NARRATIVE

FOR

SP 2024_____

WOOLEN MILLS LIGHT INDUSTRIAL PARK

TMP 07700-00-00-040B2

ZONING

LI – LIGHT INDUSTRIAL

OWNER/APPLICANT

ELEMENTAL ECOTECH, INC.

809 BOLLING AVE, UNIT C

CHARLOTTESVILLE, VA 22902

ENINGEER

MERIDIAN CIVIL SURVEY, PLLC

195 RIVERBEND DR, STE 4

CHARLOTTESVILLE, VA 22911

DATE

NOVEMBER 20, 2024

PROJECT PROPOSAL

The purpose of this Special Use Permit application is to place fill in a 1.496-acre area of the floodplain. This area is outside of the Floodway.

As defined in Zoning Section 30.3.11 by special use permit fill may be placed in the floodplain.

A CLOMR-F for fill as shown on the Concept Plan has been approved by FEMA.

Once a special use permit has been approved and the fill has been completed then a Letter of Map Revision (LOMR) will be submitted to FEMA for approval. After FEMA has approved the LOMR the area will then be removed from the floodplain.

At that time, the best use for the 1.496-acre area will be determined and a Site Development Plan will be submitted for review and approval.

PROJECT'S CONSITANCY WITH THE COMPREHENSIVE PLAN

The Comprehensive Plan Designation for this this property is Parks & Green Systems, Private & Public Open Space. The Owner has agreed to dedicate the portion of the property within the 100' stream buffer along Moore's Creek to Albemarle County so that it can be used for a park and/or extension of the Greenway Trail. Pedestrian access to this property will be from Moores Creek Lane. This would meet the use designated in the Comprehensive Plan.

This Special Use Permit will only apply to the 1.496-acre area as defined on Sheet SP-1 of the application plan, which is located adjacent to Franklin Street. The existing uses along the eastern Right-of-way of Franklin Street are all light industrial. Removing this area from the floodplain will allow its use to be more compatible with the existing uses along Franklin Street.

The Owner has determined that the best use of this area cannot be determined until the fill has been completed and the area removed from the floodplain. Consequently, a site development plan cannot be submitted at this time.

ADJACENT PROPERTIES

The Property fronts on the eastern right-of-way of Franklin Street and just south of Moores Creek Lane.

The property to the north is Zoned LI and is currently used as the distribution warehouse for Carter's Breads.

The properties to the east and south area Zoned LI and owned by Rivanna Water and Sewer Authority. Moore's Creek is along the eastern boundary line.

The property to the west, on the opposite side of Franklin Street, is located within the City of Charlottesville and Zoned RX-3. This property is currently used as a Manufactured Home residential community.

PROJECT'S IMPACTS ON SCHOOLS, PUBLIC UTILITIES, STREETS

This project will have no impact on public infrastructure such as water lines etc.

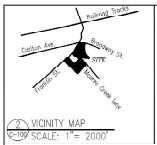
This project will have no impact on public schools.

This project will add 1.3 acres of public park along Moore's Creek.

This project will have no impact on public transportation

CONCLUSION

Approval of this Special Use Permit for fill in the floodplain will provide 1.3 acres of dedicated open space along Moore's Creek for a park and extension of the Greenway Trails as designated in the Comprehensive Plan. It will also provide an additional 1.496 acres for light industrial use as designated by the LI zoning district and a use that is compatible with the existing uses along the eastern side of Franklin Street.



VICINITY MAP
C-109 SCALE: 1"= 2000'

SP 2024_____
SPECIAL USE PERMIT APPLICATION PLAN FOR
WOOLEN MILLS LIGHT INDUSTRIAL PARK
TAX MAP 77, PARCELS 44B2
SCOTTSVILLE DISTRICT, ALBEMARLE COUNTY, VIRGINIA

SITE DATA

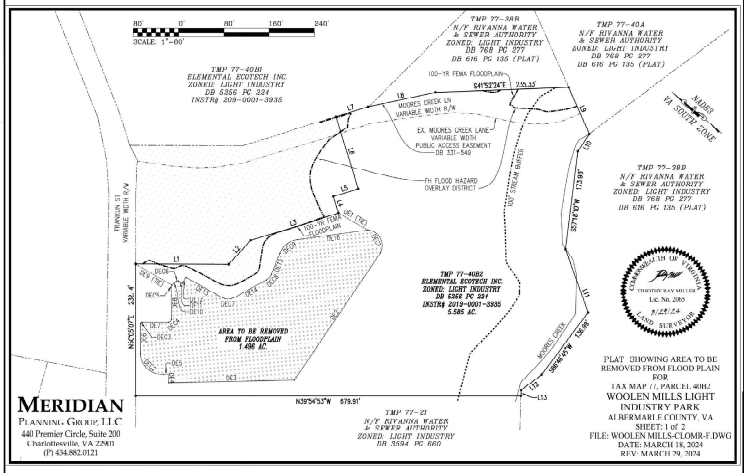
SITE PLAN NUMBER:	SDP201800076, SDP201800085
ZMA NUMBER:	ZMA201800017
WPO PLAN NUMBER:	WP02700000172
LEGAL REFERENCE:	TM 77, PARCEL 40B2
RECORDED PLATS & DEEDS:	DB 5270–304, DB 4796–325, DB 4673–132, DB 4790–637, DB 4935–90, DB 4797–476, DB 575–326, DB 4853–401, DB 4797–428, DB 4796 325, DB 4452 283, DB 411 180, DB 3088 272, DB 2797 20, DB 2797 623, DB 1751 156, DB 900 440, DB 274 70 DB 5198 30, DB 5198 45, DB 5177–1, DB 5575–302, DB 5575–439, DB 5575–414
OWNER/APPLICANT:	ELEMENTAL ECOTECH, INC. 809 ROLLING AVE, UNIT L CHARLOTTESVILLE, VA 22903
MAGISTERIAL DISTRICT:	SCOTTSVILLE
ZONING DISTRICT:	LI – LIGHT INDUSTRY, FLOOD HAZARD, STEEP SLOPES (MANAGED AND PRESERVED)
PROPOSED USE:	FILL IN FLOODPLAIN
PARCEL AREA:	7.081 ACRES
PARCEL ADDRESS:	NOT ASSIGNED
SOURCE OF BOUNDARY:	PLAT RECORDED IN DB 4893, PG 401
SOURCE OF TOPOGRAPHY:	TOPOGRAPHIC SURVEY PERFORMED BY DRAPER ADEN, DATED FEBRUARY 20, 2015 TOPOGRAPHY WAS VISUALLY VERIFIED BY TIMOTHY MILLER ON JUNE 30, 2024. THERE IS A TEMPORARY STOCKPILE ON A PORTION OF THE PROPERTY.
FLOODPLAIN:	PORTION OF PARCEL IS IN ZONE X AS SHOWN ON FEMA MAP NO. 51003C0293D. EFFECTIVE DATE FEBRUARY 4, 2005, AND MAP REVISION DATED FEBRUARY 6, 2007. 100–YEAR FLOOD ELEVATION IS 324.00.
PUBLIC WATER SUPPLY:	THIS PARCEL IS NOT LOCATED WITHIN A PUBLIC WATER SUPPLY RESERVOIR WATERSHED.
BUILDING SETBACK:	FRONT MINIMUM: 10' FROM THE RIGHT–OF–WAY OR THE EXTERIOR EDGE OF THE SIDEWALK IF THE SIDEWALK IS OUTSIDE OF THE RIGHT–OF–WAY. FRONT MAXIMUM: NONE SIDE AND REAR MINIMUM: PRIMARY STRUCTURE SHALL BE CONSTRUCTED AND SEPARATED IN ACCORDANCE WITH THE CURRENT EDITION OF THE BUILDING CODE. SIDE AND REAR MAXIMUM: NONE IF THE ADOPTING LOT IS ZONED RESIDENTIAL, RURAL AREAS, OR THE MONTICELLO HISTORIC DISTRICT: (i) NO PORTION OF ANY STRUCTURE, EXCLUDING SIGNS, SHALL BE LOCATED CLOSER THAN 50 FEET FROM THE DISTRICT BOUNDARY; AND (ii) NO PORTION OF ANY OFF–STREET PARKING SPACE SHALL BE LOCATED CLOSER THAN 30 FEET FROM THE DISTRICT BOUNDARY.
BUILDING STEPBACK:	FRONT: FOR EACH STORY THAT THAT BEGINS ABOVE 40' IN HEIGHT OR FOR EACH STORY ABOVE THE THIRD STORY, WHICHEVER IS LESS. THE MINIMUM STEPBACK SHALL BE 15'. SIDE AND REAR: NONE
BUILDING HEIGHTS:	MAXIMUM STRUCTURE HEIGHT: 65' THE MINIMUM STEPBACK REQUIREMENTS FOR ANY STORY THAT BEGIN ABOVE FORTY (40) FEET IN HEIGHT OR FOR EACH STORY ABOVE THE THIRD STORY, WHICHEVER IS LESS, IN HEIGHT SHALL BE AS PROVIDED IN SECTION 4.20.
PARKING SETBACK:	FRONT MINIMUM (OFF–STREET PARKING AND LOADING SPACES): 10' FROM ANY PUBLIC STREET RIGHT–OF–WAY.

SHEET INDEX

SP-1 ..... COVERSHEET
SP 2 ..... EXISTING CONDITIONS PLAN
SP-3 ..... CONCEPT PLAN

LEGEND

DB	DEED BOOK
PG	PAGE
FH	FIRE HYDRANT
WV	WATER VALVE
WM	WATER METER
FFE	FINISHED FLOOR ELEVATION
UFE	UPPER FINISHED FLOOR ELEVATION
BSL	BUILDING SETBACK LINE
PSL	PARKING SETBACK LINE
PP	POWER POLE
SCV	STORMWATER CONVEYANCE CHANNEL
WP	WALL PACK
NPS	FIRE LANE- NO PARKING SIGN
ULD	ULTIMATE LIMITS OF DISTURBANCE
--- TP ---	TREE PROTECTION FENCING
--- INFOR---	TI OPOGRAPHY OUTSIDE OF DISTRICT
	PRESERVED SLOPES PER GIS
	MANAGED SLOPES PER GIS
	AREA TO BE REMOVED FROM FLOODPLAIN
	VARIABLE WIDTH FOREST AND OPEN SPACE EASEMENT
	AREA TO BE DEDICATED TO ALBEMARLE COUNTY



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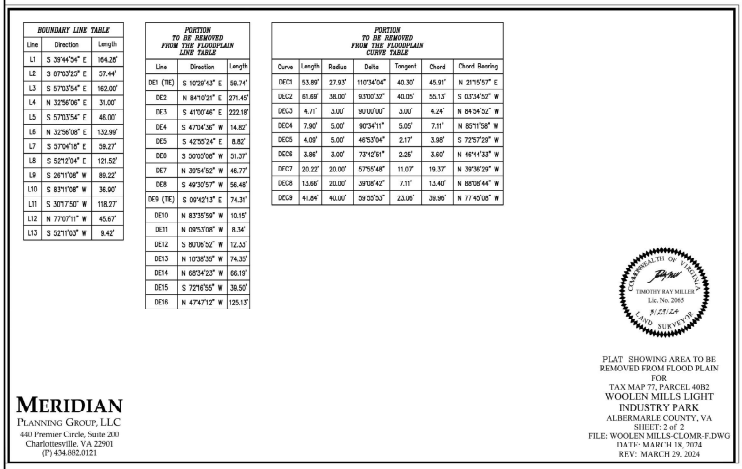
PLAT SHOWING AREA TO BE REMOVED FROM FLOOD PLAIN
FOR
TAX MAP 77, PARCEL 40B2
WOOLEN MILLS LIGHT INDUSTRY PARK
ALBERMARLE COUNTY, VA
SHEET: 1 of 2
FILE: WOOLEN MILLS-CLOMR-F.DWG
DATE: MARCH 18, 2024
REV: MARCH 29, 2024

COMMONWEALTH OF VIRGINIA
TIMOTHY RAY MILLER
Lic. No. 2065
3/28/24
LAND SURVEYOR

BOUNDARY LINE TABLE		
Line	Direction	Length
L1	S 39°44'26" E	164.26'
L2	S 07°02'23" E	57.44'
L3	S 57°03'54" E	162.00'
L4	N 32°56'06" E	31.00'
L5	S 57°03'54" E	48.00'
L6	N 32°56'06" E	132.99'
L7	S 37°04'18" E	59.27'
L8	S 52°12'04" E	121.52'
L9	S 26°11'08" W	89.22'
L10	S 83°11'08" W	36.90'
L11	S 30°17'50" W	118.27'
L12	N 77°07'11" W	45.67'
L13	S 32°17'03" W	9.42'

PORTION TO BE REMOVED FROM THE FLOODPLAIN LINE TABLE		
Line	Direction	Length
DE1 (TIE)	S 10°26'43" E	58.74'
DE2	N 84°10'21" E	271.45'
DE3	S 41°00'46" E	222.18'
DE4	S 47°04'36" W	14.82'
DE5	S 42°55'24" E	8.82'
DE6	S 30°00'00" W	21.27'
DE7	N 30°54'52" W	46.77'
DE8	S 49°30'57" W	56.48'
DE9 (TIE)	S 00°42'13" E	74.31'
DE10	N 83°35'59" W	10.15'
DE11	N 09°57'08" W	8.34'
DE12	S 89°06'56" W	74.55'
DE13	N 10°36'20" W	74.35'
DE14	N 68°34'23" W	66.19'
DE15	S 72°16'55" W	38.50'
DE16	N 47°47'12" W	125.13'

PORTION TO BE REMOVED FROM THE FLOODPLAIN CURVE TABLE						
Curve	Length	Radius	Delta	Tangent	Chord	Chord Bearing
DEC1	53.89'	27.93'	110°34'04"	40.30'	45.91'	N 21°15'57" E
DEC2	61.69'	38.00'	93°00'32"	40.05'	55.13'	S 03°34'52" W
DEC3	4.11'	3.00'	78°30'00"	3.00'	6.24'	N 84°24'26" W
DEC4	7.90'	5.00'	90°34'11"	5.05'	7.11'	N 85°11'58" W
DEC5	4.09'	5.00'	46°53'04"	2.17'	3.98'	S 72°57'29" W
DEC6	3.98'	3.00'	72°42'51"	2.26'	3.69'	N 46°41'33" W
DEC7	20.22'	20.00'	57°55'48"	11.07'	19.37'	N 39°36'29" W
DEC8	13.86'	20.00'	39°08'42"	7.17'	13.46'	N 88°08'44" W
DEC9	41.84'	40.00'	59°55'53"	23.06'	39.99'	N 11°40'05" W



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PLAT SHOWING AREA TO BE REMOVED FROM FLOOD PLAIN
FOR
TAX MAP 77, PARCEL 40B2
WOOLEN MILLS LIGHT INDUSTRY PARK
ALBERMARLE COUNTY, VA
SHEET: 2 of 2
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COMMONWEALTH OF VIRGINIA
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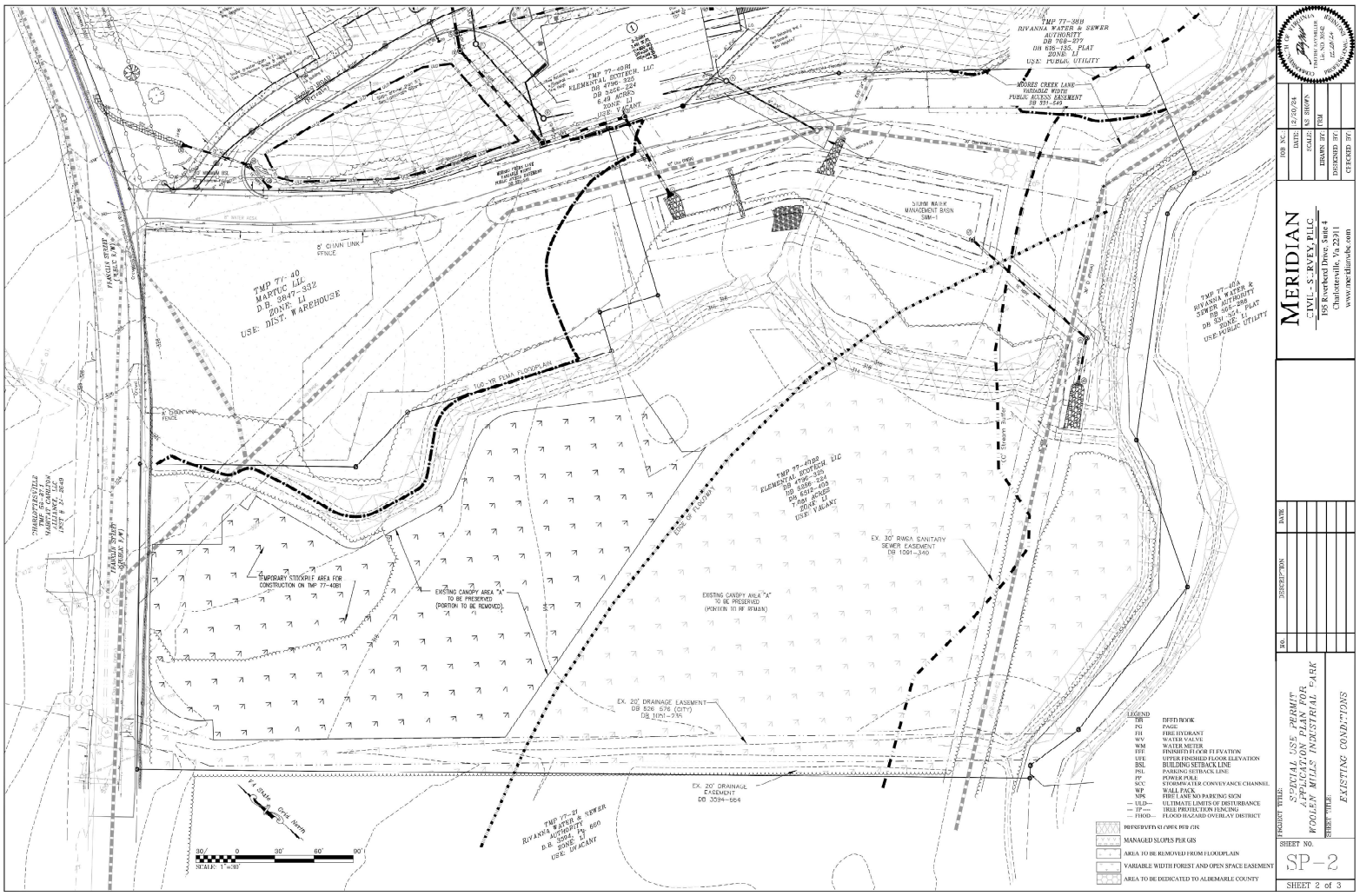
1 PLAT FOR FDP 202400001 FEMA CLOMR-F
SP-1 SCALE: 1" = 80'

808 N.C.	DATE: 12/20/24	
	SCALE: AS SHOWN	
	DRAWN BY: TDM	
	DESIGNED BY:	
	CHECKED BY:	

MERIDIAN
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195 Riverbend Drive, Suite 4
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NO.	DESCRIPTION	DATE

PROJECT TITLE: SPECIAL USE PERMIT APPLICATION PLAN FOR WOOLEN MILLS INDUSTRIAL PARK
SHEET TITLE: COVERSHEET
SHEET NO. SP-1
SHEET 1 of 3



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DRAWN BY ITM
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NO.	DESCRIPTION	DATE

PROJECT TITLE: SPECIAL USE PERMIT APPLICATION PLAN FOR WOOLEN MILLS INDUSTRIAL PARK

SHEET TITLE: EXISTING CONDITIONS

SHEET NO. SP-2

SHEET 2 of 3



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NO.	DESCRIPTION	DATE

PROJECT TITLE:
SPECIAL USE PERMIT
APPLICATION PLAN FOR
WOOLEN MILLS INDUSTRIAL PARK

SHEET TITLE:
CONCEPT PLAN

SHEET NO.
SP-3

SHEET 3 of 3

TIMMONS GROUP

YOUR VISION ACHIEVED THROUGH OURS.

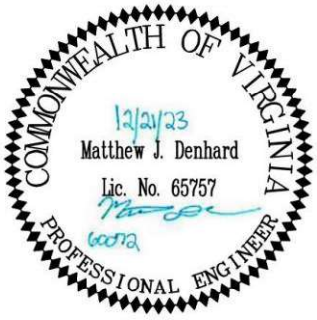
REQUEST FOR A CONDITIONAL LETTER OF MAP REVISION -FILL

TECHNICAL SUPPORT DATA NOTEBOOK

MOORES CREEK INDUSTRIAL SITE

MOORES CREEK
ALBEMARLE COUNTY, VA

DECEMBER 2023



PREPARED BY:
TIMMONS GROUP
608 Preston Ave, SUITE 200
Charlottesville, VA 22903

TG Project Number: 60072

TABLE OF CONTENTS

1.0 PROJECT SUMMARY 1

2.0 HYDROLOGIC SUMMARY 3

3.0 HYDRAULIC SUMMARY 3

4.0 CONCLUSIONS 7

LIST OF APPENDICES

APPENDIX 1 ..... Effective FIRM

APPENDIX 2 ..... Work Map & Bearings for Parcel Location

APPENDIX 3 ..... Detailed Model Output

3.0 ..... County Mapping Update Results (HEC-RAS 6.1.0)

3.1 ..... Existing Conditions Model Results (HEC-RAS 6.1.0)

3.2 ..... CLOMR-F Model Results (HEC-RAS 6.1.0)

APPENDIX 4 ..... ESA Compliance Report

APPENDIX 5 ..... MT-1 Forms for CLOMR-F

1.0 Project Summary

This hydraulic analysis has been completed on a reach of Moores Creek located within Albemarle County, Virginia to document the regulated floodplain updates associated with fill in an adjacent parcel (Albemarle County TMP: 77-40B2). Below is the location of the parcel in relation to the Moores Creek regulatory floodplain.



Figure 1: Project Location

Moores Creek is a FEMA regulated stream, which has been studied in detail (Zone AE with floodway) from its confluence with the Rivanna River to a point located just downstream of Poorhouse Road in Albemarle County. The effective study for this stream was found in the FIS for Albemarle County, Virginia and Incorporated Areas (51003CV000C), revised May 16, 2016. The stream is reflected in the current Flood Insurance Rate Map (FIRM) panel 289 (map number 51003C0289D, effective February 4, 2005) and with several LOMR's within this reach, most notably 16-03-1207P establishing a backwater condition up Moores Creek from the Rivanna River.

The purpose of this proposed CLOMR-F is to propose fill within the floodplain fringe to conditionally remove a portion of Parcel TMP: 77-40B2 from the regulated 100-year floodplain. An on-site pad will be filled to an elevation of 324.1 to be above the effective Base Flood Elevation of 324.00 (See BFE graphic below). Per LOMR 16-03-1207P, this regulatory BFE of 324.00 along this portion of Moores Creek is controlled by the downstream backwater flooding of the Rivanna River. In addition to this understanding of the backwater condition, we have performed a hydraulic study of the reach to confirm the fill placement on site is within an ineffective flow area due to a topographic flow constriction on the subject site. This study provides confirmation that all fill will be placed in inundation areas without impact to the conveyance of Moores Creek or the FEMA regulated BFE.

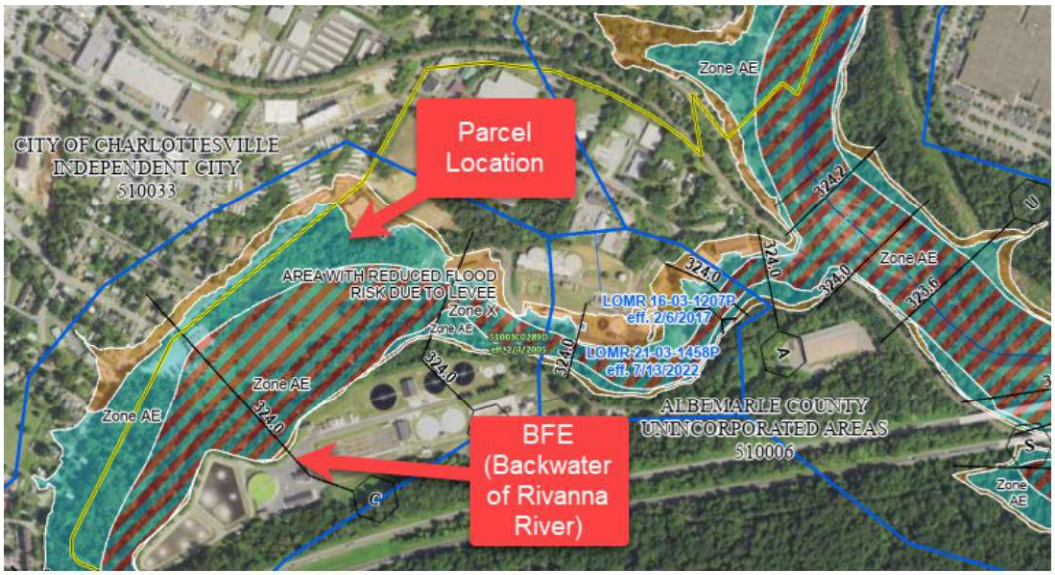


Figure 2: Base Flood Elevations from Rivanna River Backwater

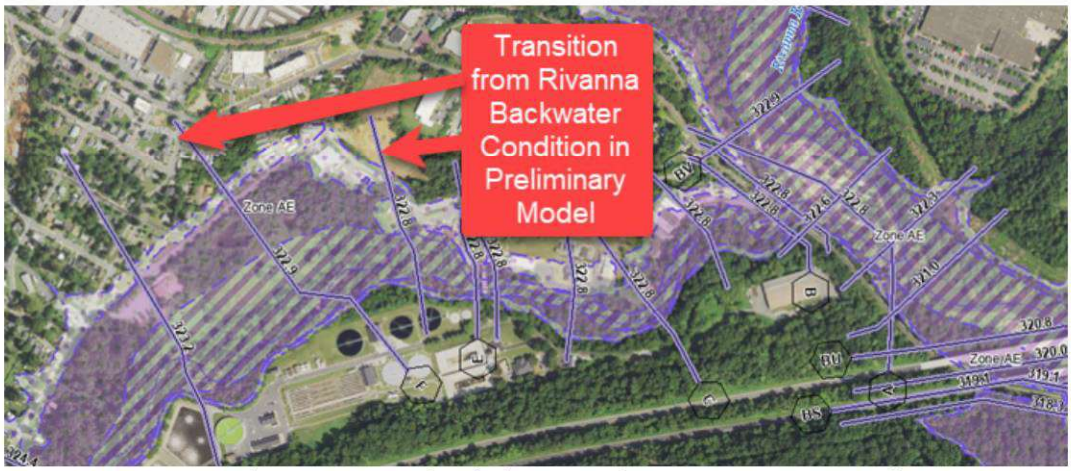


Figure 3: Preliminary Base Flood Elevations from Rivanna River Backwater

Because the location of the Rivanna River backwater condition may update in the near future with the preliminary FIS/FIRM updates, Timmons felt it prudent to study the reach of this subject site to confirm a CLOMR-F would remain appropriate in this condition. This study removes any uncertainty that this fill could affect upstream base flood elevations by more accurately evaluating where the Base Flood Elevation of Moores Creek exceeds the backwater BFE elevation and becomes the controlling flooding source. In selecting the appropriate and most accurate model for this hydraulic analysis, it was considered that Albemarle County is currently in the process of updating FIRM maps County-wide as part of a County wide mapping update effort. A new HEC-RAS model of Moores Creek has been created as a part of this effort which appears to have a high level of hydrologic and hydraulic accuracy. As this preliminary model best represents the existing current conditions of the affected reach and will likely become the effective model during the processing of this CLOMR-F/LOMR-F, this model was used in the hydraulic analysis of this proposed fill for the most accurate hydraulic results for this reach of Moores Creek.

The hydraulic analysis for this report has all been prepared in **HEC-RAS (v.6.1.0)**

2.0 Hydrologic Summary

The discharges associated with this modelling effort were taken from the County-wide mapping update model and compared with the current effective flows. The flow rates for the two models in this project reach are shown below in Table 2-1 for comparison. The preliminary model has a slightly higher flow rate through the project reach (12,603 cfs compared to the 12,200 cfs in the effective model), so the higher preliminary model flow rate was conservatively used for this analysis accounting for development within the watershed.

TABLE 2-1
Moores Creek Discharges in Project Reach
(Effective Model vs. County Preliminary Mapping Update Model Comparison)

Model	100-Year (cfs)	Floodway (cfs)
Effective Model	12,200	12,200
County Preliminary Mapping Update	12,603	12,603

3.0 Hydraulic Summary

Preliminary County Mapping Update Model

The results of the preliminary County mapping update model for this project reach are shown in the figure and table below. As shown in Table 2-2, the 100-year water surface elevation for cross section 4309 (upstream of parcel TMP 77-40B2) is 322.89', showing that the Rivanna River backwater regulatory base flood elevation of 324.0' is still controlling and conservative with the on-going mapping updates.



Figure 4: County Preliminary Model Cross Sections & 100-YR WSEL

TABLE 2-2
County Mapping Update Results - Cross Sections

HEC-RAS Plan: Plan 04 Locations: User Defined

River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Vel Total
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(ft/s)
MooresCrk	Main	5391	01pct	12603.00	306.91	323.47	319.59	323.71	0.001064	5.62	3869.71	570.47	0.28	3.26
MooresCrk	Main	5391	FW	12603.00	306.91	324.32	319.66	324.56	0.000898	5.40	3862.14	455.00	0.26	3.26
MooresCrk	Main	4309	01pct	12603.00	303.64	323.18		323.24	0.000256	3.26	9056.93	1011.52	0.14	1.39
MooresCrk	Main	4309	FW	12603.00	303.64	323.86		323.98	0.000411	4.24	6427.68	600.00	0.18	1.96
MooresCrk	Main	3682	01pct	12603.00	302.05	321.92	317.14	322.53	0.001691	7.91	3117.42	376.93	0.36	4.04
MooresCrk	Main	3682	FW	12603.00	302.05	322.73	317.17	323.33	0.001522	7.77	2981.95	275.00	0.34	4.23
MooresCrk	Main	3139	01pct	12603.00	301.24	319.90	314.42	321.29	0.002390	10.12	1512.43	135.30	0.44	8.33
MooresCrk	Main	3139	FW	12603.00	301.24	320.10	314.23	321.93	0.002839	11.13	1263.92	85.00	0.49	9.97
MooresCrk	Main	2563	01pct	12603.00	298.56	316.88		318.63	0.003244	11.19	1411.02	178.77	0.50	8.93
MooresCrk	Main	2563	FW	12603.00	298.56	317.01		319.15	0.003671	11.97	1129.92	84.00	0.53	11.15
MooresCrk	Main	1481	01pct	12603.00	295.12	311.29	308.74	314.32	0.006026	14.35	1089.60	148.96	0.67	11.57
MooresCrk	Main	1481	FW	12603.00	295.12	311.50		314.64	0.006009	14.47	956.24	81.00	0.67	13.18
MooresCrk	Main	923	01pct	12603.00	292.79	307.71	305.15	310.83	0.006408	14.36	977.01	96.01	0.70	12.90
MooresCrk	Main	923	FW	12603.00	292.79	308.69	305.16	311.36	0.005000	13.30	1059.98	90.00	0.62	11.89
MooresCrk	Main	805	01pct	12603.00	291.86	304.22	302.65	307.46	0.008025	14.63	944.96	106.19	0.77	13.34
MooresCrk	Main	805	FW	12603.00	291.86	305.19	302.58	307.95	0.006114	13.49	1005.15	90.00	0.68	12.54
MooresCrk	Main	84	01pct	12603.00	290.72	301.98	299.38	302.79	0.003131	8.48	2493.31	761.59	0.47	5.05
MooresCrk	Main	84	FW	12603.00	290.72	302.97	300.05	304.02	0.003129	9.03	2369.40	790.31	0.48	5.32

Existing Conditions Model

Prior to the placement of any fill, the preliminary model was updated adjacent to the parcel with interpolated cross section 3995.50* to properly model the ineffective flow caused by the channel constriction on the subject property. This additional cross section and ineffective flow area caused by the downstream constriction are shown in the figure below.

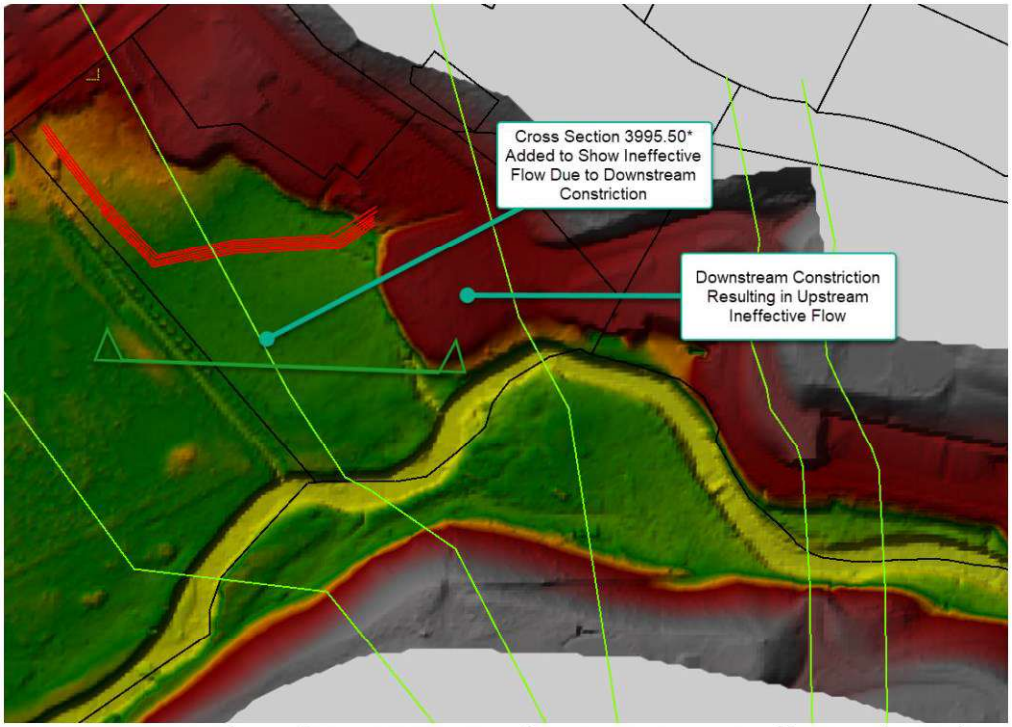


Figure 5: Downstream Channel Constriction Resulting in Upstream Ineffective Flow Adjacent to

Proposed Fill

This additional cross section and ineffective flow area resulted in slightly higher base flood elevations upstream of cross section 3995.50* as shown below, but still well below the controlling regulatory base flood elevation of 324.0. These differences are due to the flow constriction and are an improvement to the accuracy of the preliminary model for this studied reach.



Figure 6: Resulting 100-YR WSEL With Addition of Ineffective Flow Area in Cross Section 3995.50

TABLE 2-3
Existing Conditions Model Results – Cross Sections

HEC-RAS Plan: Plan 04 Locations: User Defined

River	Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl	Vel Total
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)		(ft/s)
MooresCrk	Main	5391	01pct	12603.00	306.91	323.47	319.59	323.71	0.001064	5.62	3869.71	570.47	0.28	3.26
MooresCrk	Main	5391	FW	12603.00	306.91	324.32	319.66	324.56	0.000898	5.40	3862.14	455.00	0.26	3.26
MooresCrk	Main	4309	01pct	12603.00	303.64	323.18		323.24	0.000256	3.26	9056.93	1011.52	0.14	1.39
MooresCrk	Main	4309	FW	12603.00	303.64	323.86		323.98	0.000411	4.24	6427.68	600.00	0.18	1.96
MooresCrk	Main	3682	01pct	12603.00	302.05	321.92	317.14	322.53	0.001691	7.91	3117.42	376.93	0.36	4.04
MooresCrk	Main	3682	FW	12603.00	302.05	322.73	317.17	323.33	0.001522	7.77	2981.95	275.00	0.34	4.23
MooresCrk	Main	3139	01pct	12603.00	301.24	319.90	314.42	321.29	0.002390	10.12	1512.43	135.30	0.44	8.33
MooresCrk	Main	3139	FW	12603.00	301.24	320.10	314.23	321.93	0.002839	11.13	1263.92	85.00	0.49	9.97
MooresCrk	Main	2563	01pct	12603.00	298.56	316.88		318.63	0.003244	11.19	1411.02	178.77	0.50	8.93
MooresCrk	Main	2563	FW	12603.00	298.56	317.01		319.15	0.003671	11.97	1129.92	84.00	0.53	11.15
MooresCrk	Main	1481	01pct	12603.00	295.12	311.29	308.74	314.32	0.006026	14.35	1089.60	148.96	0.67	11.57
MooresCrk	Main	1481	FW	12603.00	295.12	311.50		314.64	0.006009	14.47	956.24	81.00	0.67	13.18
MooresCrk	Main	923	01pct	12603.00	292.79	307.71	305.15	310.83	0.006408	14.36	977.01	96.01	0.70	12.90
MooresCrk	Main	923	FW	12603.00	292.79	308.69	305.16	311.36	0.005000	13.30	1059.98	90.00	0.62	11.89
MooresCrk	Main	805	01pct	12603.00	291.86	304.22	302.65	307.46	0.008025	14.63	944.96	106.19	0.77	13.34
MooresCrk	Main	805	FW	12603.00	291.86	305.19	302.58	307.95	0.006114	13.49	1005.15	90.00	0.68	12.54
MooresCrk	Main	84	01pct	12603.00	290.72	301.98	299.38	302.79	0.003131	8.48	2493.31	761.59	0.47	5.05
MooresCrk	Main	84	FW	12603.00	290.72	302.97	300.05	304.02	0.003129	9.03	2369.40	790.31	0.48	5.32

CLOMR-F Model

To account for the addition of the proposed fill, this existing model was updated to include the proposed fill up to elevation 324.0 in cross section 3995.50. This resulted in no increase in the 100-year WSEL from the existing conditions model, as shown in the Table and cross section 3995.50* below.

TABLE 2-4
CLOMR-F Model Results – Cross Sections

HEC-RAS Plan: RVA_Moores_Creek_CLOMRF Locations: User Defined

River	Reach	River Sta	Profile	Vel Total	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(ft/s)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
MooresCrk	Main	5391	01pct	3.26	12603.00	306.91	323.46	319.59	323.71	0.001064	5.62	3869.19	570.46	0.28
MooresCrk	Main	5391	FW	3.26	12603.00	306.91	324.32	319.66	324.56	0.000898	5.40	3861.92	455.00	0.26
MooresCrk	Main	4309	01pct	1.39	12603.00	303.64	323.18		323.24	0.000256	3.26	9055.85	1011.51	0.14
MooresCrk	Main	4309	FW	1.96	12603.00	303.64	323.86		323.98	0.000411	4.24	6427.35	600.00	0.18
MooresCrk	Main	3682	01pct	4.04	12603.00	302.05	321.92	317.14	322.53	0.001691	7.91	3117.42	376.93	0.36
MooresCrk	Main	3682	FW	4.23	12603.00	302.05	322.73	317.17	323.33	0.001522	7.77	2981.95	275.00	0.34
MooresCrk	Main	3139	01pct	8.33	12603.00	301.24	319.90	314.42	321.29	0.002390	10.12	1512.43	135.30	0.44
MooresCrk	Main	3139	FW	9.97	12603.00	301.24	320.10	314.23	321.93	0.002839	11.13	1263.92	85.00	0.49
MooresCrk	Main	2563	01pct	8.93	12603.00	298.56	316.68		318.63	0.003244	11.19	1411.02	178.77	0.50
MooresCrk	Main	2563	FW	11.15	12603.00	298.56	317.01		319.15	0.003671	11.97	1129.92	84.00	0.53
MooresCrk	Main	1481	01pct	11.57	12603.00	295.12	311.29	308.74	314.32	0.006026	14.35	1089.60	148.96	0.67
MooresCrk	Main	1481	FW	13.18	12603.00	295.12	311.50		314.64	0.006009	14.47	956.24	81.00	0.67
MooresCrk	Main	923	01pct	12.90	12603.00	292.79	307.71	305.15	310.83	0.006408	14.36	977.01	96.01	0.70
MooresCrk	Main	923	FW	11.89	12603.00	292.79	308.69	305.16	311.36	0.005000	13.30	1059.98	90.00	0.62
MooresCrk	Main	805	01pct	13.34	12603.00	291.86	304.22	302.65	307.46	0.008025	14.63	944.96	106.19	0.77
MooresCrk	Main	805	FW	12.54	12603.00	291.86	305.19	302.58	307.95	0.006114	13.49	1005.15	90.00	0.68
MooresCrk	Main	84	01pct	5.05	12603.00	290.72	301.98	299.38	302.79	0.003131	8.48	2493.31	761.59	0.47
MooresCrk	Main	84	FW	5.32	12603.00	290.72	302.97	300.05	304.02	0.003129	9.03	2369.40	790.31	0.48

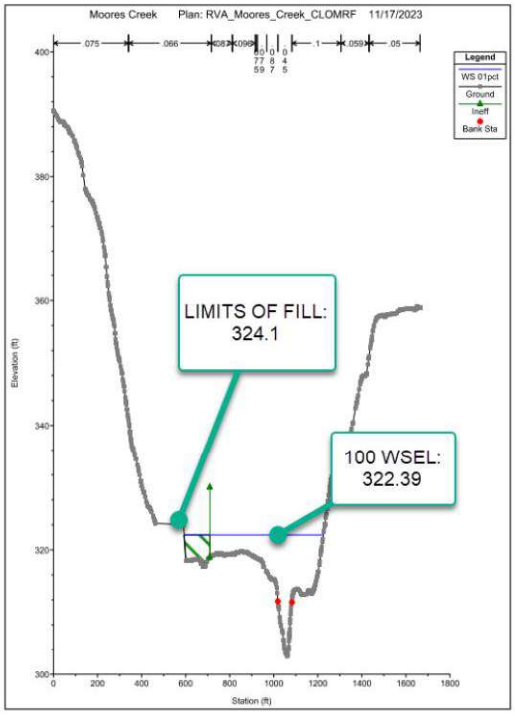


Figure 7: CLOMR-F Section

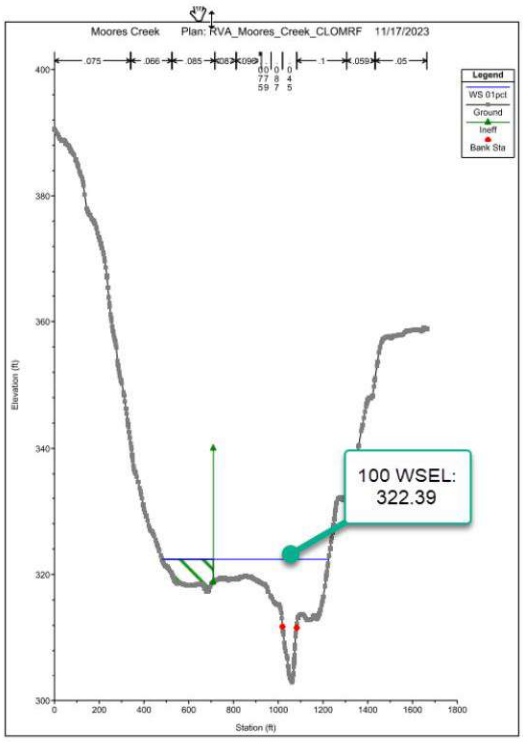


Figure 8: Existing Conditions Section

In conclusion, these modelling results demonstrate that the effective base flood elevation of 324.0 caused by the backwater of the Rivanna River remains the controlling factor in all three models. It is acknowledged the preliminary model for the Rivanna River generates a backwater base flood elevation slightly lower than the effective at 322.80. As can be seen above, the water surface of Moores Creek is still below the lower preliminary water surface elevation, meaning the backwater condition will still be the effective BFE on this site. In addition, even if the downstream flooding of the Rivanna River were to no longer be the controlling force, the existing constriction on site creates an ineffective flow area, reducing conveyance in the left overbank of Moores Creek such that placement of the proposed fill creates no increase in the 100-yr water surface elevation.

4.0 Conclusions

The purpose of this CLOMR-F is to conditionally remove a portion of parcel TMP 77-40B2 from the regulatory floodplain based on proposed fill to an elevation of 324.0 or above. The existing regulatory base flood elevation for parcel TMP 77-40B2 along Moores Creek is at 324.0 based on the backwater condition caused by the flooding of the Rivanna River. Based on this downstream flooding and supplementary findings of this study, it is the opinion of the submitting engineer that placement of fill on this parcel to a 324.1 as shown will have no impact on the effective BFE or water surface elevation of Moores Creek in this portion of the reach.

Appendix 1

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles, Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the FIS report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross-sections and interpolated between cross-sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 17. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National **Vertical Datum** of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit their website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by Albemarle County Department of Planning & Community Development. This information was photogrammetrically compiled at a scale of 1:4,800 from aerial photography dated March 2003.

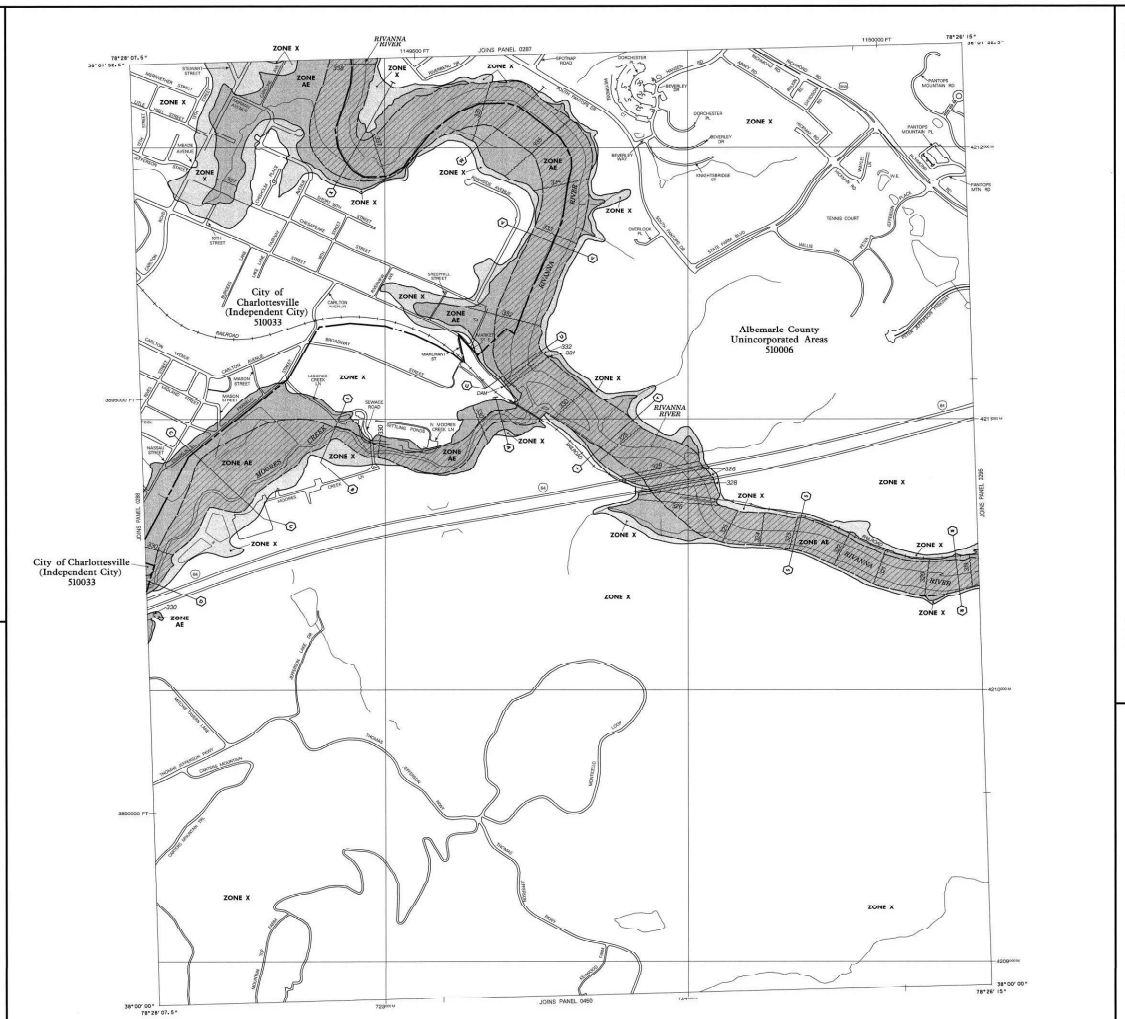
This map reflects more detailed and up to date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations Report (which contain authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a listing of Communities Inside Contiguous Special Flood Insurance Program Zones for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and their website at http://www.msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than one square mile; and areas protected by levees from 1% annual chance flood

OTHER AREAS

ZONE X	Area determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL. 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4275000 M — 1000-meter Universal Transverse Mercator grid values, zone 17
- 600000 FT — 5000-foot grid ticks: Virginia State Plane coordinate system, south zone (FIPSZONE 4502), Lambert Conformal Conic projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- RM1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
February 4, 2005

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

500 0 500 1000 FEET
150 0 150 300 METERS

NFIP — NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0289D

FIRM
FLOOD INSURANCE RATE MAP

ALBEMARLE COUNTY, VIRGINIA
AND INCORPORATED AREAS
AND THE INDEPENDENT CITY
OF CHARLOTTESVILLE

PANEL 289 OF 575

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALBEMARLE COUNTY	510006	0289	D
CHARLOTTESVILLE CITY OF (INDEPENDENT CITY)	510033	0289	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
51003C0289D

EFFECTIVE DATE
FEBRUARY 4, 2005

Federal Emergency Management Agency

Follows Conditional Case No.: 20-03-0027R

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	Albemarle County Virginia (Unincorporated Areas)	BRIDGE GRADING	BASE MAP CHANGES FLOODWAY 1D HYDRAULIC ANALYSIS UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 510006		
IDENTIFIER	Woolen Mills LOMR	APPROXIMATE LATITUDE AND LONGITUDE: 38.018, -78.457 SOURCE: Other DATUM: NAD 83	

ANNOTATED MAPPING ENCLOSURES	ANNOTATED STUDY ENCLOSURES
TYPE: FIRM* NO.: 51003C0289D DATE: February 4, 2005	DATE OF EFFECTIVE FLOOD INSURANCE STUDY: May 16, 2016 PROFILE: 47P

Enclosures reflect changes to flooding sources affected by this revision.
* FIRM - Flood Insurance Rate Map

FLOODING SOURCE AND REVISED REACH

Moores Creek - from approximately 640 feet upstream of Railroad to approximately 130 feet downstream of Sewage Road

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Moores Creek	Floodway	Floodway	YES	YES
	Zone AE	Zone AE	YES	YES
	Zone X (shaded)	Zone X (shaded)	YES	YES

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 panel 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 Mapping and Insurance 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/flood-insurance.

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

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.

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 Mapping and Insurance 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/flood-insurance.

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Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)

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.

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. April Cummings
Director, Mitigation Division
Federal Emergency Management Agency, Region III
One Independence Mall, Sixth Floor
615 Chestnut Street
Philadelphia, PA 1 9106-4404
(215) 931-5635

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 panel 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 Mapping and Insurance 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/flood-insurance.

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