



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	Greenbrier County West Virginia (Unincorporated Areas)	FILL	FLOODWAY HYDRAULIC ANALYSIS UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 540040		
IDENTIFIER	Greenbrier Residential Development	APPROXIMATE LATITUDE AND LONGITUDE: 37.781, -80.322 SOURCE: Precision Mapping Streets DATUM: NAD 83	
ANNOTATED MAPPING ENCLOSURES		ANNOTATED STUDY ENCLOSURES	
TYPE: FIRM* NO.: 54025C0665E DATE: October 16, 2012 TYPE: FIRM NO.: 54025C0670E DATE: October 16, 2012		DATE OF EFFECTIVE FLOOD INSURANCE STUDY: October 16, 2012 PROFILES: 13P AND 14P FLOODWAY DATA TABLE: 7	

Enclosures reflect changes to flooding sources affected by this revision.

* FIRM - Flood Insurance Rate Map

FLOODING SOURCE AND REVISED REACH

Howard Creek - from approximately 3,280 feet downstream of U.S. Route 60 to approximately 7,840 feet upstream of U.S. Route 60

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Howard Creek	Zone AE	Zone AE	YES	YES
	Zone X (shaded)	Zone X (shaded)	YES	YES
	Floodway	Floodway	YES	YES
	BFEs*	BFEs	YES	YES

* 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 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. Sacbbit, P. E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

18-03-1881P

102-I-A-C



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Washington, D.C. 20472

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

OTHER COMMUNITIES AFFECTED BY THIS REVISION

CID Number: 540045 **Name:** City of White Sulphur Springs, West Virginia

AFFECTED MAP PANELS

TYPE: FIRM NO.: 54025C0665E DATE: October 16, 2012

AFFECTED PORTIONS OF THE FLOOD INSURANCE STUDY REPORT

DATE OF EFFECTIVE FLOOD INSURANCE STUDY: October 16, 2012
PROFILES: 13P AND 14P
FLOODWAY DATA TABLE: 7

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>.

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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 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 revision has met our criteria for removing an area from the 1-percent-annual-chance floodplain to reflect the placement of fill. However, we encourage you to require that the lowest adjacent grade and lowest floor (including basement) of any structure placed within the subject area be elevated to or above the Base (1-percent-annual-chance) Flood Elevation.

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>.

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

Ms. Janice Barlow
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>.

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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: *West Virginia Daily News*

Dates: February 8, 2019 and February 15, 2019

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>.

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Federal Insurance and Mitigation Administration

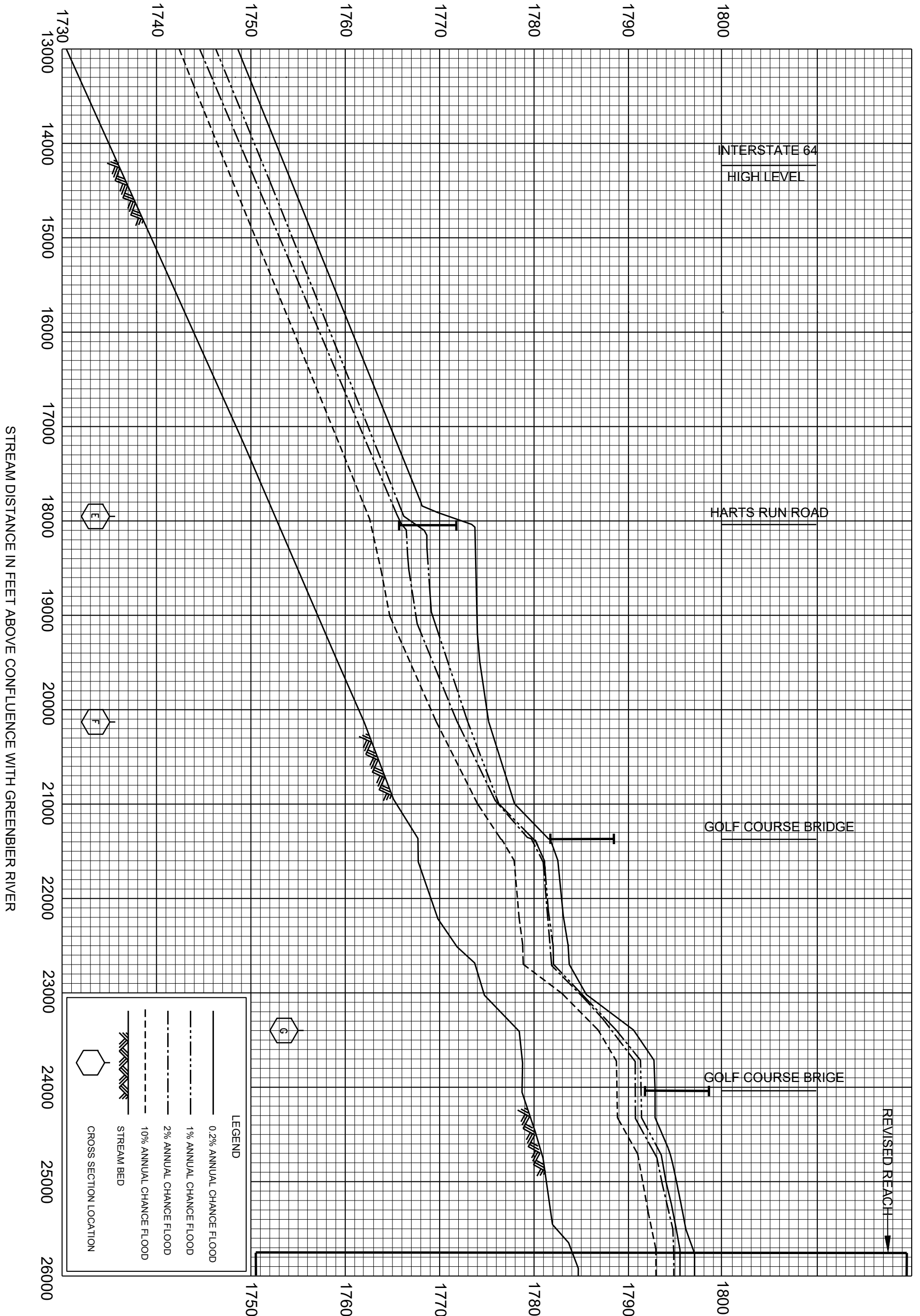
FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Howard Creek								
A	2,960	260	2,000	10.8	1,693.7	1,693.7	1,693.8	0.1
B	6,070	155	1,332	16.1	1,709.1	1,709.1	1,709.1	0.0
C	8,190	131	2,276	9.4	1,730.0	1,730.0	1,730.3	0.3
D	12,500	186	1,417	15.2	1,744.2	1,744.2	1,744.2	0.0
E	17,960	300	2,838	6.4	1,766.1	1,766.1	1,766.6	0.5
F	20,130	300	2,484	7.4	1,773.0	1,773.0	1,774.0	1.0
G	23,400	430	1,823	9.7	1,788.8	1,788.8	1,789.1	0.3
H	29,540	460	2,677	6.5	1,811.4	1,811.4	1,811.5	0.1
I	31,350	1,174	5,919	2.9	1,815.3	1,815.3	1,815.8	0.5
J	34,060	420	2,800	6.2	1,829.0	1,829.0	1,829.2	0.2
K	36,830	353	2,100	8.2	1,833.1	1,833.1	1,833.2	0.1
L	38,486	650	2,249	7.4	1,841.2	1,841.2	1,841.4	0.2
M	39,076	330	3,654	6.9	1,844.6	1,844.6	1,845.3	0.7
N	39,979	111	1,212	11.8	1,844.9	1,844.9	1,845.8	0.9
O	41,469	492	1,390	11.9	1,851.5	1,851.5	1,851.5	0.0
P	43,872	108	750	11.9	1,862.0	1,862.0	1,862.4	0.4
Q	45,906	285	2,115	4.9	1,872.9	1,872.9	1,873.9	1.0
R	46,386	367	2,726	3.7	1,873.9	1,873.9	1,874.8	0.9
S	47,750	494	1,795	6.8	1,877.2	1,877.2	1,877.9	0.7

REVISED DATA
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¹ Feet above confluence with Greenbrier River

TABLE 7	FEDERAL EMERGENCY MANAGEMENT AGENCY	FLOODWAY DATA HOWARD CREEK	REVISED TO REFLECT LOMR EFFECTIVE: June 17, 2019
	GREENBRIER COUNTY, WV AND INCORPORATED AREAS		

ELEVATION IN FEET (NAVD 88)



LEGEND

- 0.2% ANNUAL CHANCE FLOOD (Long dashed line)
- 1% ANNUAL CHANCE FLOOD (Dotted line)
- 2% ANNUAL CHANCE FLOOD (Dash-dot line)
- 10% ANNUAL CHANCE FLOOD (Dashed line)
- STREAM BED (Solid line)
- CROSS SECTION LOCATION (Hexagon symbol)

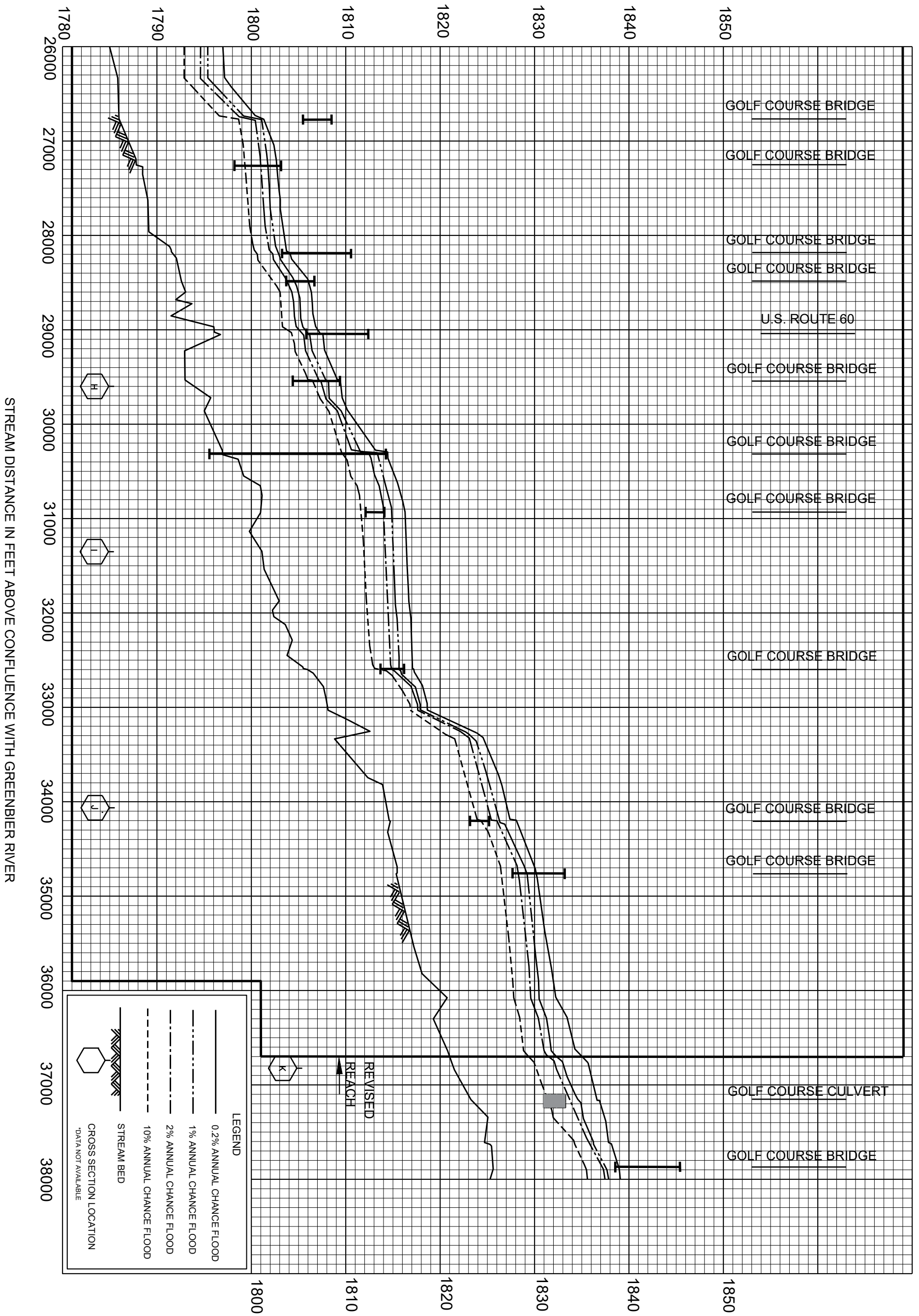
STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH GREENBIER RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
GREENBRIER COUNTY, WV
AND INCORPORATED AREAS

FLOOD PROFILES
REVISED TO REFLECT LOMR
EFFECTIVE: June 17, 2019
HOWARD CREEK

13P

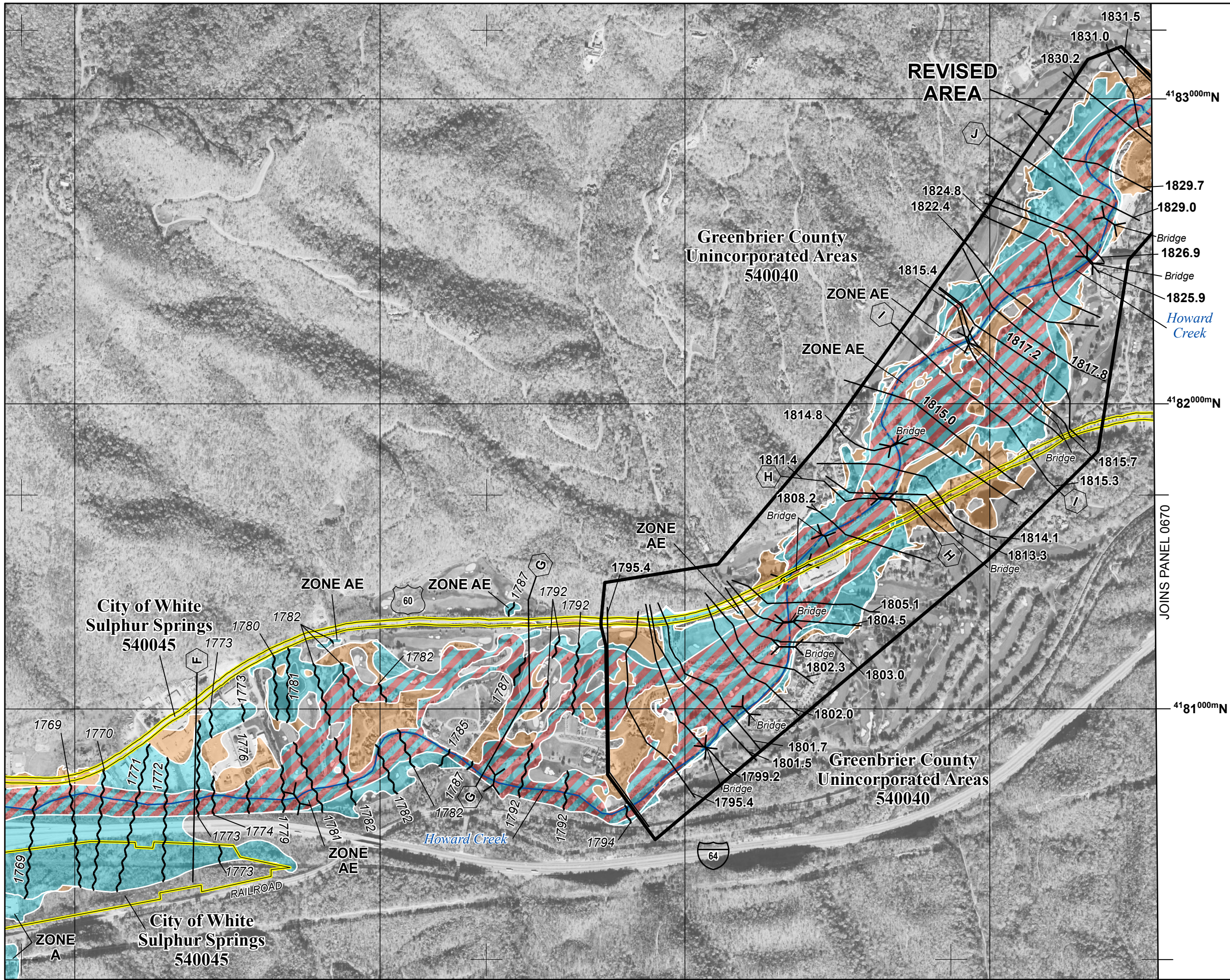
ELEVATION IN FEET (NAVD 88)



STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH GREENBIER RIVER

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- - - 1% ANNUAL CHANCE FLOOD
- · - · 2% ANNUAL CHANCE FLOOD
- - - 10% ANNUAL CHANCE FLOOD
- ▬ STREAM BED
- ⬢ CROSS SECTION LOCATION
*DATA NOT AVAILABLE



SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee See Notes. Zone X

SCALE

NOTE: BASEMAP IMAGERY WAS OBTAINED FROM NAIP IN 2014.

Map Projection:
NAD 1983 UTM Zone 17N;
Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 1,000 feet 1:12,000

0 500 1,000 2,000 Feet
0 150 300 600 Meters

FEMA
National Flood Insurance Program

**NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP**

**GREENBRIER COUNTY,
WEST VIRGINIA
and Incorporated Areas**

PANEL 665 OF 800

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
GREENBRIER COUNTY	540040	0665	E
WHITE SULPHUR SPRINGS, CITY OF	540045	0665	E

**REVISED TO REFLECT LOMR
EFFECTIVE: June 17, 2019**

VERSION NUMBER
2.1.3.0

MAP NUMBER
54025C0665E

EFFECTIVE DATE
OCTOBER 16, 2012

**Greenbrier County
Unincorporated Areas
540040**

LIMIT OF STUDY

**City of White
Sulphur Springs
540045**

290000 FT

1833

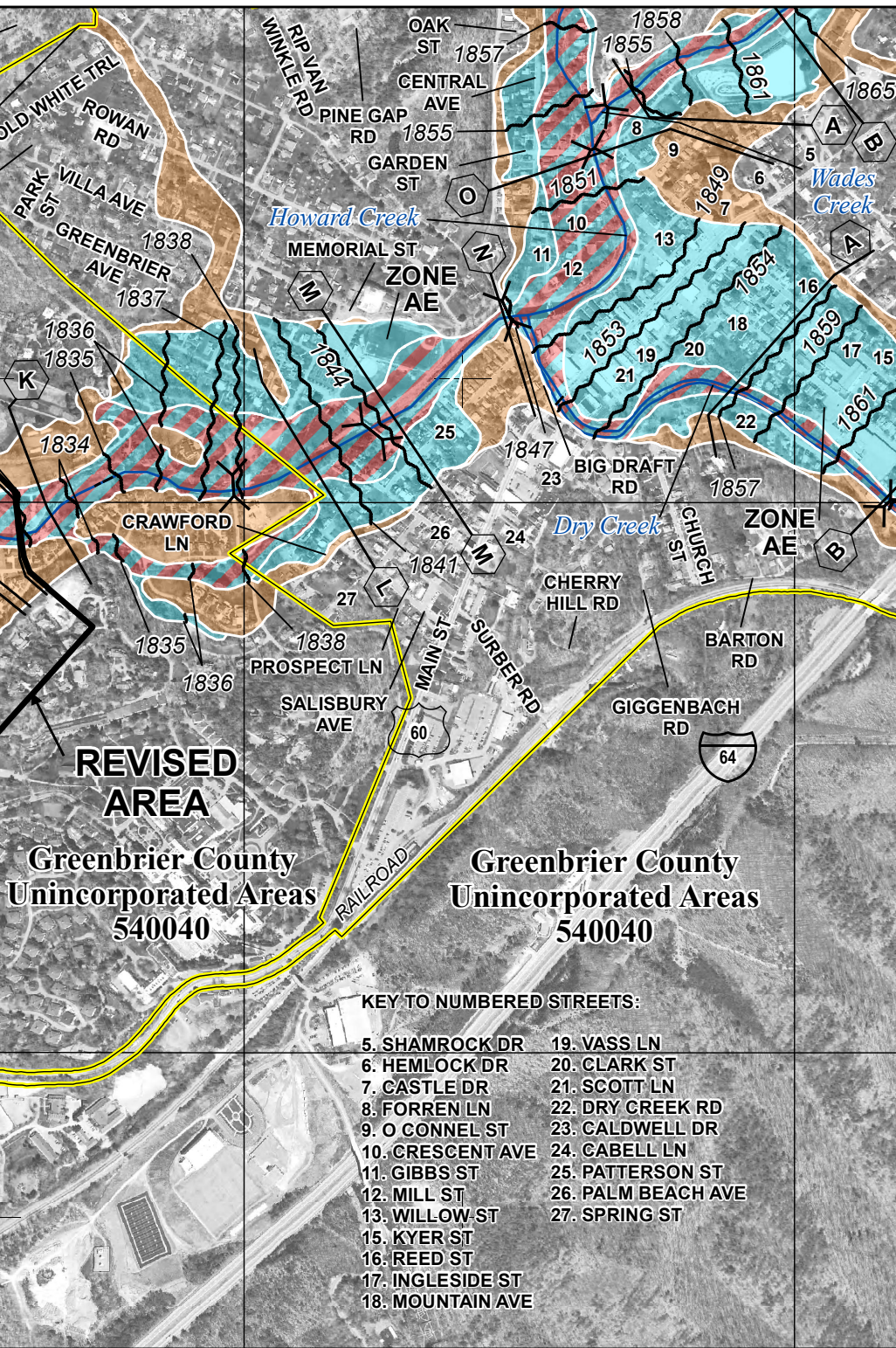
1831.5

1831.0

1830.2

JOINS PANEL 0665

285000 FT



**REVISED
AREA**
**Greenbrier County
Unincorporated Areas
540040**

**Greenbrier County
Unincorporated Areas
540040**

KEY TO NUMBERED STREETS:

- | | |
|------------------|--------------------|
| 5. SHAMROCK DR | 19. VASS LN |
| 6. HEMLOCK DR | 20. CLARK ST |
| 7. CASTLE DR | 21. SCOTT LN |
| 8. FORREN LN | 22. DRY CREEK RD |
| 9. O CONNELL ST | 23. CALDWELL DR |
| 10. CRESCENT AVE | 24. CABELL LN |
| 11. GIBBS ST | 25. PATTERSON ST |
| 12. MILL ST | 26. PALM BEACH AVE |
| 13. WILLOW ST | 27. SPRING ST |
| 15. KYER ST | |
| 16. REED ST | |
| 17. INGLESIDE ST | |
| 18. MOUNTAIN AVE | |

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee See Notes. Zone X

SCALE NOTE: BASEMAP IMAGERY WAS OBTAINED FROM NAIP IN 2016

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NAD 1983 UTM Zone 17N;
Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 1,000 feet 1:12,000

FEMA
National Flood Insurance Program

**NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP**

**GREENBRIER COUNTY,
WEST VIRGINIA**
and Incorporated Areas

PANEL 670 OF 800
Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
GREENBRIER COUNTY	540040	0670	E
WHITE SULPHUR SPRINGS, CITY OF	540045	0670	E

**REVISED TO
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