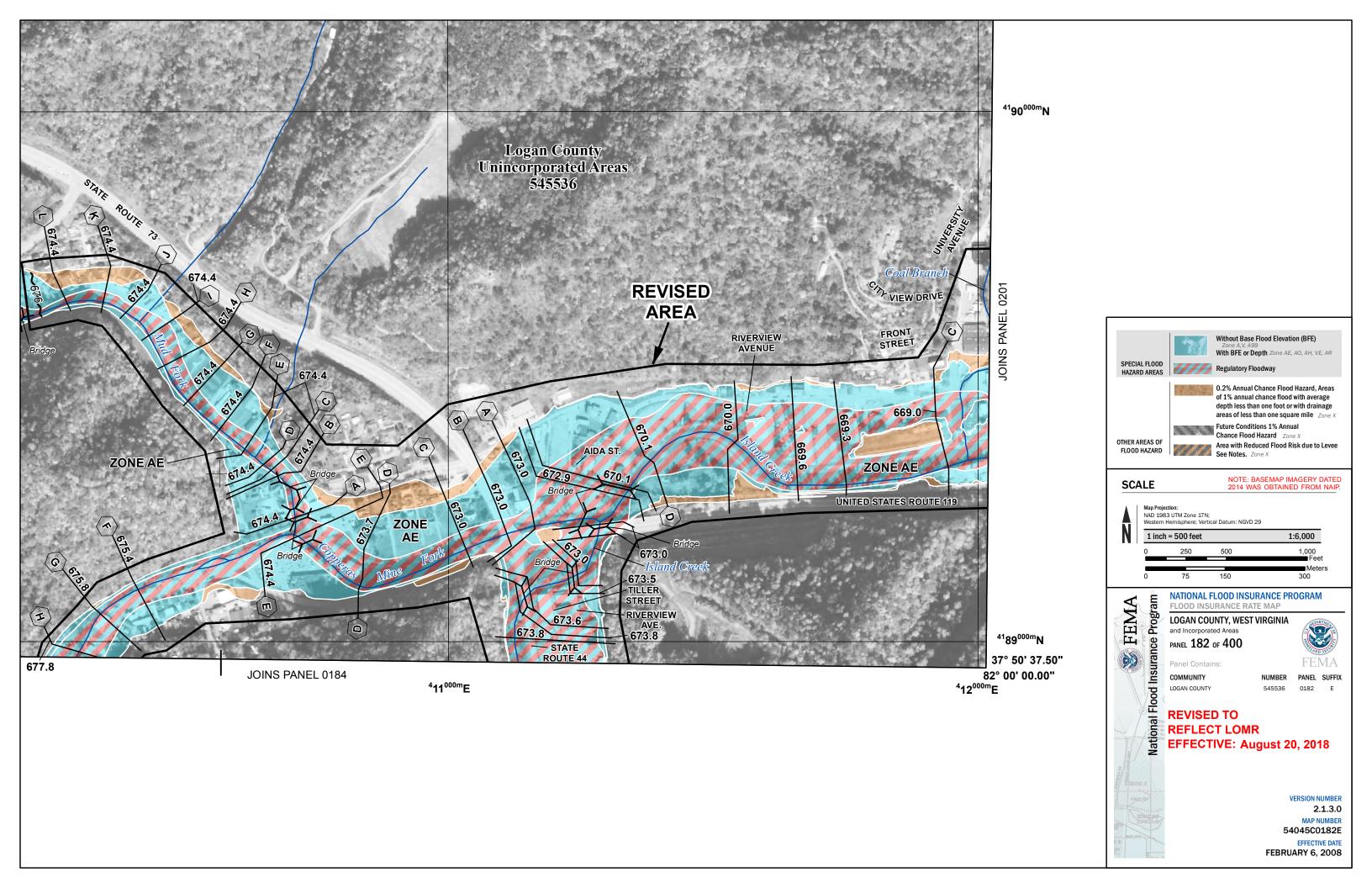
Miles above confluence with Island Creek

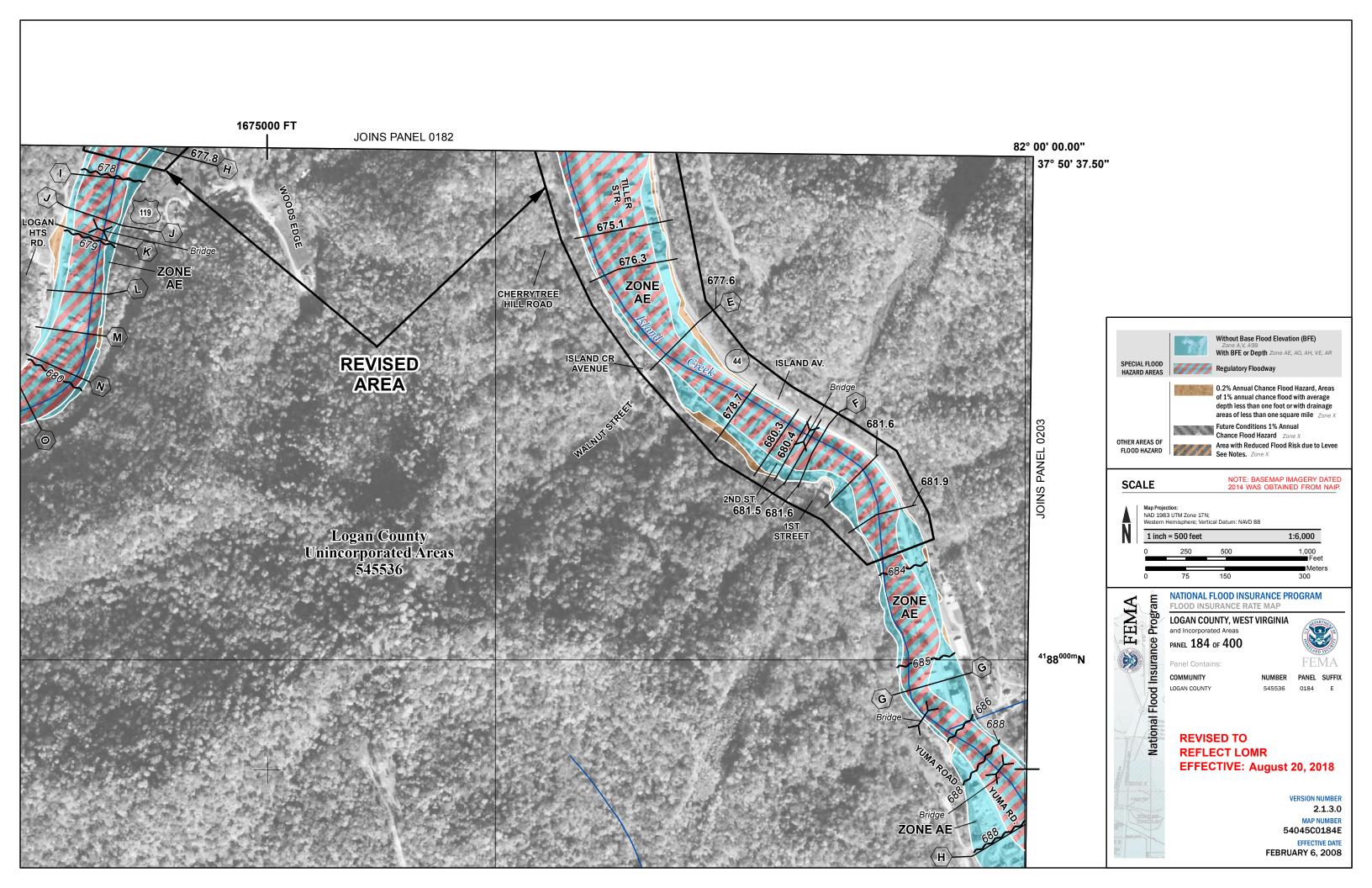
Elevation computed without consideration of backwater effects from Island Creek

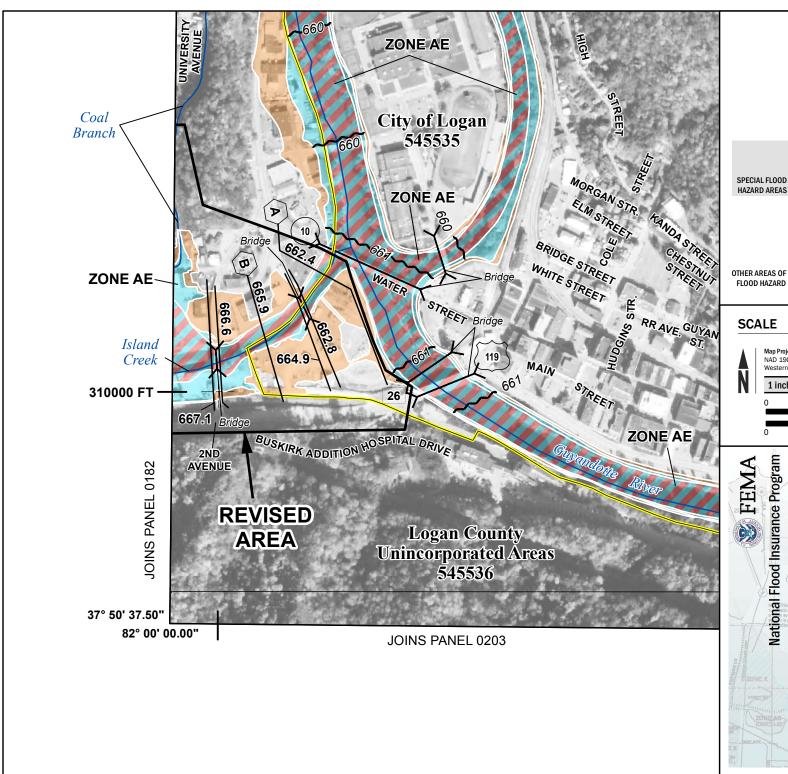


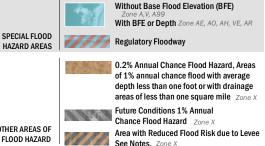




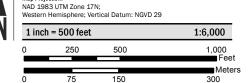








NOTE: BASEMAP IMAGERY DATED 2014 WAS OBTAINED FROM NAIP



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP LOGAN COUNTY, WEST VIRGINIA and Incorporated Areas

PANEL 201 OF 400



Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
LOGAN COUNTY	545536	0201	Ε
LOGAN, CITY OF	545535	0201	Ε
WEST LOGAN, TOWN OF	545539	0201	E

REVISED TO REFLECT LOMR EFFECTIVE: August 20, 2018

> **VERSION NUMBER** 2.1.3.0 MAP NUMBER 54045C0201E **EFFECTIVE DATE** FEBRUARY 6, 2008