



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	City of Rapid City Pennington County South Dakota	NO PROJECT	FLOODWAY HYDRAULIC ANALYSIS HYDROLOGIC ANALYSIS UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 465420		
IDENTIFIER	City of Rapid, City Haines Avenue	APPROXIMATE LATITUDE AND LONGITUDE: 44.094, -103.217 SOURCE: USGS QUADRANGLE DATUM: NAD 83	
ANNOTATED MAPPING ENCLOSURES		ANNOTATED STUDY ENCLOSURES	
TYPE: FIRM* NO.: 46103C0776H DATE: June 3, 2013 TYPE: FIRM* NO.: 46103C0777H DATE: June 3, 2013 TYPE: FIRM* NO.: 46103C0778H DATE: June 3, 2013 TYPE: FIRM* NO.: 46103C0779H DATE: June 3, 2013		DATE OF EFFECTIVE FLOOD INSURANCE STUDY: June 03, 2013 PROFILES: 60P, 61P, 150P, AND 151P FLOODWAY DATA TABLE: 7 SUMMARY OF DISCHARGES TABLE: 4	

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

Haines Avenue Drainage Basin – from the confluence of Rapid Creek through Rapid City to approximately 810 upstream of Lindbergh Avenue

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Haines Avenue Drainage Basin	No Floodway	Floodway	YES	NONE
	BFEs*	BFEs	YES	YES
	Zone AE	Zone AE	YES	YES
	Zone X (shaded)	Zone X (shaded)	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 LOMC Clearinghouse, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional information about the NFIP is available on our website at <http://www.fema.gov/national-flood-insurance-program>.

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

16-08-0803P

102-I-A-C



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LETTER OF MAP REVISION DETERMINATION DOCUMENT (CONTINUED)

OTHER FLOODING SOURCES AFFECTED BY THIS REVISION

FLOODING SOURCES AND REVISED REACHES

East Boulevard Breakout – from the confluence of Rapid Creek through Rapid City to the divergence with Haines Avenue Drainage Basin
Adams Street Breakout – from the confluence to approximately 1,260 feet upstream of confluence with Haines Avenue Drainage Basin

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
East Boulevard Breakout	No BFEs*	BFEs	YES	NONE
	Zone AE	Zone AE	YES	YES
	Zone X (unshaded)	Zone AE	YES	NONE
	Zone X (unshaded)	Zone X (shaded)	YES	NONE
	Zone X (shaded)	Zone AE	YES	NONE
Adams Street Breakout	No BFEs	BFEs	YES	NONE
	Zone AE	Zone AE	YES	YES
	Zone X (unshaded)	Zone AE	YES	NONE
	Zone X (unshaded)	Zone X (shaded)	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 website at <http://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 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 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, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional information about the NFIP is available on our website at <http://www.fema.gov/national-flood-insurance-program>.

A handwritten signature in black ink, appearing to read "Rick F. Sacibit".

Patrick "Rick" F. Sacibit, P.E., Branch Chief
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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. Jeanine D. Petterson
Director, Mitigation Division
Federal Emergency Management Agency, Region VIII
Denver Federal Center, Building 710
P.O. Box 25267
Denver, CO 80225-0267
(303) 235-4830

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 website at <http://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: *Rapid City Journal*

Dates: October 19, 2016 and October 26, 2016

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, 847 South Pickett Street, Alexandria, VA 22304-4605. Additional information about the NFIP is available on our website at <http://www.fema.gov/national-flood-insurance-program>.

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Engineering Services Branch
Federal Insurance and Mitigation Administration

TABLE 4- SUMMARY OF DISCHARGES TABLE (Cont'd)

Flooding Source and Location	Drainage Area (square miles)	10-percent	2-percent	1-percent	0.2-percent
Haines Avenue Drainage Basin (continued)					
Downstream of East Boulevard Breakout	2.1	540	720	820	1,510
Just downstream of North Street	2.0	550	980	1,140	1,970
Just upstream of Madison Street	1.9	510	880	1,010	1,870
Just downstream of Monroe Street	1.9	510	870	925	1,870
Just downstream of Adams Street ¹	1.9	30	70	130	425
At Wright Street ¹	1.8	30	90	210	1,550
Adams Street Breakout					
Just downstream of confluence with Haines Avenue Drainage Basin	--	--	10	85	725
East Boulevard Breakout					
Just upstream of East Saint Louis Street	--	40	135	170	250
Just downstream of confluence with Haines Avenue Drainage Basin	--	40	150	200	320

¹Discharges do not include flow in Box Storm Sewer

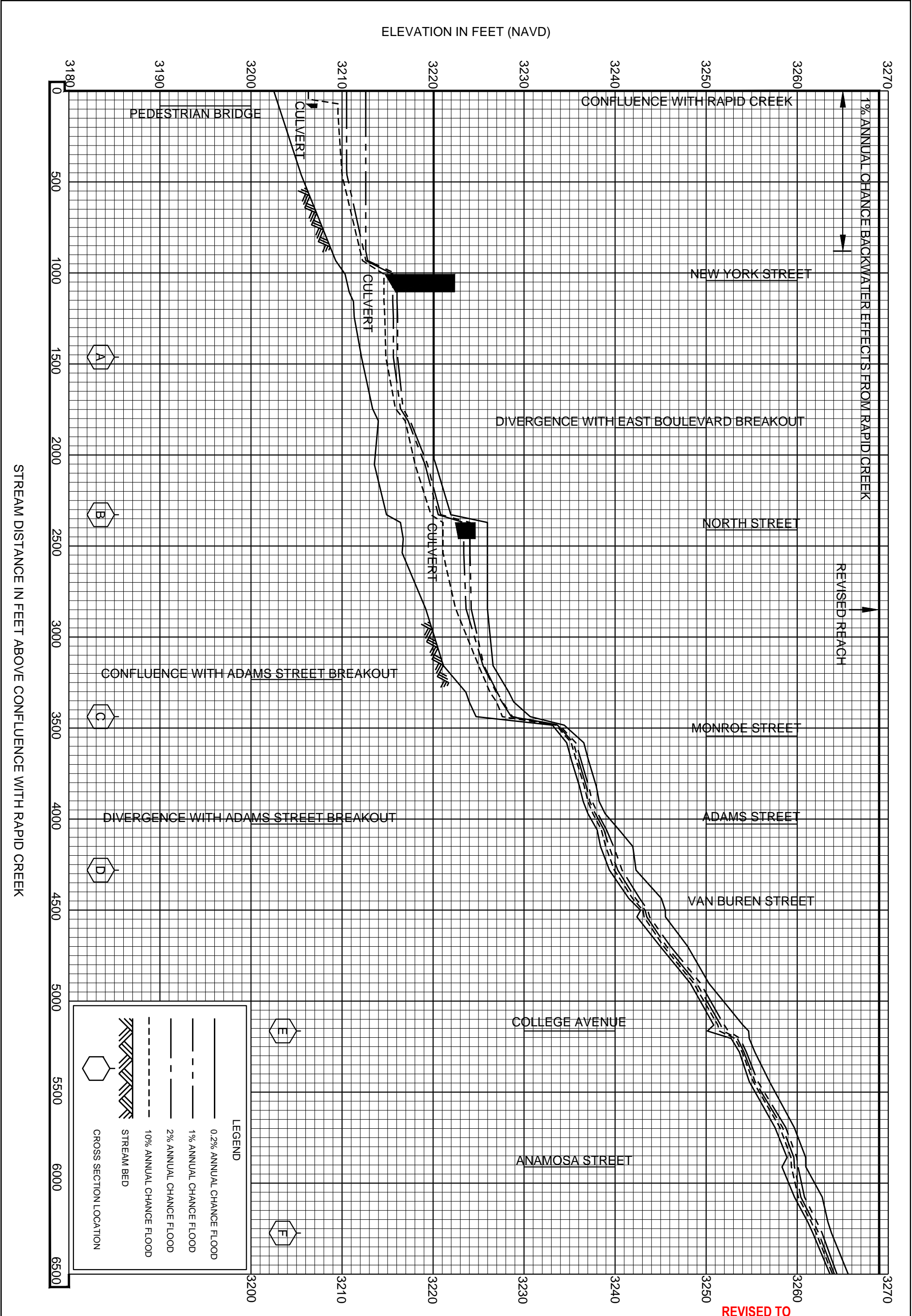
**REVISED TO
REFLECT LOMR
EFFECTIVE: February 23, 2017**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE 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
A	1,462	115	287	2.9	3,216.1	3,216.1	3,216.1	0.0
B	2,328	36	125	9.1	3,220.8	3,220.8	3,220.9	0.1
C	3,437	30	92	10.0	3,228.7	3,228.7	3,228.7	0.0

¹Feet Above Confluence with Rapid Creek

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EFFECTIVE: February 23, 2017

TABLE 7	FEDERAL EMERGENCY MANAGEMENT AGENCY PENNINGTON COUNTY, SD AND INCORPORATED AREAS	FLOODWAY DATA
		HAINES AVENUE DRAINAGE BASIN



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REFLECT LOMR
EFFECTIVE: February 23, 2017

FEDERAL EMERGENCY MANAGEMENT AGENCY

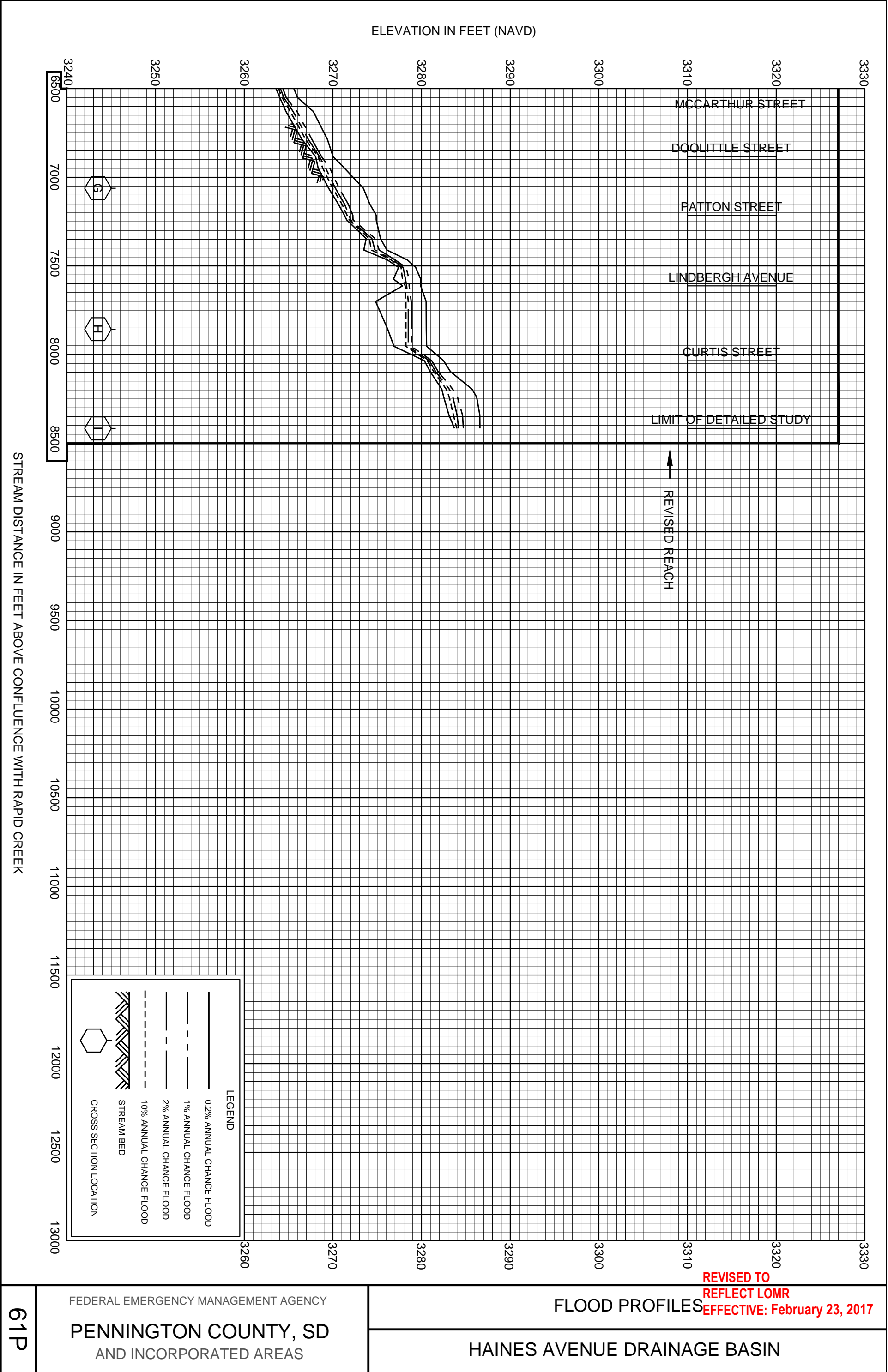
PENNINGTON COUNTY, SD
AND INCORPORATED AREAS

FLOOD PROFILES

HAINES AVENUE DRAINAGE BASIN

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH RAPID CREEK

60P

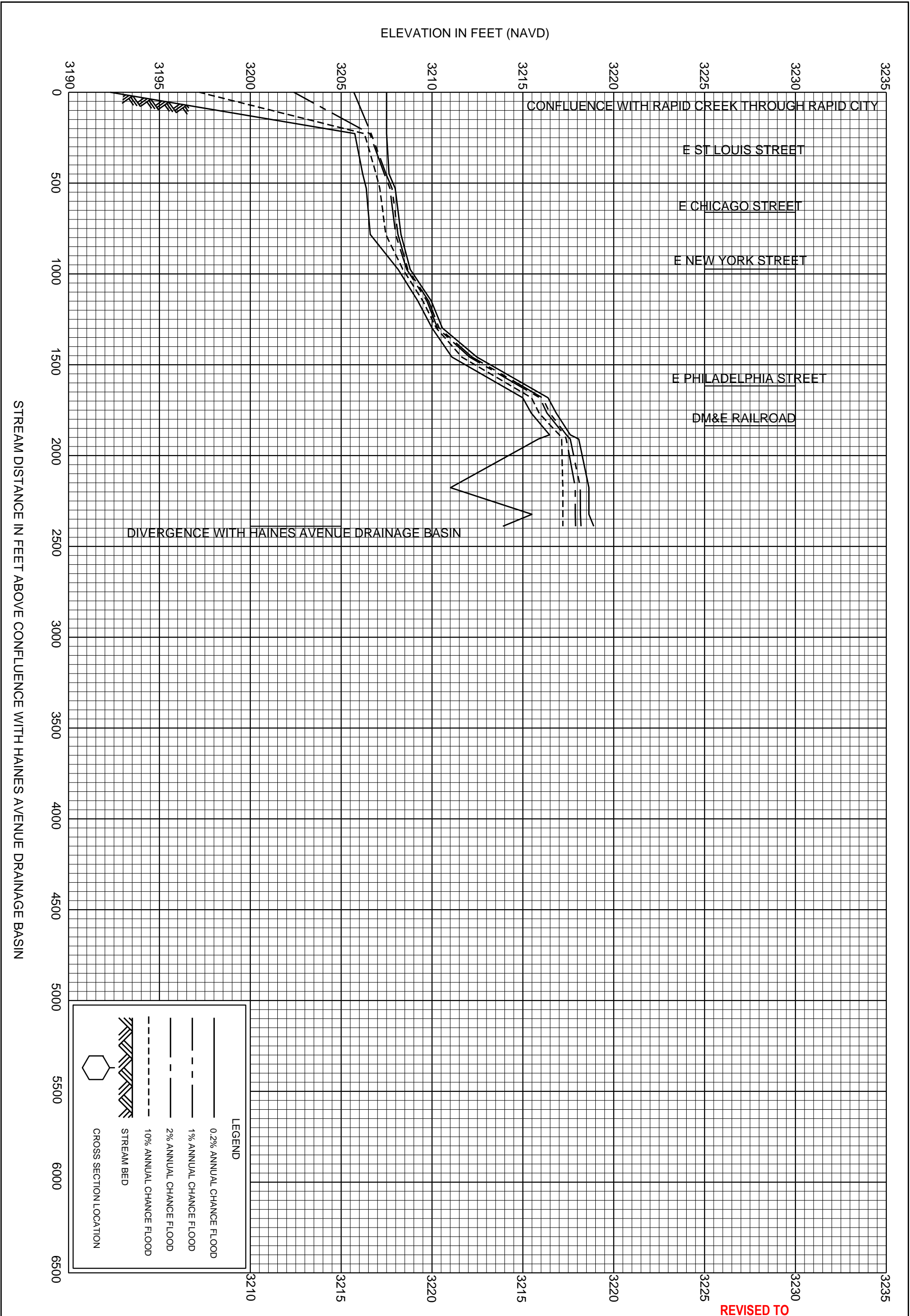


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EFFECTIVE: February 23, 2017

FLOOD PROFILES

HAINES AVENUE DRAINAGE BASIN

FEDERAL EMERGENCY MANAGEMENT AGENCY
PENNINGTON COUNTY, SD
AND INCORPORATED AREAS



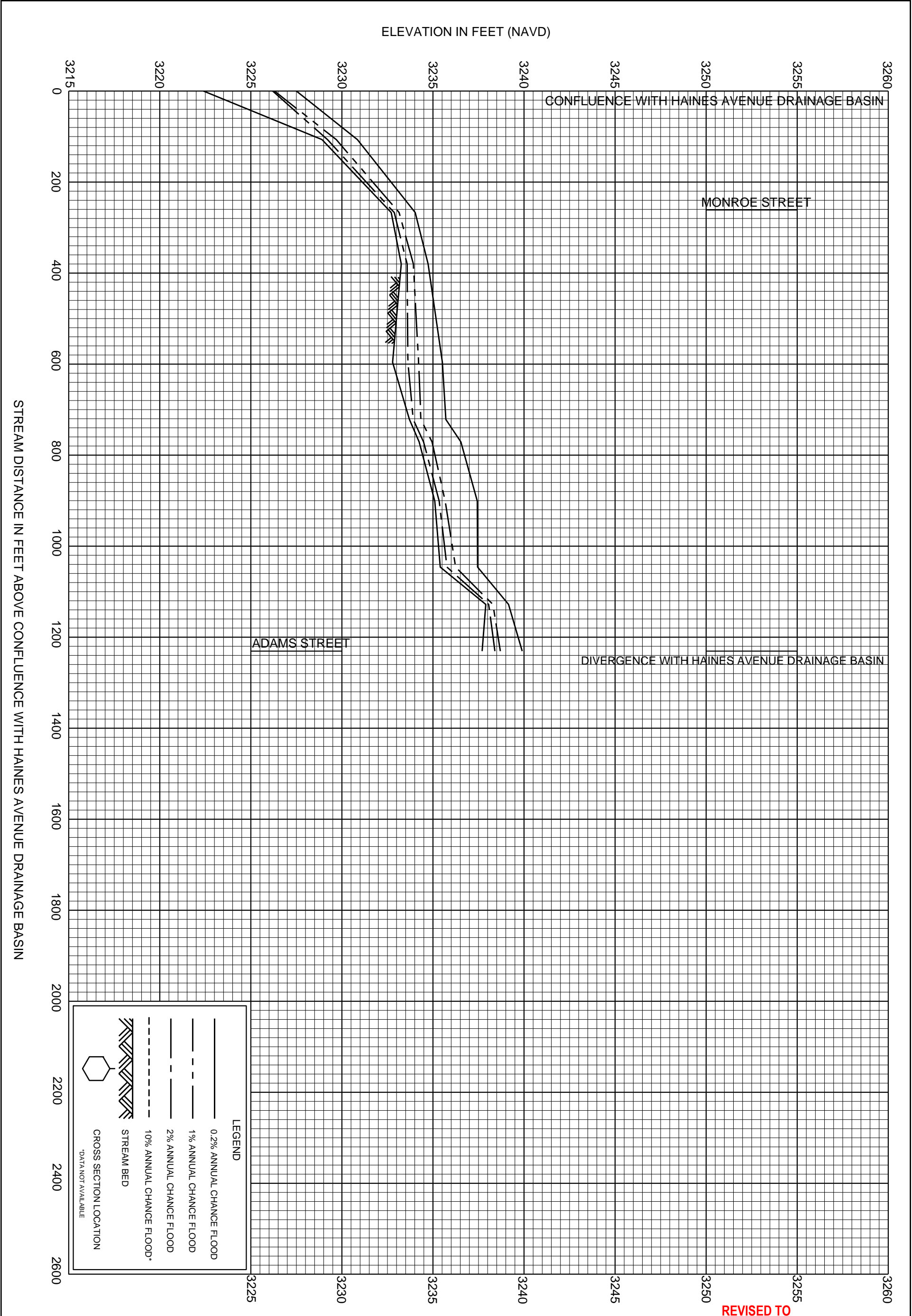
REVISED TO
REFLECT LOMR
EFFECTIVE: February 23, 2017

FLOOD PROFILES

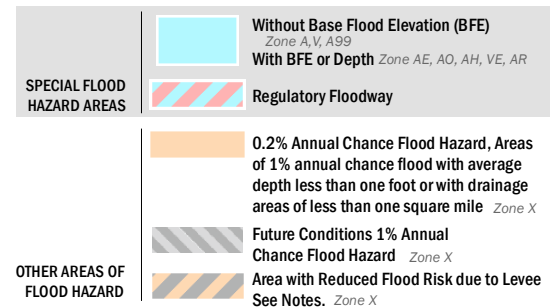
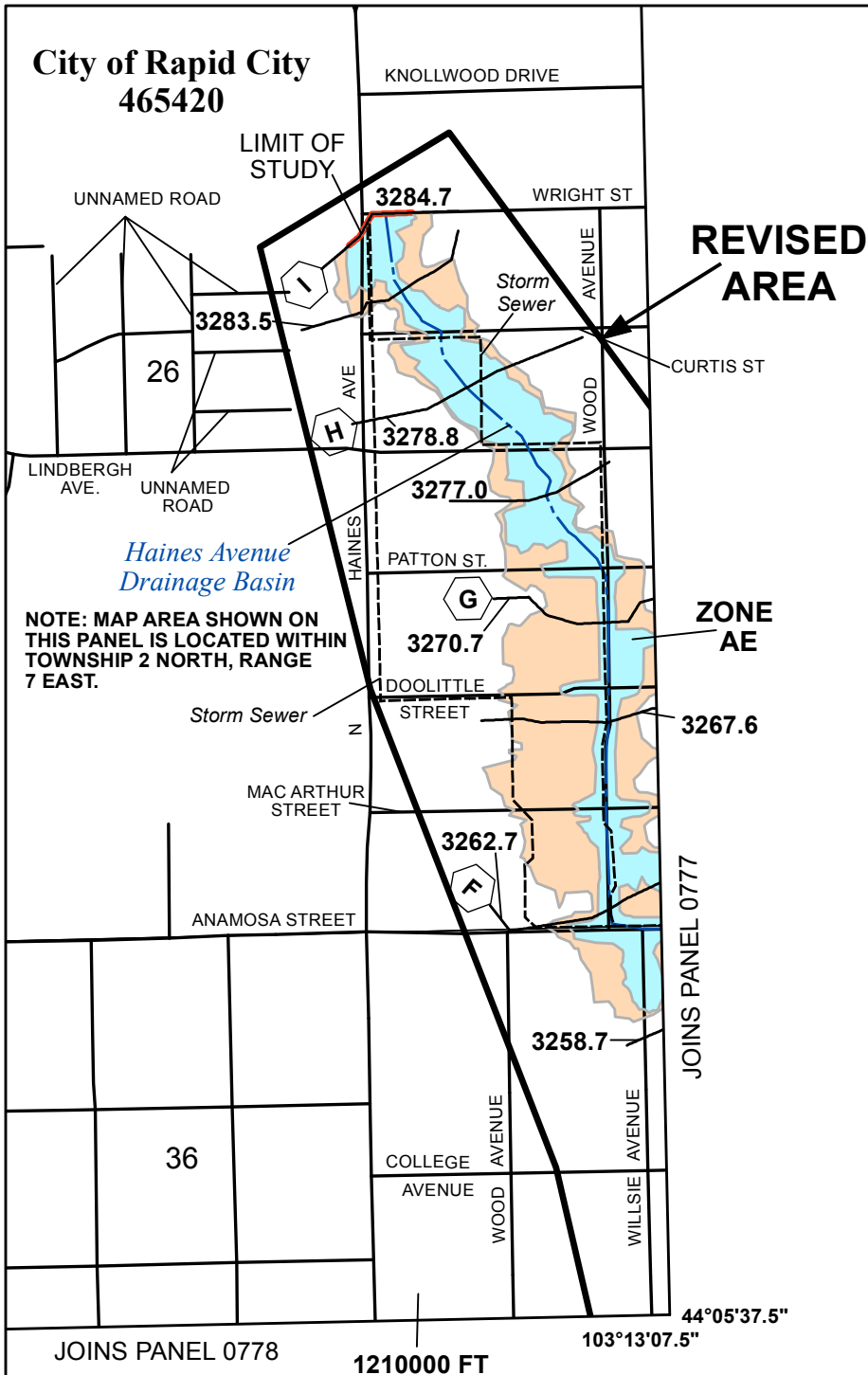
EAST BOULEVARD BREAKOUT

FEDERAL EMERGENCY MANAGEMENT AGENCY

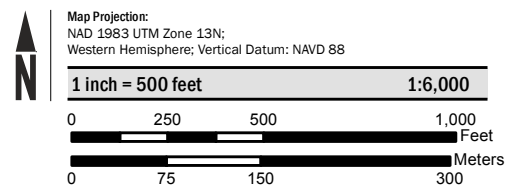
PENNINGTON COUNTY, SD
AND INCORPORATED AREAS



**City of Rapid City
465420**



SCALE





National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

**PENNINGTON COUNTY,
SOUTH DAKOTA**
and Incorporated Areas

PANEL 776 OF 2050

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
PENNINGTON COUNTY	460064	0776	H
RAPID CITY, CITY OF	465420	0776	H

**REVISED TO
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FEMA

VERSION NUMBER
2.1.3.0

MAP NUMBER
46103C0776H

EFFECTIVE DATE
JUNE 3, 2013

City of Rapid City 465420

NOTE: MAP AREA SHOWN ON THIS PANEL
IS LOCATED WITHIN TOWNSHIP 2 NORTH,
RANGE 7 EAST AND TOWNSHIP
2 NORTH, RANGE 8 EAST.

JOINS PANEL 0776

CURTIS ST.

25

LINDBERGH
AVENUE

MIDWAY
STREET

**REVISED
AREA**

PATTON STREET

PEARL HARBOR STREET

3270.7

ZONE AE

FLOODING EFFECTS
FROM HAINES
DRAINAGE BASIN

3267.6

DOOLITTLE STR.

MAC ARTHUR STREET

3262.7

ANAMOSA STREET

3260.1

ZONE AE

ZONE AE

36

3258.7

BLAINE AVE.

HALLEY AVENUE

COLLEGE
AVENUE

48°04'00.00m N

*Haines Avenue
Drainage Basin*

Storm
Sewer

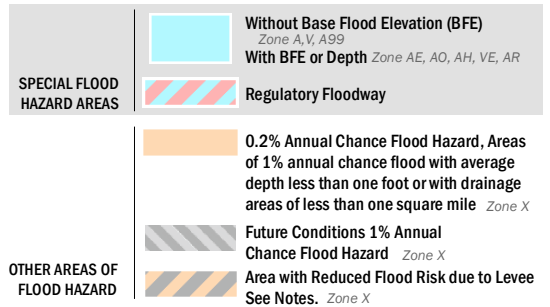
LEMMON
AVE.

3252.4

44°05'37.5"

103°13'07.5"

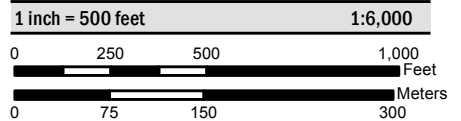
JOINS PANEL 0779



SCALE



Map Projection:
NAD 1983 UTM Zone 13N;
Western Hemisphere; Vertical Datum: NAVD 88



FEMA
National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP

PENNINGTON COUNTY,
SOUTH DAKOTA
and Incorporated Areas

PANEL 777 OF 2050

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
PENNINGTON COUNTY	460064	0777	H
RAPID CITY, CITY OF	465420	0777	H

**REVISED TO
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EFFECTIVE: February 23, 2017**

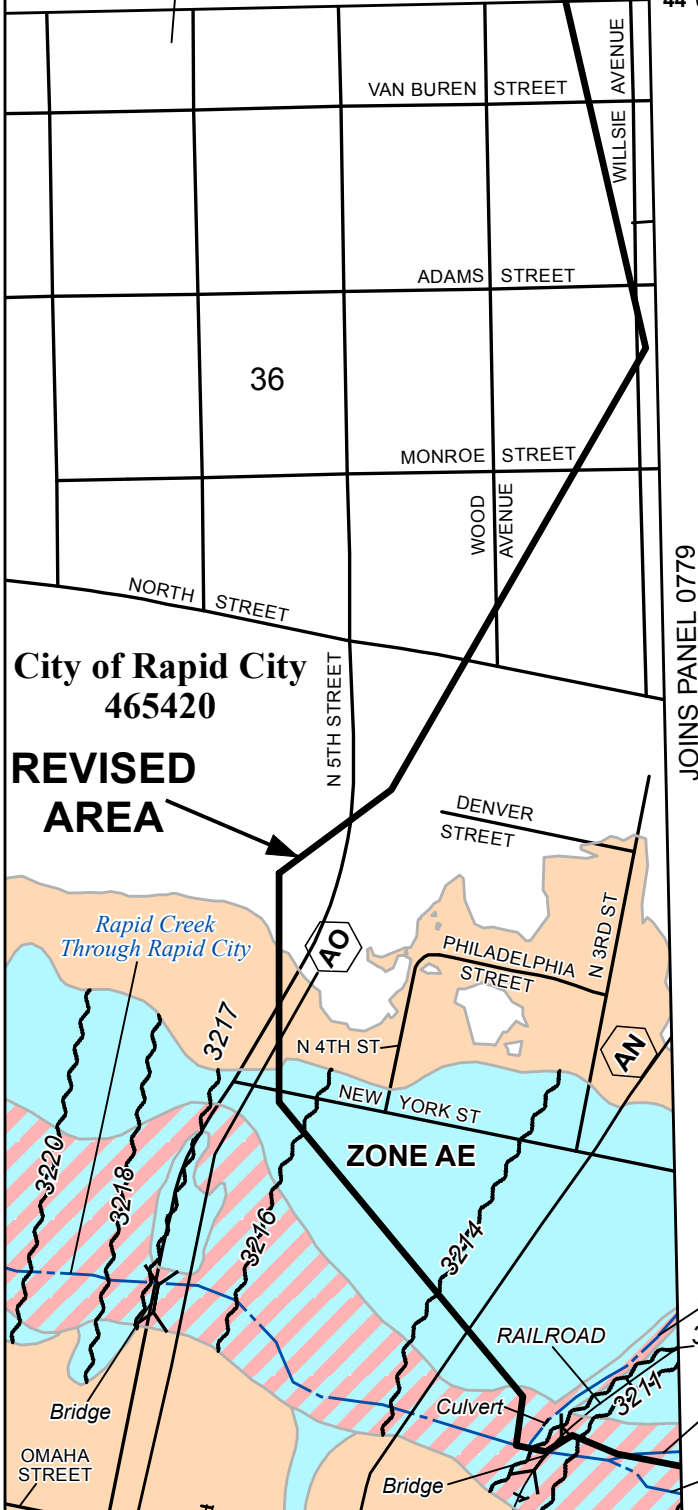
VERSION NUMBER
2.1.3.0
MAP NUMBER
46103C0777H
EFFECTIVE DATE
JUNE 3, 2013

NOTE: MAP AREA SHOWN ON THIS
PANEL IS LOCATED WITHIN TOWNSHIP
1 NORTH, RANGE 7 EAST AND
TOWNSHIP 2 NORTH, RANGE 7 EAST.

JOINS PANEL 0776

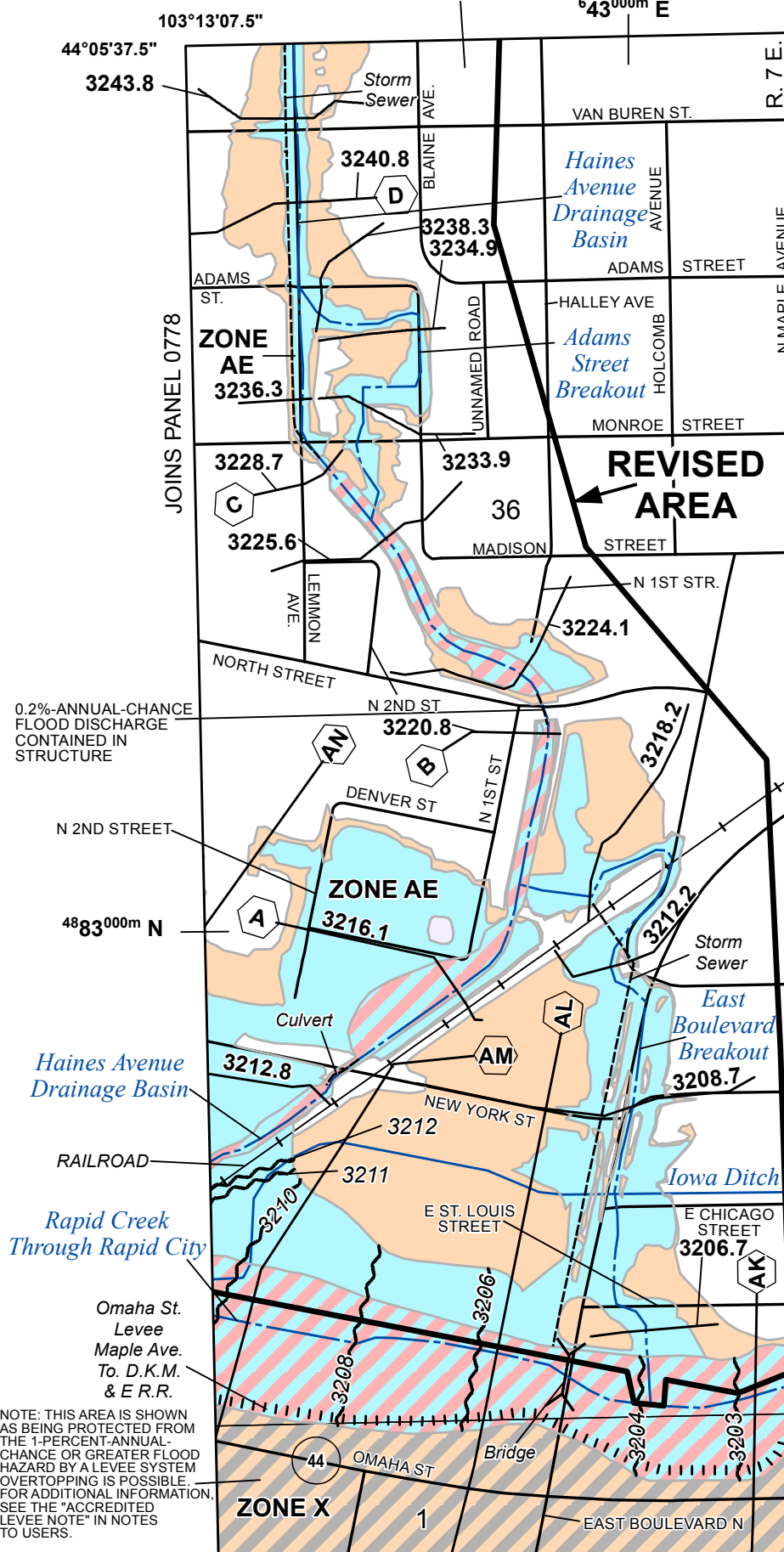
103°13'07.5"

44°05'37.5"



City of Rapid City 465420

JOINS PANEL 0777



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

Map Projection:
NAD 1983 UTM Zone 13N;
Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 500 feet 1:6,000

0 250 500 1,000 Feet
0 75 150 300 Meters

FEMA National Flood Insurance Program

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

**PENNINGTON COUNTY,
SOUTH DAKOTA
and Incorporated Areas**

PANEL 779 OF 2050

Panel Contains:
COMMUNITY
RAPID CITY, CITY OF

NUMBER 465420
PANEL 0779
SUFFIX H

**REVISED TO
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**VERSION NUMBER
2.1.3.0
MAP NUMBER
46103C0779H
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