

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee
 \$ **3.35**

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ **2.75**

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

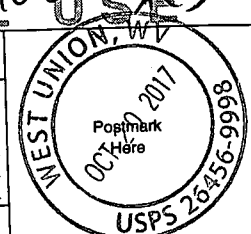
Postage
 \$ **.49**

Total Postage and Fees
 \$ **6.59**

Sent To **Floodplain**
 Street and Apt. No., or PO Box No.
2374 WV Rt. 18

City, State, ZIP+4®
West Union, WV 26456 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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Certified Mail Fee
 \$ **3.35**

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ **2.75**

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$


Postage
 \$ **.49**

Total Postage and Fees
 \$ **6.59**

Sent To **Michael & Barbara Travis**
 Street and Apt. No., or PO Box No.
710 Crystal Lake Rd.

City, State, ZIP+4®
West Union, WV 26456 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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Certified Mail Fee
 \$ **3.35**

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ **2.75**

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

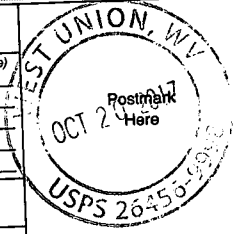
Postage
 \$ **.49**

Total Postage and Fees
 \$ **6.59**

Sent To **Bruffy Nelson et ux**
 Street and Apt. No., or PO Box No.
309 Tonkin Station Rd.

City, State, ZIP+4®
West Union, WV 26456 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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OFFICIAL USE

Certified Mail Fee
 \$ **3.35**

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ **2.75**

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

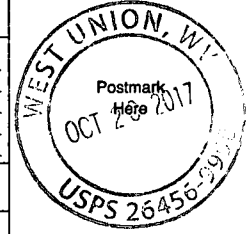
Postage
 \$ **.49**

Total Postage and Fees
 \$ **6.59**

Sent To **Coastal Forest Resources Co.**
 Street and Apt. No., or PO Box No.
P.O. Box 709

City, State, ZIP+4®
Buckhannon, WV 26201 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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Certified Mail Fee
 \$ **3.35**

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ **2.75**

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

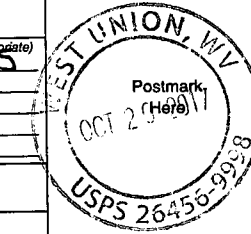
Postage
 \$ **.49**

Total Postage and Fees
 \$ **6.59**

Sent To **Rebecca Nicholson**
 Street and Apt. No., or PO Box No.
2285 WV Rt. 18

City, State, ZIP+4®
West Union, WV 26456 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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Certified Mail Fee
 \$ **3.35**

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ **2.75**

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

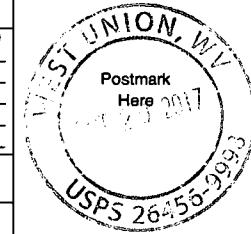
Postage
 \$ **.49**

Total Postage and Fees
 \$ **6.59**

Sent To **Brandon Rogers**
 Street and Apt. No., or PO Box No.
2213 WV Rt. 18

City, State, ZIP+4®
West Union, WV 26456 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



7017 0660 0000 2275 7165

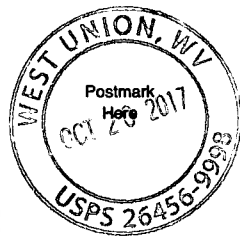
U.S. Postal Service CERTIFIED MAIL® RECEIPT

Domestic Mail Only

For delivery information, visit our website at www.usps.com

OFFICIAL USE

Certified Mail Fee	\$ 3.35
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$ 2.75
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$



Postage	.49
Total Postage and Fees	\$ 6.59

Sent To: Jeffery Stamm
 Street and Apt. No., or PO Box No. Rt. 5, Box 350
 City, State, ZIP+4® West Union, WV 26456 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0660 0000 2275 7130

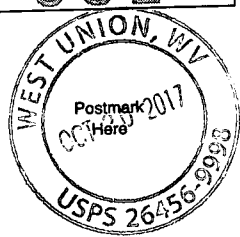
U.S. Postal Service CERTIFIED MAIL® RECEIPT

Domestic Mail Only

For delivery information, visit our website at www.usps.com

OFFICIAL USE

Certified Mail Fee	\$ 3.35
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$ 2.75
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$



Postage	.49
Total Postage and Fees	\$ 6.59

Sent To: Joshua & Kimberly Weekley
 Street and Apt. No., or PO Box No. 1925 WV Rt. 18
 City, State, ZIP+4® West Union, WV 26456 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0660 0000 2275 7154

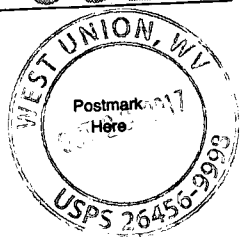
U.S. Postal Service CERTIFIED MAIL® RECEIPT

Domestic Mail Only

For delivery information, visit our website at www.usps.com

OFFICIAL USE

Certified Mail Fee	\$ 3.35
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$ 2.75
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$



Postage	.49
Total Postage and Fees	\$ 6.59

Sent To: Gregory & Denise Edgell
 Street and Apt. No., or PO Box No. 1873 WV Rt. 18
 City, State, ZIP+4® West Union, WV 26456 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0660 0000 2275 7062

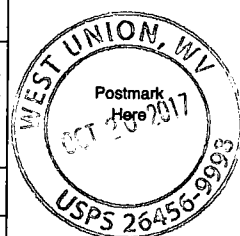
U.S. Postal Service CERTIFIED MAIL® RECEIPT

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OFFICIAL USE

Certified Mail Fee	\$ 3.35
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$ 2.75
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$



Postage	.49
Total Postage and Fees	\$ 6.59

Sent To: Joyce Lago
 Street and Apt. No., or PO Box No. HC 69, Box 5
 City, State, ZIP+4® West Union, WV 26456 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0660 0000 2275 7086

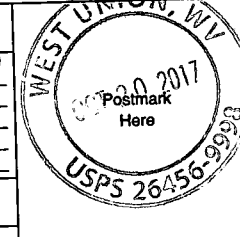
U.S. Postal Service CERTIFIED MAIL® RECEIPT

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OFFICIAL USE

Certified Mail Fee	\$ 3.35
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$ 2.75
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$



Postage	.49
Total Postage and Fees	\$ 6.59

Sent To: Ralph & Sheila McCutchen
 Street and Apt. No., or PO Box No. 1905 WV Rt. 18
 City, State, ZIP+4® West Union, WV 26456 17-490

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0660 0000 2275 7161

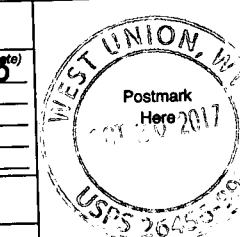
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OFFICIAL USE

Certified Mail Fee	\$ 3.35
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$ 2.75
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$



Postage	.49
Total Postage and Fees	\$ 6.59

Sent To: Charity Gass
 Street and Apt. No., or PO Box No. Rt. 3, Box 62
 City, State, ZIP+4® Salem, WV 26426 17-490

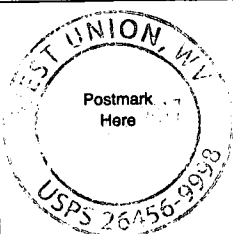
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0660 0000 2275 7178

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OFFICIAL USE

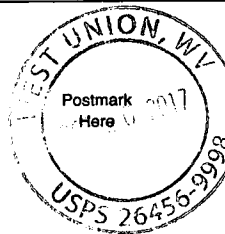
Certified Mail Fee \$ 3.35	
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy) \$ 2.75	
<input type="checkbox"/> Return Receipt (electronic) \$ _____	
<input type="checkbox"/> Certified Mail Restricted Delivery \$ _____	
Postage \$.49	
Total Postage and Fees \$ 6.59	
Sent To Charity Gas	
Street and Apt. No., or PO Box No. 9844 meathouse Fork Rd.	
City, State, ZIP+4® Salem, Wv 26421 17-490	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

7017 0660 0000 2275 7116

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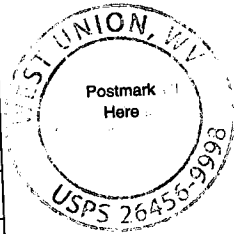
Certified Mail Fee \$ 3.35	
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy) \$ 2.75	
<input type="checkbox"/> Return Receipt (electronic) \$ _____	
<input type="checkbox"/> Certified Mail Restricted Delivery \$ _____	
Postage \$.49	
Total Postage and Fees \$ 6.59	
Sent To Hope Natural Gas Co.	
Street and Apt. No., or PO Box No. 625 Liberty Av mail Drop 18-01	
City, State, ZIP+4® Pittsburgh PA 15221 17-490	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

7017 0660 0000 2275 7109

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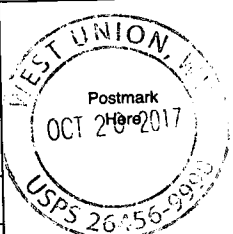
Certified Mail Fee \$ 3.35	
Extra Services & Fees (check box, add fees appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy) \$ 2.75	
<input type="checkbox"/> Return Receipt (electronic) \$ _____	
<input type="checkbox"/> Certified Mail Restricted Delivery \$ _____	
Postage \$.49	
Total Postage and Fees \$ 6.59	
Sent To Elizabeth Anne Spencer ETAL	
Street and Apt. No., or PO Box No. 219 Cedar Run Rd.	
City, State, ZIP+4® Friendly, Wv 26146 17-490	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

7017 0660 0000 2275 7093

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OFFICIAL USE

Certified Mail Fee \$ 3.35	
Extra Services & Fees (check box, add fees as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy) \$ 2.75	
<input type="checkbox"/> Return Receipt (electronic) \$ _____	
<input type="checkbox"/> Certified Mail Restricted Delivery \$ _____	
Postage \$.49	
Total Postage and Fees \$ 6.59	
Sent To Elizabeth Anne Spencer ETAL	
Street and Apt. No., or PO Box No. 146 Mastons Road	
City, State, ZIP+4® West Union, Wv 26456 17-490	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Elizabeth Anne Spencer ETAL
~~146 Mastens Road PO Box 365~~
~~West Union, WV 26456~~
 Ellenboro, WV 26346



9590 9402 2859 7069 5382 46

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

 Landy V. Mavis
 Agent Addressee

B. Received by (Printed Name)

Landy V. Mavis

C. Date of Delivery

*11/3/17*D. Is delivery address different from item 1? YesIf YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)

- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

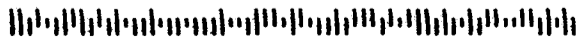
9590 9402 2859 7069 5382 46

**United States
Postal Service**

• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Hope Natural Gas Co.
25 Liberty AV Mail Drop 18-01
Pittsburgh, PA 15221



9590 9402 2859 7069 5382 22

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X 

B. Received by (Printed Name)

J M

C. Date of Delivery

10-23

 D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

USPS TRACKING#



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

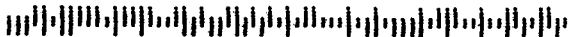
9590 9402 2859 7069 5382 22

**United States
Postal Service**

• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Elizabeth Anne Spencer ETAL
219 Cedar Run Road
Friendly, WV 26146



9590 9402 2859 7069 5382 39

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

 Agent Addressee

B. Received by (Printed Name)

C. Date of Delivery

10/23

 D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

9590 9402 2859 7069 5382 39

**United States
Postal Service**

• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Coastal Forest Resources Co.
P.O. Box 709
Buckhannon, WV 26201



9590 9402 2859 7069 5382 91

2. Article Number. (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

 Agent Addressee

B. Received by (Printed Name)

C. Date of Delivery

10.23.17

 D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. 6-18
WESTON

9590 9402 2859 7069 5382 91

**United States
Postal Service**

• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Joshua & Kimberly Weekley
1925 WV Rt. 18
West Union, WV 26456



9590 9402 2859 7069 5382 08

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X


 Agent Addressee

B. Received by (Printed Name)

C. Date of Delivery

10-23-17

 D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

USPS TRACKING #

CHARLESTON



WV 250

18 OCT 19

PM 2 L

9590 9402 2859 7069 5382 08



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

United States
Postal Service

• Sender: Please print your name, address, and ZIP+4® in this box•

Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456

17-490

5-201205



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Charity Gas Inc.
9844 Meathouse Fork Road
Salem, WV 26426



9590 9402 2859 7069 5381 61

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

-
- Agent
-
-
- Addressee

B. Received by (Printed Name)

Eric S. Bee

C. Date of Delivery

 D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below No

 SALEM, WV 26426
 OCT 24 2017
 USPS

3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

9590 9402 2859 7069 5381 61

**United States
Postal Service**

• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

**Charity Gas Inc.
Rt. 3, Box 62
Salem, WV 26426**



9590 9402 2859 7069 5381 78

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

 Agent Addressee

B. Received by (Printed Name) _____ Date of Delivery _____

Eric S. Bee SALEM, WV 26426

D. Is delivery address different from item 1? YesIf YES, enter delivery address below: No

OCT 24 2017

USPS

3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

9590 9402 2859 7069 5381 78

**United States
Postal Service**

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**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ralph & Sheila McCutchen
1905 WV Rt. 18
West Union, WV 26456



9590 9402 2859 7069 5382 53

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *Sheila R McCutchen* Agent
 Addressee

B. Received by (Printed Name)

Sheila R McCutchen

C. Date of Delivery

10-21-17

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

9590 9402 2859 7069 5382 53

**United States
Postal Service**

• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Bruffy Nelson et ux
309 Tonkin Station Road
West Union, WV 26456



9590 9402 2859 7069 5382 84

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature *Edith J. Bruffy*
 Agent
 Addressee
 X *Edith J. Bruffy*

B. Received by (Printed Name)

C. Date of Delivery

10/21/17

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

USPS TRACKING #



9590 9402 2859 7069 5382 84



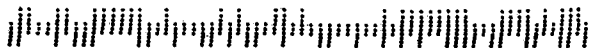
First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

United States
Postal Service

• Sender: Please print your name, address, and ZIP+4® in this box•

Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456

17-490



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Michael & Barbar Travis
710 Crystal Lake Road
West Union, WV 26456



9590 9402 2859 7069 5381 92

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Barb Travis

 Agent Addressee

B. Received by (Printed Name)

Barb Travis

C. Date of Delivery

10/21/17

D. Is delivery address different from item 1?

 Yes

If YES, enter delivery address below:

 No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)

- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

9590 9402 2859 7069 5381 92

**United States
Postal Service**

• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Paul & Sharon Weekley
2374 WV Rt. 18
West Union, WV 26456



9590 9402 2859 7069 5381 16

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *Sharon Weekley* Agent
 Addressee

B. Received by (Printed Name)

Sharon Weekley | C. Date of Delivery
10-21-17

D. Is delivery address different from item 1? Yes
 No
 If YES, enter delivery address below:

3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

9590 9402 2859 7069 5381 16

**United States
Postal Service**

• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Gregory & Denise Edgell
1873 WV Rt. 18
West Union, WV 26456



9590 9402 2859 7069 5381 85

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? Yes

If YES, enter delivery address below:

 Agent Addressee Yes No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)

- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

9590 9402 2859 7069 5381 85

**United States
Postal Service**

• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Rebecca Nicholson
2285 WV Rt. 18
West Union, WV 26456



9590 9402 2859 7069 5382 15

2. Article Number. (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Rebecca Nicholson

 Agent Addressee

B. Received by (Printed Name)

Rebecca Nicholson

C. Date of Delivery

10-21-12

D. Is delivery address different from item 1?

 Yes

If YES, enter delivery address below:

 No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)

- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

9590 9402 2859 7069 5382 15

**United States
Postal Service**

• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

17-490

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Brandon Rogers
2213 WV Rt. 18
West Union, WV 26456



9590 9402 2859 7069 5382 60

2. Article Number (Transfer from service label)**COMPLETE THIS SECTION ON DELIVERY****A. Signature**

X

- Agent
 Addressee

B. Received by (Printed Name)

Brandon Rogers

C. Date of Delivery

10-21-17

- D. Is delivery address different from item 1?** Yes
 If YES, enter delivery address below: No

3. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Adult Signature | <input type="checkbox"/> Priority Mail Express® |
| <input type="checkbox"/> Adult Signature Restricted Delivery | <input type="checkbox"/> Registered Mail™ |
| <input type="checkbox"/> Certified Mail® | <input type="checkbox"/> Registered Mail Restricted Delivery |
| <input type="checkbox"/> Certified Mail Restricted Delivery | <input type="checkbox"/> Return Receipt for Merchandise |
| <input type="checkbox"/> Collect on Delivery | <input type="checkbox"/> Signature Confirmation™ |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail | |
| <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500) | |

USPS TRACKING #



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

9590 9402 2859 7069 5382 60

**United States
Postal Service**

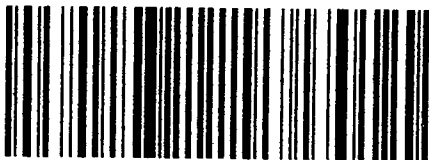
• Sender: Please print your name, address, and ZIP+4® in this box•

**Doddridge County OEM/CFM
George Eidel
105 Court Street, Suite 3
West Union, WV 26456**

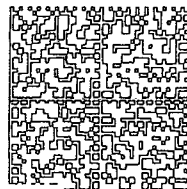
17-490

CERTIFIED MAIL®

Floodplain Manager
Doddridge County Office of Emergency Management
105 Court Street, Suite 3
West Union, WV 26456



7017 0660 0000 2275 7185



HASLER

\$006.59⁰⁰

10/20/2017 ZIP 26456
012E14643162

US POSTAGE



- Not Deliverable As Addressed
Unable To Forward
- Insufficient Address
- Moved, Left No Address
- Unclaimed Refused
- Attempted - Not Known
- No Such Street Number
- Vacant Illegible
- No Mail Receptacle
- Box Closed - No Order
- Returned For Better Address
- Postage Due _____

UTF

Jeffery Stamm
Rt, 5, Box 350
Salem, WV 26426

NIXIE 250 FE 1 0010/25/17

RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNABLE TO FORWARD

UTF

BC: 26456201205

*1771-03104-20-44

26426435201205



PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT
OF THE RETURN ADDRESS. FOLD AT DOTTED LINE

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Jeffery Stamm
Rt, 5, Box 350
Salem, WV 26426



9590 9402 2859 7069 5381 54

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

- Agent
- Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

Doddridge County Office of
Emergency Management/Floodplain Management
105 Court Street, Suite 3
304-873-1343
doddridgecountyfpm@gmail.com



Dear Sir or Ma'am,

October 19, 2017

You are receiving this letter because you have been identified as a land surface and/or mineral rights owner for property or adjacent property related to the proposed development/project identified by the following page.

No action is required of you. This letter is simply to inform you of the proposed development.

If you would like to comment on this proposed project, or would like additional information, you may contact the Doddridge County Floodplain Manager at the above address.

Respectfully yours,

A handwritten signature in cursive script, appearing to read "George Eidel".

George Eidel, CFM, OEM Director/Floodplain Manager



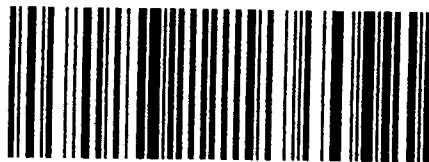
Doddridge County Floodplain Permits

(Week of October 23, 2017)

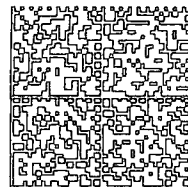
Please take notice that on the 18th day of **October, 2017**, **Blue Mountain Inc. on behalf of EQT Production** filed an application for a Floodplain Permit (**#17-490**) to develop land located at or about **Middle Island Rd (Rt. 18)**, **Coordinates 39.308764 N, -80.780469 W**. The Application is on file with the Clerk of the County Court and may be inspected or copied during regular business hours. Any interested persons who desire to comment shall present the same in writing by **November 27, 2017** (20 calendar days after the announcement at the regularly scheduled Doddridge County Commission Meeting) delivered to the Clerk of the County Court at 108 Court Street Ste. 1, West Union, WV 26456. **This project is for a truck pad water withdrawal site**

CERTIFIED MAIL®

Floodplain Manager
Doddridge County Office of Emergency Management
105 Court Street, Suite 3
West Union, WV 26456



7017 0660 0000 2275 7062



HASLER

\$006.59⁰

10/20/2017 ZIP 26456
012E14643162

US POSTAGE

10-25

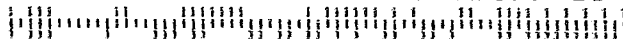
Joyce Lapo
HC 69, Box 5
West Union, WV 26456

NIXIE 250 DE 1 0010/23/17

RETURN TO SENDER
INSUFFICIENT ADDRESS
UNABLE TO FORWARD

IA
26456>2012

BC: 26456201205 *1771-05877-23-23



Postnet barcode

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS FOLD AT POINTS

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Joyce Lapo
HC 69, Box 5
West Union, WV 26456



9590 9402 2859 7069 5382 77

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

- Agent
- Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

Doddridge County Office of
Emergency Management/Floodplain Management
105 Court Street, Suite 3
304-873-1343
doddridgecountyfpm@gmail.com



Dear Sir or Ma'am,

October 19, 2017

You are receiving this letter because you have been identified as a land surface and/or mineral rights owner for property or adjacent property related to the proposed development/project identified by the following page.

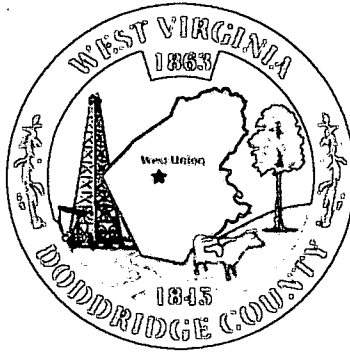
No action is required of you. This letter is simply to inform you of the proposed development.

If you would like to comment on this proposed project, or would like additional information, you may contact the Doddridge County Floodplain Manager at the above address.

Respectfully yours,

A handwritten signature in cursive script, appearing to read 'George Eidel'.

George Eidel, CFM, OEM Director/Floodplain Manager



Doddridge County Floodplain Permits

(Week of October 23, 2017)

Please take notice that on the 18th day of **October, 2017**, **Blue Mountain Inc. on behalf of EQT Production** filed an application for a Floodplain Permit (**#17-490**) to develop land located at or about **Middle Island Rd (Rt. 18)**, **Coordinates 39.308764 N, -80.780469 W**. The Application is on file with the Clerk of the County Court and may be inspected or copied during regular business hours. Any interested persons who desire to comment shall present the same in writing by **November 27, 2017** (20 calendar days after the announcement at the regularly scheduled Doddridge County Commission Meeting) delivered to the Clerk of the County Court at 108 Court Street Ste. 1, West Union, WV 26456. **This project is for a truck pad water withdrawal site**



Floodplain Development Permit

Doddridge County, WV Floodplain Management

This permit gives approval for the development/ project listed that impacts the FEMA-designated floodplain and/or floodway of Doddridge County, WV, pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance. This permit must be posted at the site of work as to be clearly visible, and must remain posted during entirety of development.

Permit: #17-490

Date Approved: November 27, 2017 **Expires: November 27, 2018**

Issued to: EQT Production Company

POC: Cory Chalmers

Company Address: 120 Professional Place Bridgeport, WV 26330

Project Address: Middle Island Road

Firm: 54017C0120C

Lat/Long: 39.308764N, -80.780469W

Purpose of Development: Truck Pad Water Withdrawal Site

Issued by: George C. Eidel, CFM, OEM Director/Doddridge County FPM (or designee)

Date: November 27, 2017

For additional information regarding this permit, please contact
Doddridge County Floodplain Manager at 304.873.2631, or via email at
doddridgecountyfpm@gmail.com
118 East Court Street; West Union, WV 26456

COPY COPY

COPY

19040



Blue Mountain, Inc.
Woman Owned Small Business
11023 Mason Dixon Hwy
Burton, WV 26562
304.662.6486

first
Exchange Bank
69-135/515

E2Shield® Check Fraud
Protection for Business

10/16/2017

PAY TO THE ORDER OF DODDRIDGE COUNTY COMMISSION

\$ **500.00

COPY

Five Hundred and 00/100*****

DOLLARS

DODDRIDGE COUNTY COMMISSION
108 COURT STREET, STE 1
WEST UNION, WV 26456

Wanda J. Siz
AUTHORIZED SIGNATURE

Security features on back

COPY

MEMO MIDDLE ISLAND CREEK

COPY

⑈019040⑈ ⑆051501354⑆ 20⑈02309⑈

Blue Mountain, Inc.

DODDRIDGE COUNTY COMMISSION

COPY

10/16/2017

19040

500.00

FP # 17-490

COPY

First Exchange Bank MIDDLE ISLAND CREEK

500.00

Doddridge County, West Virginia

RECEIPT NO: 9874

DATE: 2017/10/25

FROM: BLUE MOUNTAIN

AMOUNT: \$ 500.00

FIVE HUNDRED DOLLARS AND 00 CENTS

FOR: #17-490 MIDDLE ISLAND CREEK

00000019040 FP-BUILDING PERMITS

020-318

TOTAL: \$500.00

MICHAEL HEADLEY

SHERIFF & TREASURER

MEC

CLERK

Customer Copy

Blue Mountain, Inc.

DODDRIDGE COUNTY COMMISSION

10/16/2017

19040

500.00

FP # 17-490

First Exchange Bank MIDDLE ISLAND CREEK

500.00

7017 0660 0000 2275 7192

FLOODPLAIN PERMIT #17-490

EQT Production/Middle Island Creek (Rt18) Truck Pad

7017 0660 0000 2275 7154

7017 0660 0000 2275 7178

7017 0660 0000 2275 7161

7017 0660 0000 2275 7185

TASK	COMPLETE (DATE)	NOTES
CHECK RECEIVED	10/18/2017	
US ARMY CORP. ENGINEERS (USACE)		
US FISH & WILDLIFE SERVICES (USFWS)		
WV DEPT. NATURAL RESOURCES (WVDNR)		
WV DEPT. ENVIROMENTAL PROTECTION (WVDEP)		
STATE HISTORIC & PRESERVATION OFFICE (SHPO)		
OFFICE of LAND & STREAM (OLS)		
DATE OF COMMISSION READING	11/7/2017	
DATE AVAILABLE TO BE GRANTED	11/27/2017	
PERMIT GRANTED		
COMPLETE		

7017 0660 0000 2275 7048

7017 0660 0000 2275 7109

7017 0660 0000 2275 7055

7017 0660 0000 2275 7116

7017 0660 0000 2275 7062

7017 0660 0000 2275 7123

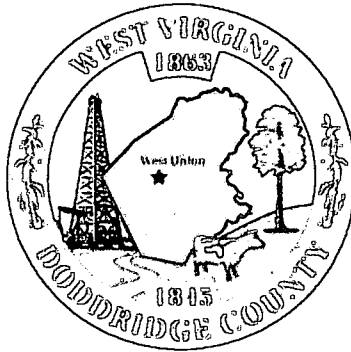
7017 0660 0000 2275 7079

7017 0660 0000 2275 7130

7017 0660 0000 2275 7086

7017 0660 0000 2275 7147

7017 0660 0000 2275 7093



Doddridge County Floodplain Permits

(Week of October 23, 2017)

Please take notice that on the 18th day of October, 2017, Blue Mountain Inc. on behalf of EQT Production filed an application for a Floodplain Permit (#17-490) to develop land located at or about Middle Island Rd (Rt. 18) , Coordinates 39.308764 N, -80.780469 W. The Application is on file with the Clerk of the County Court and may be inspected or copied during regular business hours. Any interested persons who desire to comment shall present the same in writing by November 27, 2017 (20 calendar days after the announcement at the regularly scheduled Doddridge County Commission Meeting) delivered to the Clerk of the County Court at 108 Court Street Ste. 1, West Union, WV 26456. This project is for a truck pad water withdrawal site



Blue Mountain Inc.
11023 Mason Dixon Highway
Burton, WV 26562
Ph: (304) 662-6486
Fax: (304) 662-6501

October 16, 2017

To: Mr. George Eidel
Doddridge County Floodplain Office
105 Court Street, Suite 3
West Union, WV 26456
(304) 873-1343
doddridgecountyfpm@gmail.com

OCT18 17 9:02AM

Subject: **Doddridge County Floodplain Permit – Permit Extension**
EQT Production Company
Middle Island Creek Truck Pad

Dear Mr. George Eidel,

Enclosed please find one original and one copy of the completed Doddridge County Floodplain Permit- Permit Extension request and the associated fee for the following project:

Applicant: EQT Production Company

Project Name: Middle Island Creek Truck Pad – Permit Extension

Project Description: EQT Production Company is requesting a year extension of the permit received from Doddridge Co. on July 25, 2016, permit number: 16-426. The proposed work is the installation of a second entrance for an existing truck pad along SR18. This truck pad entrance will require 15 cubic yards of gravel fill for access.

An H&H Study has been performed by Blue Mountain, Inc. on behalf of EQT Production Company. Please find this attached with the permit package.

Please contact Kaley DuCoeur at 304-662-6486 or BMI@bluemtninc.com if you have any questions regarding this request.

Respectfully,
Blue Mountain, Inc.

Kaley DuCoeur
Environmental Scientist

Enclosures
Cc: C. Chalmers



LETTER OF TRANSMITTAL

TO:

Mr. George Eidel
 Doddridge County Floodplain Office
 105 Court Street, Suite 3
 West Union, WV 26456
 (304) 873-1343

LIST OF ITEMS SUBMITTED

Number of Items	Original or Copy	Description
2	2 Originals	2-\$500 Doddridge County Floodplain Permit Fees; Check numbers: 19039, 19040
2	1 Original 1 Copy	OXFD 156 to Henderson Impoundment Doddridge County Floodplain permit - Renewal
2	1 Original 1 Copy	Middle Island Creek Truck Pad Doddridge County Floodplain Permit - Renewal

Submitted By:

Kaley DuCoeur _____

Date:

Received By:

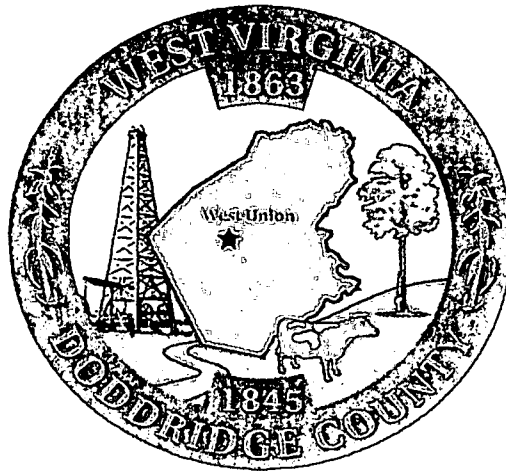
Date:

Print Name:

Please Sign and Return Via Fax or Email

Fax: (304) 662-6501

Email: bmi@bluemtninc.com



Permit# 17-490
Project Name: Middle Island Creek
Cruck Pond
Permittees Name: EAT Production

OCT18 17 9:02AM

Doddridge County, WV

Floodplain Development

Permit Application

This document is to be used for projects that impact/potentially impact the FEMA—designated floodplain and/or floodway of Doddridge County, WV pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance.

SECTION 1: GENERAL PROVISIONS (APPLICANT TO READ AND SIGN)

1. No work may start until a permit is issued.
2. The permit may be revoked if any false statements are made herein.
3. If revoked, all work must cease until permit is re-issued.
4. Development shall not be used or occupied until a Certificate of Compliance is issued.
5. The permit will expire if no work is commenced within six months of issuance.
6. Applicant is hereby informed that other permits may be required to fulfill local, state, and federal requirements.
7. Applicant hereby gives consent to the Floodplain Administrator/Manager or his/her representative to make inspections to verify compliance.
8. I THE APPLICANT CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

APPLICANT'S SIGNATURE _____

DATE _____

10/13/14

Doddridge County Commercial/Industrial
Floodplain Development Permit Application

Applicant Information:

Please provide all pertinent data.

Applicant Information		
Responsible Company Name: EQT Production Corporation		
Corporate Mailing Address: 120 Professional Place		
City: Bridgeport	State: WV	Zip: 26330
Corporate Point of Contact (POC): Mr. Cory Chalmers		
Corporate POC Title: Environmental Coordinator		
Corporate POC Primary Phone: (304) 848-0061		
Corporate POC Primary Email: CChalmers@eqt.com		
Corporate FEIN:	Corporate DUNS:	
Corporate Website: www.eqt.com		
Local Mailing Address: 120 Professional Place		
City: Bridgeport	State: WV	Zip: 26330
Local Project Manager (PM):		
Local PM Primary Phone:		
Local PM Secondary Phone:		
Local PM Primary Email:		
Person Filing Application: Ms. Kaley DuCoeur		
Applicant Title: Project Scientist		
Applicant Primary Phone: (304) 662-6486		
Applicant Secondary Phone: FAX: (304) 662-6501		
Applicant Primary Email: BMI@BlueMtnInc.com		

Doddridge County Commercial/Industrial
Floodplain Development Permit Application

Proposed Development:

Please check all elements of the proposed project that apply.

DESCRIPTION OF WORK (CHECK ALL APPLICABLE BOXES)

A. STRUCTURAL DEVELOPMENT

- | <u>ACTIVITY</u> | <u>STRUCTURAL TYPE</u> |
|--|---|
| <input type="checkbox"/> New Structure | <input type="checkbox"/> Residential (1 – 4 Family) |
| <input type="checkbox"/> Addition | <input type="checkbox"/> Residential (more than 4 Family) |
| <input type="checkbox"/> Alteration | <input type="checkbox"/> Non-residential (floodproofing) |
| <input type="checkbox"/> Relocation | <input type="checkbox"/> Combined Use (res. & com.) |
| <input type="checkbox"/> Demolition | <input type="checkbox"/> Replacement |
| <input type="checkbox"/> Manufactured/Mobil Home | |

B. OTHER DEVELOPMENT ACTIVITIES:

- Fill Mining Drilling Pipelining
- Grading
- Excavation (except for STRUCTURAL DEVELOPMENT checked above)
- Watercourse Alteration (including dredging and channel modification)
- Drainage Improvements (including culvert work)
- Road, Street, or Bridge Construction
- Subdivision (including new expansion)
- Individual Water or Sewer System
- Other (please specify)

Doddridge County Commercial/Industrial
Floodplain Development Permit Application

Development Site/Property Information:

Please provide physical description of the site/property, along with pertinent ownership (surface and mineral rights) data as applicable. Attach appropriate maps from the WV Flood Tool showing location of proposed development. Use additional copies of this page if development spans multiple property boundaries. Designate each property by number (i.e. Property 1 of 1, Property 2 of 7, etc.)

Property Designation: 1 of 1

Site/Property Information:		
Legal Description:		
2.44 AC M I CREEK		
Physical Address/911 Address: W Virginia 18, West Union, WV 26456		
Decimal Latitude/Longitude: 39.308764, -80.780469		
DMS Latitude/Longitude: 39° 18' 31.55"N; 80° 46' 49.69"W		
District: 8	Map: 7	Parcel: 32
Land Book Description:		
Deed Book Reference:		
Book: 110/ Page: 195		
Tax Map Reference:		
West Union		
Existing Buildings/Use of Property:		

Floodplain Location Data: (to be completed by Floodplain Manager or designee)			
Community:	Number:	Panel:	Suffix:
Location (Lat/Long):		Approximate Elevation:	
		Estimated BFE:	
Is the development in the floodway?		Is the development in the floodplain?	
Yes No		Yes No Zone: _____	
Notes:			

Doddridge County Commercial/Industrial
Floodplain Development Permit Application

Property Owner Data:

Please provide data on current site/property landowner(s), both surface and mineral rights (as applicable). Use additional copies of this page as needed. Designate each page in relation to each property listed above.

Property Designation: 1 of 1

Property Owner Data:		
Name of Primary Owner (PO): CNG TRANSMISSION CORP % DOMINION TRANS		
PO Address: 625 LIBERTY AV MAIL DROP 18-01		
City: PITTSBURGH	State: PA	Zip: 15221
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Surface Rights Owner Data:		
Name of Primary Owner (PO):		
PO Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Mineral Rights Owner Data: (As Applicable):		
Name of Primary Owner (PO):		
PO Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Doddridge County Commercial/Industrial
Floodplain Development Permit Application

Contractor Data:

Please provide all pertinent data for contractors and sub---contractors that may be participating in this project. Use additional copies of this page as needed. Designate each page in relation to each property listed above.

Property Designation: ___ of ___

Contractor/Sub-Contractor (C/SC) Information:		
C/SC Company Name: ** To Be Determined**		
C/SC WV License Number:		
C/SC FEIN:	C/SC DUNS:	
Local C/SC Point of Contact (POC):		
Local C/SC POC Title:		
C/SC Mailing Address:		
City:	State:	Zip-Code:
Local C/SC Office Phone:		
Local C/SC POC Phone:		
Local C/SC POC E-Mail:		

Engineer Firm Information:		
Engineer Firm Name: Blue Mountain, Inc.		
Engineer WV License Number: 449		
Engineer Firm FEIN: 550704426	Engineer Firm DUNS: 805979713	
Engineer Firm Primary Point of Contact (POC): Nathan Huggins		
Engineer Firm Primary POC Title: Project Designer		
Engineer Firm Mailing Address: 11023 Mason Dixon Hwy		
City: Burton	State: WV	Zip-Code: 26562
Engineer Firm Office Phone: (304) 662-6486		
Engineer Firm Primary POC Phone:		
Engineer Firm Primary POC E-Mail: BMI@BlueMtnInc.com		

UPSTREAM

Adjacent and/or Affected Landowners Data

Please provide data for all adjacent and/or affected surface owners (both up and down stream) whose property may be impacted by proposed development as demonstrated by a floodplain study or survey. Use additional copies of this page as needed.

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Spencer Elizabeth Anne ETAL		
Physical Address: 146 Mastons Road		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Spencer Elizabeth Anne		
Physical Address: 219 Cedar Run Road		
City: Friendly	State: WV	Zip: 26146
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Hope Natural Gas Co.		
Physical Address: 625 Liberty AV Mail Drop 18-01		
City: Pittsburgh	State: PA	Zip: 15221
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Charity Gas Inc.		
Physical Address: 9844 Meathouse Fork Road		
City: Salem	State: WV	Zip: 26426
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

UPSTREAM

Adjacent and/or Affected Landowners Data

Please provide data for all adjacent and/or affected surface owners (both up and down stream) whose property may be impacted by proposed development as demonstrated by a floodplain study or survey. Use additional copies of this page as needed.

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Charity Gas Inc.		
Physical Address: Rt. 3 Box 62		
City: Salem	State: WV	Zip: 26462
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO):		
Physical Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO):		
Physical Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO):		
Physical Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

DOWNSTREAM

Adjacent and/or Affected Landowners Data

Please provide data for all adjacent and/or affected surface owners (both up and down stream) whose property may be impacted by proposed development as demonstrated by a floodplain study or survey. Use additional copies of this page as needed.

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Edgell Gregory & Denise		
Physical Address: 1873 WV Rt. 18		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): McCutchan Ralph & Shelia		
Physical Address: 1905 WV Rt 18		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Weekley Joshua & Kimberly		
Physical Address: 1925 WV Route 18N		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Lapo Joyce		
Physical Address: HC 69 Box 5		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

DOWNSTREAM

Adjacent and/or Affected Landowners Data

Please provide data for all adjacent and/or affected surface owners (both up and down stream) whose property may be impacted by proposed development as demonstrated by a floodplain study or survey. Use additional copies of this page as needed.

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Stamm Jeffery		
Physical Address: Rt 5 Box 350		
City: Salem	State: WV	Zip: 26426
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Paul & Sharon Weekley		
Physical Address: 2374 WV Rt. 18N		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Rogers Brandon		
Physical Address: 2213 WV Rt. 18 N		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Nicholson Rebecca		
Physical Address: 2285 WV Route 18		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

DOWNSTREAM

Adjacent and/or Affected Landowners Data

Please provide data for all adjacent and/or affected surface owners (both up and down stream) whose property may be impacted by proposed development as demonstrated by a floodplain study or survey. Use additional copies of this page as needed.

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Travis Michael & Barbara		
Physical Address: 710 Crystal Lake R.		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Coastal Forest Resources Co.		
Physical Address: PO Box 709		
City: Buckhannon	State: WV	Zip: 26201
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Bruffy Nelson et ux		
Physical Address: 309 Tonkin Station Road		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO):		
Physical Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Site Plan

A Site Plan is an accurate and detailed map of the proposed development for this project. It shows the size, shape, location and special features of the project property, and the size and location of any development planned to the property, especially as that development will impact the floodplain and/or floodway. Site plans show what currently exists on the project property, and any changes or improvements you are proposing to make. **A certified and licensed engineering firm should complete site plans.**

A SITE PLAN MUST CONTAIN THE FOLLOWING INFORMATION:

1. Legal description of the parcel, north arrow and scale
2. All property lines and their dimensions
3. Names of adjacent roads, location of driveways
4. Location of sloughs, tributaries, streams, rivers, wetlands, ponds, and lakes, with setbacks indicated, and including FEMA floodplain data based on most updated FIRM.
5. Location, size, shape of all buildings, existing and proposed, with elevation of lowest floor indicated.
6. Location and dimensions of existing or proposed on-site sewage systems.
7. Location of all propane tanks, fuel tanks or other liquid storage tanks whether above ground or below ground level.
8. Location and dimensions of any proposed pipeline placement(s) into floodplain/floodway.
9. Location and dimensions of any roadway development into floodplain/floodway. *(Includes initial development access roads)*
10. Location and dimensions of any bridge and/or culvert development into floodplain/floodway.
11. Location and dimensions of any storage yard or facility into the floodplain/floodway.
12. Location of any existing utilities and/or proposed utility placement and/or displacement.
13. Location, dimensions and depth of any existing or proposed fill on site.
14. A survey showing the **existing ground elevations** of at least location on the building site. **ELEVATION NOTE:** All vertical datum will reference either NGVD 29 or NAVD 88. Assumed datum will not be acceptable unless the property is located in an area where vertical datum has not been published. For those areas where vertical datum has not been established, a site plan with contours, elevations using assumed datum, high water marks and existing water levels of sloughs, rivers, lakes or streams and proposed lowest floor elevation.

Applicant

Please read print name, sign and date below:

- I certify that I am authorized to submit this application for the primary project developer.
- I certify that the information included in this application is to the best of my knowledge true and complete.
- I certify that all required Federal, State, and local permits required by law and/or ordinance for the above described development of this project have been properly attained, are current and valid, and must be presented with this application before a Doddridge County Floodplain Permit may be issued.
- I understand that if in the course of the development project additional permits become required that were not needed during the initial proposal, the primary developer must notify the Doddridge County Floodplain Manager within 48 hours of such need, and that a "Stop Work" order may be issued for all project work directly impacting the floodplain or floodway, until such time the required additional permits are acquired.
- I understand that once the floodplain permit is submitted, the application will be entered into official public record at the next regularly scheduled Doddridge County Commission meeting after the date of submittal.
- I understand that from the date of submittal of the fully completed permit application, the Doddridge County Floodplain Manager has ninety (90) days to make a determination to either grant or deny said permit application. During this approval period, the Doddridge County Floodplain Manager may, at his or her discretion, conduct a review and/or additional study of provided documentation by means of an independent engineering firm. All costs associated with said review and/or study must be reimbursed to the County before issuance of approved permit.
- I understand that during the approval period, the Doddridge County Floodplain Manager or designee may at his or her discretion conduct site visits and document conditions of proposed development pursuant to the permit application.
- I understand that once the Floodplain Permit is granted, the permit will be entered into official public record at the next scheduled Doddridge County Commission meeting after the date of issuance. Appeals to the permit may be made no later than twenty (20) days after said issuance. If a valid appeal is submitted, as determined by the Doddridge County Floodplain Manager, a "Stop Work" order will be issued for all project development directly involving the floodplain or floodway. A public hearing by the Doddridge County Appeals Board will be scheduled no less than ten (10) days after the next regularly scheduled Doddridge County Commission meeting.
- I understand that all decisions of the Doddridge County Appeals Board shall be final.
- I understand issuance of a Floodplain Permit authorizes me to proceed with construction as proposed. A Certificate of Compliance is required upon substantial completion of the project.
- In signing this application, the primary developer hereby grants the Doddridge County Floodplain Manager or designee the right to enter onto the above—described location to inspect the development work proposed, in progress, and/or completed.
- I understand that if I do not follow exactly the site—plan submitted and approved by this permit that a "Stop Work" order may be issued by the Wirt County Floodplain Manager and that I must stop all construction immediately until discrepancies of actual work vs. proposed work is resolved.

Applicant Signature



Date: 10/13/17

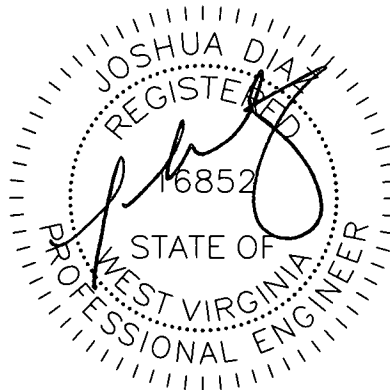
Applicant Printed Name:

Cory Chalmer

HYDROLOGIC AND HYDRAULIC ANALYSIS

MIDDLE ISLAND CREEK TRUCK PAD ADDITIONAL ENTRANCE

JUNE 2016



Summary of Findings: Based on the attached H&H analysis, it was determined that the proposed floodplain is insignificantly raised by 0.01' at the upstream, and the floodway will have no-rise upstream or downstream.

Prepared For:



120 Professional Place
Professional Building Four
Bridgeport, WV 26330

Prepared By:

Blue Mountain, Inc.
10125 Mason Dixon Hwy
Burton, WV 26562



Blue Mountain Inc.

bmi@bluemtninc.com 304.662.6486

www.bluemtninc.com

HYDROLOGIC AND HYDRAUIC ANALYSIS

For the

EQT MIDDLE ISLAND CREEK TRUCK PAD ADDITIONAL ENTRANCE

West Union District,
Doddridge County, West Virginia

A. Purpose

EQT is proposing a second entrance for an existing truck pad along SR 18. This truck pad entrance will require 12" (maximum) of gravel for access. The appropriate permits are being pursued for this fill. This report identifies the 100 year/ 24 hour rainfall event at the proposed gravel entrance.

B. Drainage Area

The contributing drainage area for the site was analyzed utilizing USGS contours. The attached "Watershed Limits" map shows the watershed limits for this site. This contributing drainage area has been identified as 78,700 acres.

C. Runoff Discharge Methods

Runoff from the contributing drainage area in the existing land use configuration was calculated using the USDA TR-55 method for runoff modeling.

A summary of the Curve Number (CN) tabulations can be found within the attached calculations. The resulting composite CN values were entered into a hydrologic modeling program called Hydraflow Hydrographs. Time of Concentration (Tc) values were calculated within this program, utilizing sheet flow, shallow concentrated flow and channel flow. A summary of these values can be found within the attached calculations.

Rainfall data was obtained from NOAA Atlas 14, Volume 2, Version 3 and can be found within the supporting calculations attached within this report.

D. Design Storm

This report analyzes the water elevation of the 100 year/ 24 hour rainfall event at the location of the gravel entrance.

E. Hydrologic Soil Group

The USDA Natural Resources Conservation Service Soil Survey of this area was researched to identify the soil types present within the contributing drainage area of Beham Run. The soil survey showed the presence of Hydrologic soil groups 'A', 'B', 'C' and 'D' within the drainage area. The attached "Web Soil Survey" shows the soil types present within the drainage area.

F. Peak Discharge

The peak discharge has been modeled for the 100 year/ 24 hour rainfall event for the contributing drainage area within Hydraflow Hydrographs. The peak discharge for this storm event has been calculated to be 13,866.08 cfs.

G. Hydraulic Analysis

The computer program Hec-Ras v4.1.0 was used to determine the water surface elevation at the proposed gravel pad. The peak discharge from the 100 year/ 24 hour storm event was used within Hec-Ras. The floodplain limits were mapped using the Hec-Ras program and exported to display on the site plan. Summary output information from Hec-Ras has been provided within the supporting calculations.

H. Results

This report indicates an existing and proposed water surface elevation of 764.96' for the 100 year/ 24 hour rainfall event at this site. The report indicates an existing water surface elevation of 765.80' and a proposed water surface elevation of 765.81' at the adjoining property immediately upstream. The report indicates an existing and proposed water surface elevation of 762.26' at the adjoining property immediately downstream. Based on these findings, it was determined that the proposed floodplain is insignificantly raised by 0.01' at the upstream, and the floodway will have no-rise upstream or downstream.



POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerials](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.332 (0.301-0.367)	0.397 (0.361-0.440)	0.476 (0.432-0.525)	0.536 (0.486-0.592)	0.612 (0.552-0.673)	0.669 (0.602-0.735)	0.723 (0.648-0.792)	0.778 (0.694-0.851)	0.849 (0.754-0.926)	0.900 (0.796-0.981)
10-min	0.517 (0.468-0.570)	0.620 (0.563-0.686)	0.740 (0.671-0.816)	0.828 (0.750-0.913)	0.936 (0.844-1.03)	1.02 (0.912-1.11)	1.09 (0.975-1.19)	1.16 (1.04-1.27)	1.25 (1.11-1.36)	1.31 (1.16-1.43)
15-min	0.633 (0.574-0.698)	0.758 (0.689-0.839)	0.909 (0.824-1.00)	1.02 (0.923-1.12)	1.16 (1.04-1.27)	1.26 (1.13-1.38)	1.35 (1.21-1.48)	1.44 (1.29-1.58)	1.56 (1.38-1.70)	1.64 (1.45-1.79)
30-min	0.838 (0.759-0.924)	1.02 (0.922-1.12)	1.24 (1.13-1.37)	1.41 (1.28-1.56)	1.63 (1.47-1.80)	1.80 (1.61-1.97)	1.95 (1.75-2.14)	2.11 (1.88-2.31)	2.31 (2.05-2.52)	2.46 (2.17-2.68)
60-min	1.02 (0.927-1.13)	1.25 (1.13-1.38)	1.56 (1.42-1.72)	1.80 (1.63-1.99)	2.12 (1.91-2.33)	2.37 (2.13-2.60)	2.61 (2.34-2.86)	2.86 (2.55-3.13)	3.19 (2.83-3.48)	3.45 (3.05-3.76)
2-hr	1.19 (1.07-1.32)	1.44 (1.30-1.61)	1.81 (1.63-2.01)	2.09 (1.87-2.32)	2.47 (2.21-2.73)	2.77 (2.46-3.06)	3.08 (2.73-3.39)	3.39 (2.99-3.73)	3.82 (3.35-4.19)	4.16 (3.62-4.55)
3-hr	1.27 (1.14-1.42)	1.53 (1.38-1.71)	1.92 (1.72-2.13)	2.21 (1.98-2.47)	2.63 (2.34-2.92)	2.95 (2.62-3.27)	3.29 (2.91-3.64)	3.64 (3.20-4.01)	4.12 (3.59-4.53)	4.50 (3.89-4.94)
6-hr	1.51 (1.37-1.68)	1.82 (1.65-2.03)	2.25 (2.04-2.51)	2.60 (2.35-2.89)	3.09 (2.77-3.42)	3.49 (3.11-3.84)	3.90 (3.46-4.28)	4.34 (3.82-4.75)	4.93 (4.31-5.39)	5.42 (4.70-5.91)
12-hr	1.81 (1.64-2.00)	2.16 (1.97-2.39)	2.65 (2.41-2.93)	3.05 (2.76-3.37)	3.62 (3.26-3.98)	4.08 (3.66-4.48)	4.57 (4.07-5.00)	5.09 (4.50-5.55)	5.82 (5.09-6.33)	6.41 (5.56-6.96)
24-hr	2.15 (1.98-2.34)	2.56 (2.36-2.79)	3.10 (2.85-3.38)	3.54 (3.25-3.85)	4.16 (3.81-4.51)	4.65 (4.25-5.05)	5.17 (4.70-5.60)	5.72 (5.17-6.18)	6.46 (5.82-6.97)	7.05 (6.33-7.60)
2-day	2.53 (2.35-2.73)	3.00 (2.78-3.24)	3.60 (3.33-3.89)	4.08 (3.77-4.40)	4.74 (4.38-5.11)	5.27 (4.85-5.67)	5.82 (5.34-6.25)	6.38 (5.83-6.85)	7.13 (6.49-7.65)	7.73 (7.00-8.29)
3-day	2.72 (2.53-2.93)	3.22 (3.00-3.47)	3.85 (3.58-4.14)	4.34 (4.03-4.67)	5.01 (4.64-5.39)	5.55 (5.13-5.95)	6.08 (5.61-6.52)	6.63 (6.09-7.10)	7.36 (6.74-7.88)	7.93 (7.23-8.48)
4-day	2.91 (2.72-3.13)	3.45 (3.22-3.71)	4.09 (3.82-4.40)	4.60 (4.29-4.94)	5.29 (4.91-5.67)	5.82 (5.40-6.23)	6.35 (5.88-6.80)	6.89 (6.36-7.35)	7.60 (6.98-8.10)	8.13 (7.46-8.68)
7-day	3.56 (3.34-3.79)	4.20 (3.93-4.47)	4.92 (4.61-5.24)	5.48 (5.13-5.82)	6.20 (5.80-6.59)	6.75 (6.31-7.17)	7.29 (6.80-7.74)	7.82 (7.27-8.30)	8.50 (7.88-9.01)	9.00 (8.32-9.55)
10-day	4.11 (3.88-4.36)	4.84 (4.56-5.13)	5.62 (5.29-5.94)	6.21 (5.84-6.57)	6.97 (6.55-7.37)	7.54 (7.08-7.97)	8.08 (7.58-8.54)	8.61 (8.06-9.09)	9.27 (8.66-9.79)	9.75 (9.09-10.3)
20-day	5.83 (5.52-6.15)	6.83 (6.48-7.22)	7.81 (7.40-8.25)	8.55 (8.10-9.02)	9.47 (8.96-9.98)	10.1 (9.59-10.7)	10.8 (10.2-11.3)	11.4 (10.7-12.0)	12.1 (11.4-12.7)	12.6 (11.9-13.3)
30-day	7.40 (7.04-7.78)	8.63 (8.22-9.08)	9.76 (9.29-10.3)	10.6 (10.1-11.1)	11.6 (11.1-12.2)	12.4 (11.8-13.0)	13.1 (12.4-13.7)	13.7 (13.0-14.4)	14.4 (13.7-15.2)	15.0 (14.2-15.7)
45-day	9.51 (9.07-9.96)	11.1 (10.6-11.6)	12.4 (11.8-13.0)	13.3 (12.7-14.0)	14.5 (13.8-15.2)	15.3 (14.6-16.1)	16.1 (15.3-16.8)	16.8 (16.0-17.6)	17.6 (16.7-18.4)	18.1 (17.2-19.0)
60-day	11.5 (11.0-12.0)	13.4 (12.8-13.9)	14.8 (14.2-15.5)	15.9 (15.2-16.6)	17.2 (16.4-17.9)	18.1 (17.3-18.9)	18.9 (18.0-19.7)	19.6 (18.7-20.4)	20.4 (19.5-21.3)	21.0 (20.0-21.9)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerals](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	3.98 (3.61-4.40)	4.76 (4.33-5.28)	5.71 (5.18-6.30)	6.43 (5.83-7.10)	7.34 (6.62-8.08)	8.03 (7.22-8.82)	8.68 (7.78-9.50)	9.34 (8.33-10.2)	10.2 (9.05-11.1)	10.8 (9.55-11.8)
10-min	3.10 (2.81-3.42)	3.72 (3.38-4.12)	4.44 (4.03-4.90)	4.97 (4.50-5.48)	5.62 (5.06-6.18)	6.09 (5.47-6.68)	6.53 (5.85-7.16)	6.97 (6.22-7.62)	7.48 (6.65-8.17)	7.86 (6.95-8.57)
15-min	2.53 (2.30-2.79)	3.03 (2.76-3.36)	3.64 (3.30-4.01)	4.07 (3.69-4.50)	4.62 (4.17-5.09)	5.02 (4.52-5.52)	5.41 (4.84-5.92)	5.78 (5.15-6.32)	6.23 (5.53-6.80)	6.55 (5.79-7.14)
30-min	1.68 (1.52-1.85)	2.03 (1.84-2.25)	2.49 (2.26-2.74)	2.83 (2.56-3.12)	3.27 (2.94-3.59)	3.59 (3.23-3.94)	3.91 (3.50-4.28)	4.22 (3.76-4.61)	4.61 (4.10-5.03)	4.91 (4.34-5.35)
60-min	1.02 (0.927-1.13)	1.25 (1.13-1.38)	1.56 (1.42-1.72)	1.80 (1.63-1.99)	2.12 (1.91-2.33)	2.37 (2.13-2.60)	2.61 (2.34-2.86)	2.86 (2.55-3.13)	3.19 (2.83-3.48)	3.45 (3.05-3.76)
2-hr	0.595 (0.534-0.662)	0.722 (0.650-0.804)	0.904 (0.813-1.00)	1.04 (0.935-1.16)	1.24 (1.10-1.37)	1.39 (1.23-1.53)	1.54 (1.37-1.69)	1.70 (1.50-1.86)	1.91 (1.67-2.09)	2.08 (1.81-2.27)
3-hr	0.422 (0.380-0.471)	0.510 (0.459-0.570)	0.638 (0.573-0.710)	0.737 (0.660-0.821)	0.875 (0.779-0.971)	0.983 (0.873-1.09)	1.10 (0.968-1.21)	1.21 (1.07-1.34)	1.37 (1.20-1.51)	1.50 (1.30-1.65)
6-hr	0.253 (0.228-0.281)	0.304 (0.275-0.339)	0.376 (0.340-0.419)	0.435 (0.392-0.483)	0.517 (0.463-0.571)	0.582 (0.520-0.642)	0.652 (0.578-0.715)	0.724 (0.638-0.793)	0.824 (0.719-0.900)	0.905 (0.785-0.987)
12-hr	0.150 (0.136-0.166)	0.179 (0.163-0.199)	0.220 (0.200-0.243)	0.253 (0.229-0.279)	0.300 (0.271-0.330)	0.339 (0.304-0.372)	0.379 (0.338-0.415)	0.422 (0.374-0.461)	0.483 (0.422-0.525)	0.532 (0.462-0.578)
24-hr	0.090 (0.082-0.098)	0.107 (0.098-0.116)	0.129 (0.119-0.141)	0.148 (0.136-0.161)	0.173 (0.159-0.188)	0.194 (0.177-0.210)	0.216 (0.196-0.233)	0.238 (0.216-0.257)	0.269 (0.242-0.290)	0.294 (0.264-0.317)
2-day	0.053 (0.049-0.057)	0.063 (0.058-0.068)	0.075 (0.069-0.081)	0.085 (0.079-0.092)	0.099 (0.091-0.106)	0.110 (0.101-0.118)	0.121 (0.111-0.130)	0.133 (0.121-0.143)	0.149 (0.135-0.159)	0.161 (0.146-0.173)
3-day	0.038 (0.035-0.041)	0.045 (0.042-0.048)	0.053 (0.050-0.058)	0.060 (0.056-0.065)	0.070 (0.064-0.075)	0.077 (0.071-0.083)	0.084 (0.078-0.091)	0.092 (0.085-0.099)	0.102 (0.094-0.109)	0.110 (0.100-0.118)
4-day	0.030 (0.028-0.033)	0.036 (0.034-0.039)	0.043 (0.040-0.046)	0.048 (0.045-0.051)	0.055 (0.051-0.059)	0.061 (0.056-0.065)	0.066 (0.061-0.071)	0.072 (0.066-0.077)	0.079 (0.073-0.084)	0.085 (0.078-0.090)
7-day	0.021 (0.020-0.023)	0.025 (0.023-0.027)	0.029 (0.027-0.031)	0.033 (0.031-0.035)	0.037 (0.034-0.039)	0.040 (0.038-0.043)	0.043 (0.040-0.046)	0.047 (0.043-0.049)	0.051 (0.047-0.054)	0.054 (0.050-0.057)
10-day	0.017 (0.016-0.018)	0.020 (0.019-0.021)	0.023 (0.022-0.025)	0.026 (0.024-0.027)	0.029 (0.027-0.031)	0.031 (0.029-0.033)	0.034 (0.032-0.036)	0.036 (0.034-0.038)	0.039 (0.036-0.041)	0.041 (0.038-0.043)
20-day	0.012 (0.012-0.013)	0.014 (0.013-0.015)	0.016 (0.015-0.017)	0.018 (0.017-0.019)	0.020 (0.019-0.021)	0.021 (0.020-0.022)	0.022 (0.021-0.024)	0.024 (0.022-0.025)	0.025 (0.024-0.027)	0.026 (0.025-0.028)
30-day	0.010 (0.010-0.011)	0.012 (0.011-0.013)	0.014 (0.013-0.014)	0.015 (0.014-0.015)	0.016 (0.015-0.017)	0.017 (0.016-0.018)	0.018 (0.017-0.019)	0.019 (0.018-0.020)	0.020 (0.019-0.021)	0.021 (0.020-0.022)
45-day	0.009 (0.008-0.009)	0.010 (0.010-0.011)	0.011 (0.011-0.012)	0.012 (0.012-0.013)	0.013 (0.013-0.014)	0.014 (0.014-0.015)	0.015 (0.014-0.016)	0.016 (0.015-0.016)	0.016 (0.015-0.017)	0.017 (0.016-0.018)
60-day	0.008 (0.008-0.008)	0.009 (0.009-0.010)	0.010 (0.010-0.011)	0.011 (0.011-0.012)	0.012 (0.011-0.012)	0.013 (0.012-0.013)	0.013 (0.013-0.014)	0.014 (0.013-0.014)	0.014 (0.014-0.015)	0.015 (0.014-0.015)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical

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 and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies the 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 Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

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 for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 17. The horizontal datum was NAD 83, GRS 1980 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 Geodetic 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:

NGS Information Services
NOAA, NIMS312
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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 its website at <http://www.ngs.noaa.gov>.

Base map created by the WV Statewide Addressing and Mapping Board (SAMB). Imagery was captured at a scale of 1:24000 in the spring of 2003 for the purpose of producing natural color digital orthophotos at a 2' pixel resolution.

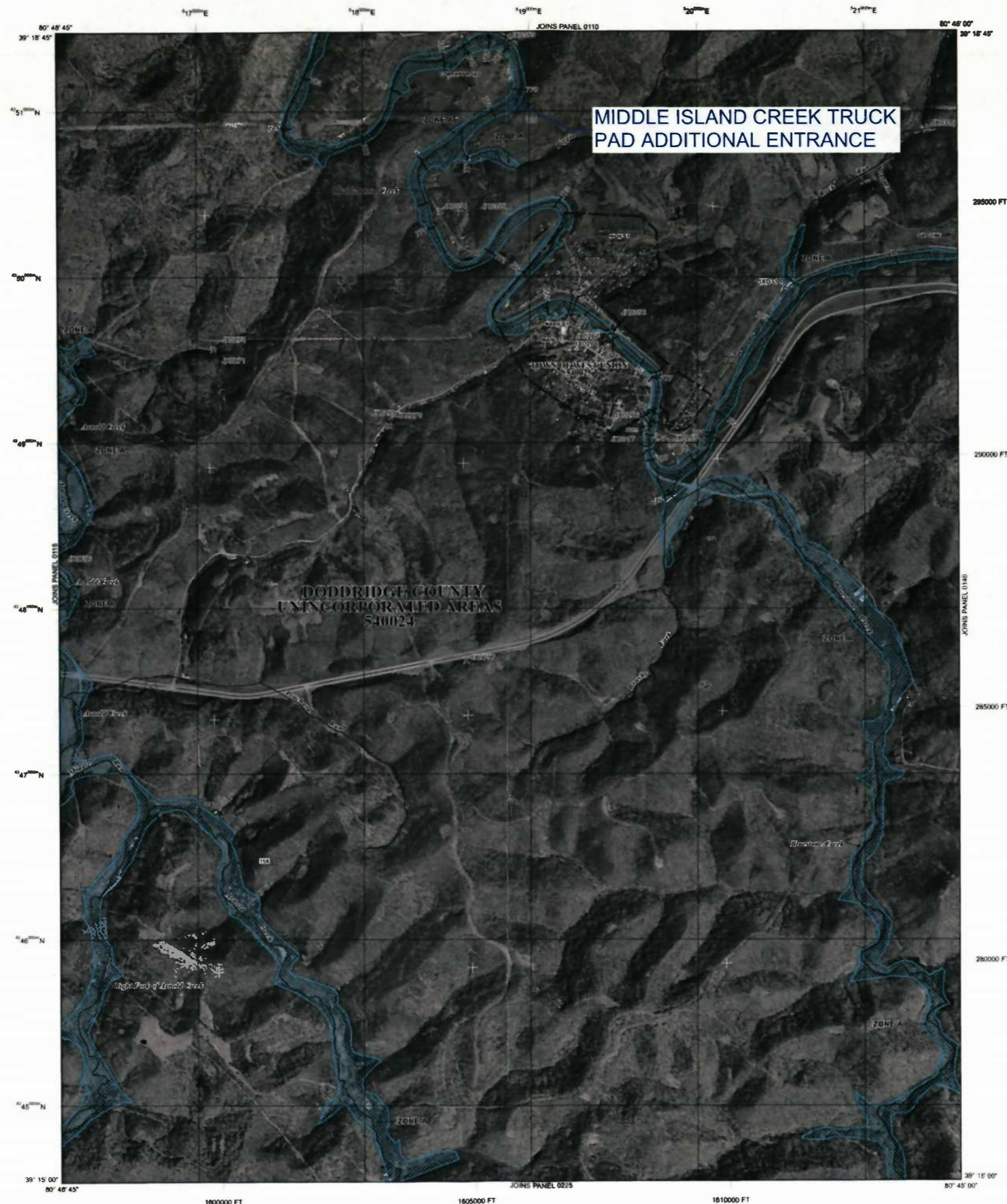
This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains 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 dis-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 table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the Map Service Center (MSC) website at <http://www.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have questions about this map, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/info>.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO FLOODING 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. The areas of hazard for flooding, velocities also determined.

ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently described. 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 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE D Areas determined to be outside the 0.2% annual chance floodplain.

ZONE B 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.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance 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
- Base Flood Elevation line and value; elevation in feet
- Base Flood Elevation value where uniform within zone; elevation in feet

*Referenced to the North American Vertical Datum of 1988

Cross section line
Thersect line

45° 02' 08" 93° 02' 12"
3100000 FT
100' N
000000 X
141.5

MAP REPOSITORIES
Refer to Map Repository list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
March 18, 1991

EFFECTIVE DATES OF REVISIONS TO THIS PANEL
October 4, 2011: to update corporate limits to decrease Base Flood Elevations, to change Special Flood Hazard Areas, to update map format and to add roads and road names

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" = 1000'

500 0 1000 2000
300 0 300 600
FEET
METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0120C

FIRM
FLOOD INSURANCE RATE MAP
DODDRIDGE COUNTY,
WEST VIRGINIA
AND INCORPORATED AREAS

PANEL 120 OF 325
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

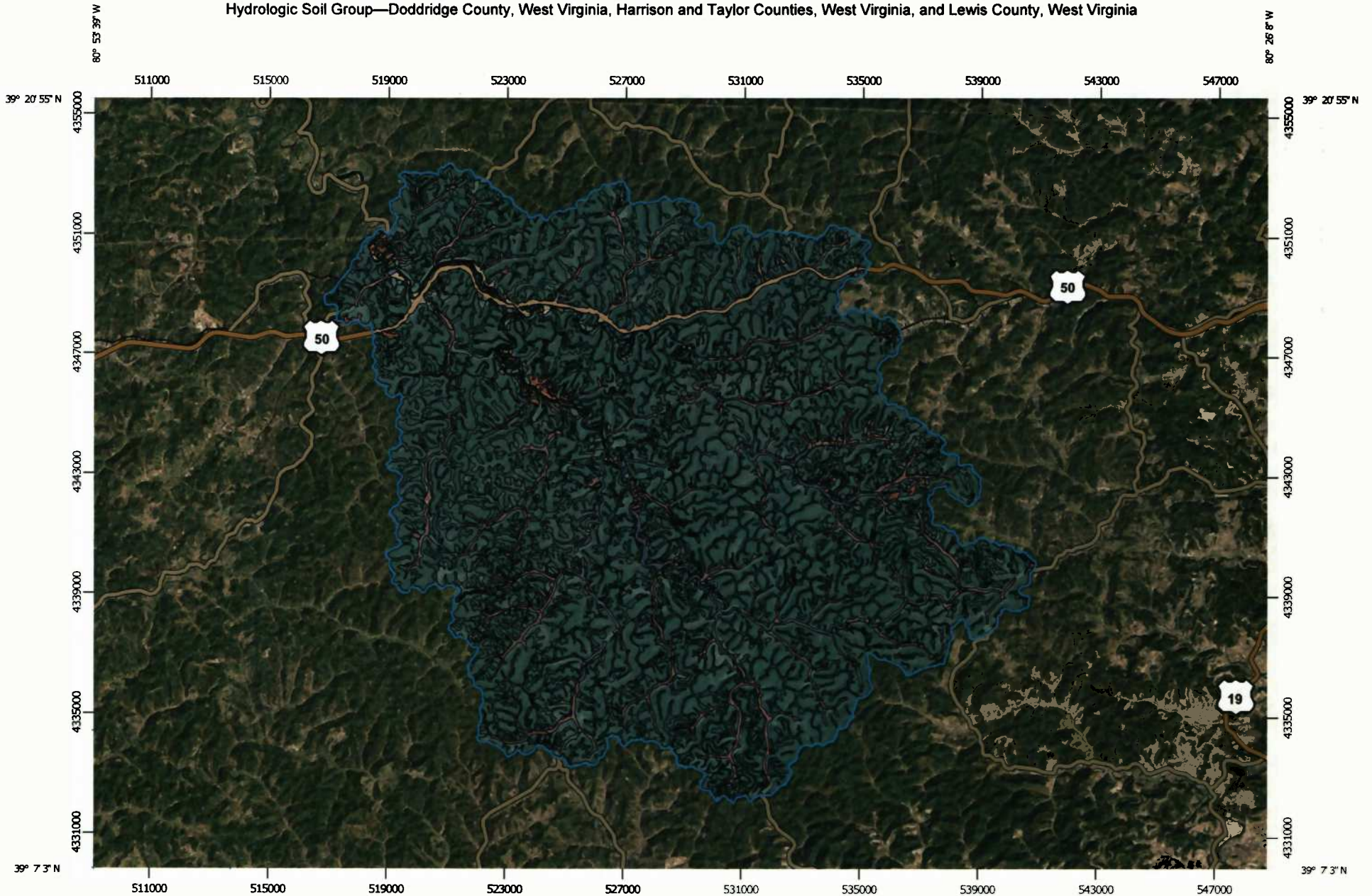
COMMUNITY	NUMBER	PANEL	SUFFIX
DODDRIDGE COUNTY	540024	0120C	C
WEST UNION TOWN OF	540025	0120C	C

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.

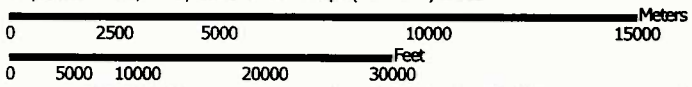
MAP NUMBER
54017C0120C
MAP REVISED
OCTOBER 4, 2011

Federal Emergency Management Agency

Hydrologic Soil Group—Doddridge County, West Virginia, Harrison and Taylor Counties, West Virginia, and Lewis County, West Virginia



Map Scale: 1:181,000 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84







MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils




Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:20,000 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Doddridge County, West Virginia
 Survey Area Data: Version 11, Sep 24, 2015

Soil Survey Area: Harrison and Taylor Counties, West Virginia
 Survey Area Data: Version 9, Sep 24, 2015

Soil Survey Area: Lewis County, West Virginia
 Survey Area Data: Version 7, Sep 24, 2015

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Doddridge County, West Virginia (WV017)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ch	Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded	B	1,049.0	1.3%
Co	Cotaco silt loam	B/D	122.6	0.2%
GpE	Gilpin-Peabody silt loams, 25 to 35 percent slopes	D	349.2	0.4%
GsE	Gilpin-Peabody complex, 15 to 35 percent slopes, very stony	C	17,129.0	21.8%
GsF	Gilpin-Peabody complex, 35 to 70 percent slopes, very stony	C	47,862.8	60.8%
GuC	Gilpin-Upshur silt loams, 8 to 15 percent slopes	C	881.2	1.1%
GuD	Gilpin-Upshur silt loams, 15 to 25 percent slopes	C	3,247.5	4.1%
GyD	Gilpin-Upshur-Urban land complex, 15 to 25 percent slopes	C	71.6	0.1%
Ka	Kanawha loam, 0 to 3 percent slopes, rarely flooded	B	383.7	0.5%
Ku	Kanawha-Urban land complex	B	34.0	0.0%
Me	Melvin silt loam, 0 to 3 percent slopes, rarely flooded	B/D	43.3	0.1%
MoB	Monongahela silt loam, 3 to 8 percent slopes	D	74.6	0.1%
MoC	Monongahela silt loam, 8 to 15 percent slopes	D	88.8	0.1%
MuB	Monongahela-Urban land complex, 3 to 8 percent slopes	C	34.3	0.0%
MuC	Monongahela-Urban land complex, 8 to 15 percent slopes		39.9	0.1%
Se	Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded	A	2,390.4	3.0%

Hydrologic Soil Group—Doddridge County, West Virginia, Harrison and Taylor Counties, West Virginia, and Lewis County, West Virginia

Hydrologic Soil Group— Summary by Map Unit — Doddridge County, West Virginia (WV017)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
SeB	Sensabaugh silt loam, 3 to 8 percent slopes, rarely flooded	A	2,067.6	2.6%
Su	Sensabaugh-Urban land complex	A	117.2	0.1%
SuB	Sensabaugh-Urban land complex, 3 to 8 percent slopes, rarely flooded	A	56.1	0.1%
Ud	Udorthents, smoothed		841.9	1.1%
VaC	Vandalia silt loam, 8 to 15 percent slopes	C	122.3	0.2%
VaD	Vandalia silt loam, 15 to 25 percent slopes	C	626.0	0.8%
VaE	Vandalia silt loam, 25 to 35 percent slopes	C	53.2	0.1%
VsE	Vandalia silt loam, 15 to 35 percent slopes, very stony	C	694.3	0.9%
VuD	Vandalia-Urban land complex, 15 to 25 percent slopes	C	51.5	0.1%
W	Water		161.1	0.2%
Subtotals for Soil Survey Area			78,593.1	99.9%
Totals for Area of Interest			78,703.4	100.0%

Hydrologic Soil Group— Summary by Map Unit — Harrison and Taylor Counties, West Virginia (WV610)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GIF	Gilpin silt loam, 35 to 70 percent slopes	C	1.1	0.0%
GuC	Gilpin-Upshur complex, 8 to 15 percent slopes	C	1.8	0.0%
GuC3	Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded	D	0.6	0.0%
GuD	Gilpin-Upshur complex, 15 to 25 percent slopes	C	4.5	0.0%
GuD3	Gilpin-Upshur complex, 15 to 25 percent slopes, severely eroded	D	1.6	0.0%
GuE	Gilpin-Upshur complex, 25 to 35 percent slopes	C	15.5	0.0%
GuE3	Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded	C	11.6	0.0%

Hydrologic Soil Group— Summary by Map Unit — Harrison and Taylor Counties, West Virginia (WV610)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GuF3	Gilpin-Upshur complex, 35 to 70 percent slopes, severely eroded	C	38.2	0.0%
UL	Urban land		10.2	0.0%
VaC	Vandalia silty clay loam, 8 to 15 percent slopes	C	6.4	0.0%
VaD	Vandalia silty clay loam, 15 to 25 percent slopes	C	5.3	0.0%
Subtotals for Soil Survey Area			96.7	0.1%
Totals for Area of Interest			78,703.4	100.0%

Hydrologic Soil Group— Summary by Map Unit — Lewis County, West Virginia (WV041)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GaD	Gilpin silt loam, 15 to 25 percent slopes	C	0.8	0.0%
GuD	Gilpin-Upshur silt loams, 15 to 25 percent slopes	C	0.7	0.0%
GuE	Gilpin-Upshur silt loams, 25 to 35 percent slopes	C	1.3	0.0%
GwF3	Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded	C	10.9	0.0%
Subtotals for Soil Survey Area			13.6	0.0%
Totals for Area of Interest			78,703.4	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Weighted CN Values

PROJECT: Middle Island Creek Truck Pad
DATE: 5/24/2016
PREPARED BY: AFF

HYDROLOGIC SOIL GROUPS				
COVER TYPE/CONDITION	SOIL NAME	HYDROLOGIC GROUP	AREA (ac.)	CN
Woods	GsF, GsE, GuC, GuD	C	66400	70
Meadow	Ch, Se, SeB, Su, VaD	A/B/C	8500	71
Residential	GyD, MuB, MuC	C	2200	80
Industrial	Co, GpE, Me, VsE	B/C/D	1600	93

Total Area: 78700 ac.
Weighted CN: 70.9



TR55 Tc Worksheet

Hyd. No. 1

MIC Truck Pad

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.800	0.011	0.011	
Flow length (ft)	= 300.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 2.56	0.00	0.00	
Land slope (%)	= 25.00	0.00	0.00	
Travel Time (min)	= 36.65	+ 0.00	+ 0.00	= 36.65
Shallow Concentrated Flow				
Flow length (ft)	= 6025.00	0.00	0.00	
Watercourse slope (%)	= 6.80	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	=4.21	0.00	0.00	
Travel Time (min)	= 23.87	+ 0.00	+ 0.00	= 23.87
Channel Flow				
X sectional flow area (sqft)	= 30.00	100.00	350.00	
Wetted perimeter (ft)	= 23.00	104.00	85.00	
Channel slope (%)	= 0.50	0.50	0.50	
Manning's n-value	= 0.040	0.040	0.040	
Velocity (ft/s)	=3.15	2.57	6.80	
Flow length (ft)	((0))47230.0	47230.0	47230.0	
Travel Time (min)	= 250.12	+ 306.81	+ 115.78	= 672.71
Total Travel Time, Tc				733.23 min

Hydrograph Report

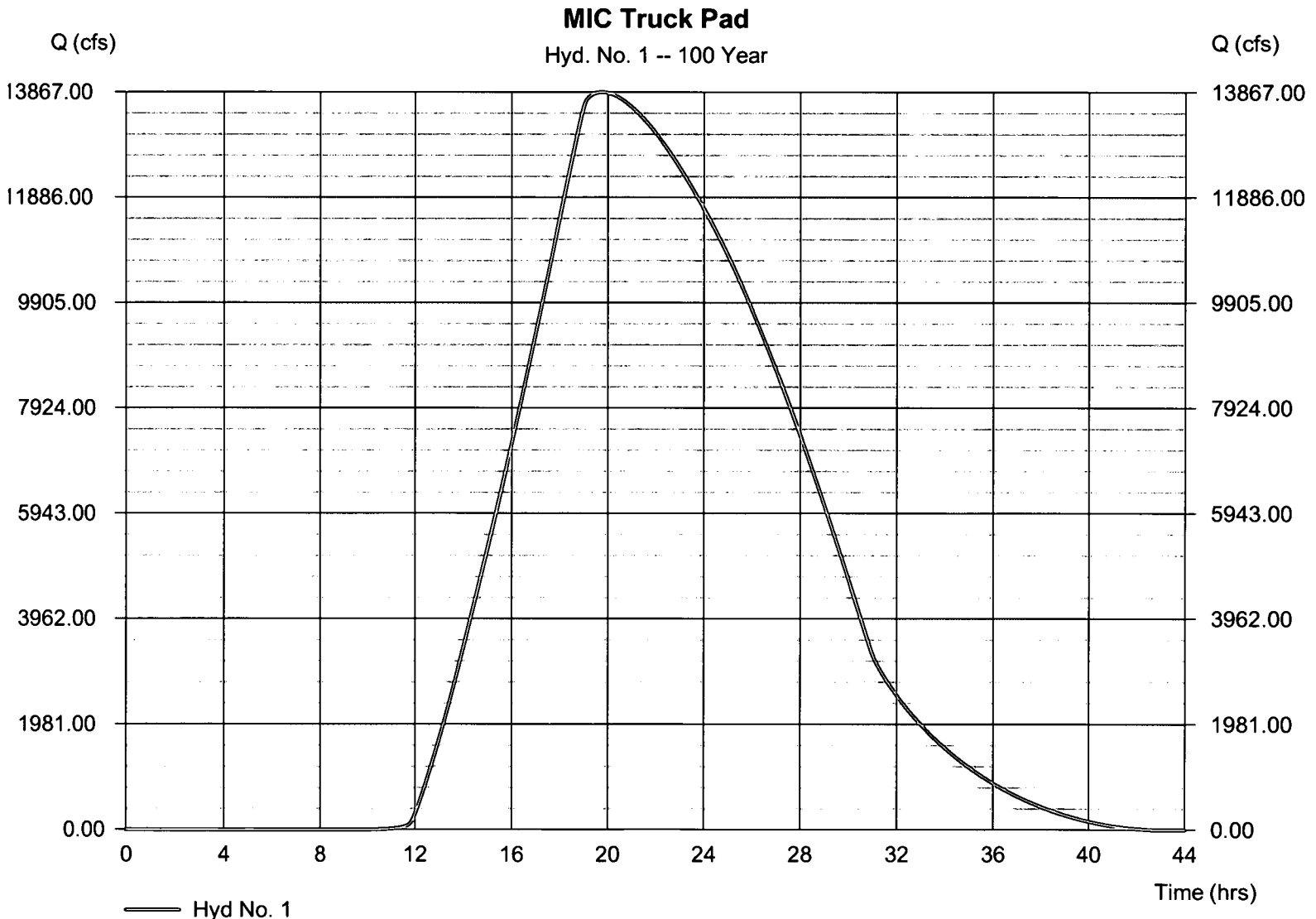
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.5

Wednesday, 05 / 25 / 2016

Hyd. No. 1

MIC Truck Pad

Hydrograph type	= SCS Runoff	Peak discharge	= 13866.08 cfs
Storm frequency	= 100 yrs	Time to peak	= 19.77 hrs
Time interval	= 2 min	Hyd. volume	= 639,215,488 cuft
Drainage area	= 78700.000 ac	Curve number	= 70.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 733.20 min
Total precip.	= 5.17 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



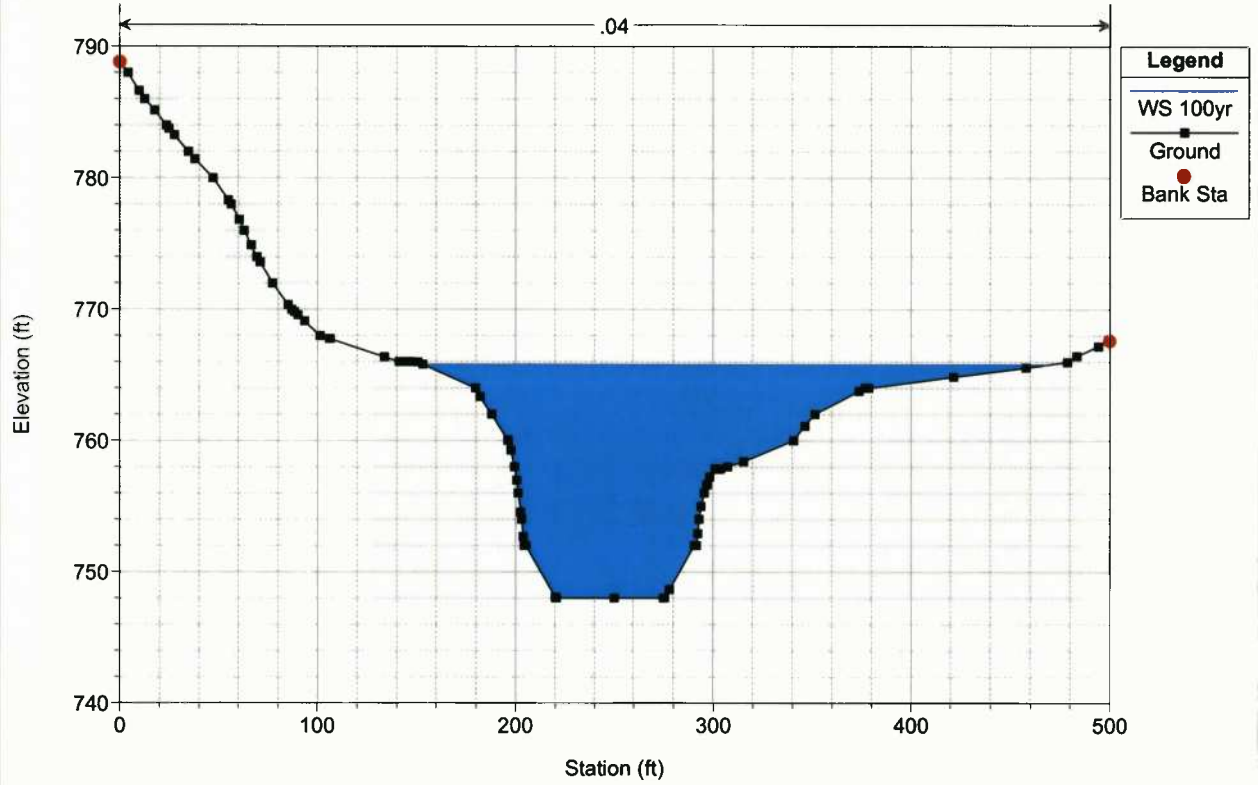
HEC-RAS SUMMARY OUTPUT - EXISTING CONDITIONS

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
MIC	900	100yr	13866.08	748	765.8		766.41	0.002154	6.24	2222.78	315.43	0.41
MIC	700	100yr	13866.08	748	765.45		766.02	0.001662	6.06	2288.09	278.09	0.37
MIC	525	100yr	13866.08	748	764.96		765.7	0.001826	6.89	2012.62	212.55	0.39
MIC	300	100yr	13866.08	748	764.02		765.18	0.002433	8.67	1598.71	147.67	0.46
MIC	100	100yr	13866.08	748	762.26	759	764.41	0.004998	11.77	1177.71	116.34	0.65

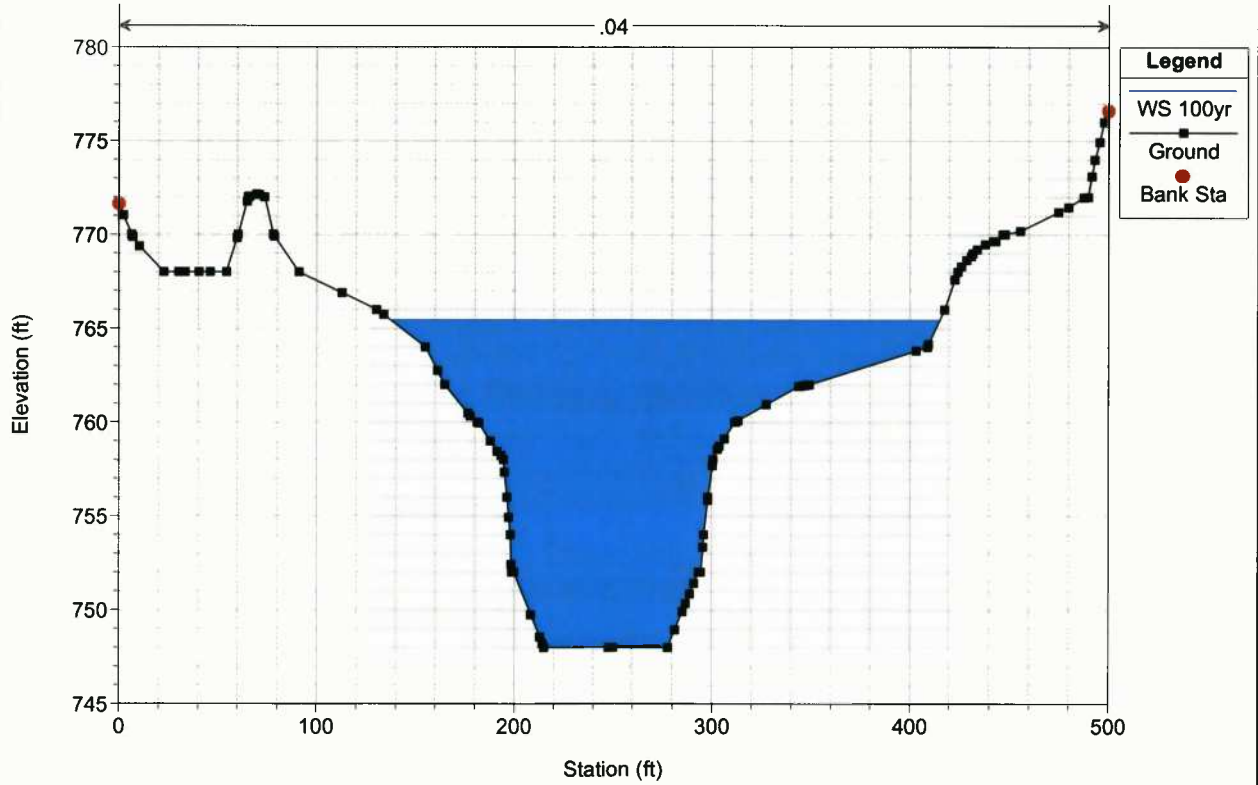
HEC-RAS SUMMARY OUTPUT - PROPOSED CONDITIONS

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
MIC	900	100yr	13866.08	748	765.81		766.41	0.002153	6.24	2223.72	315.62	0.41
MIC	700	100yr	13866.08	748	765.45		766.02	0.00166	6.06	2288.96	278.14	0.37
MIC	525	100yr	13866.08	748	764.96		765.7	0.001838	6.9	2008.83	212.55	0.4
MIC	300	100yr	13866.08	748	764.02		765.18	0.002433	8.67	1598.71	147.67	0.46
MIC	100	100yr	13866.08	748	762.26	759	764.41	0.004998	11.77	1177.71	116.34	0.65

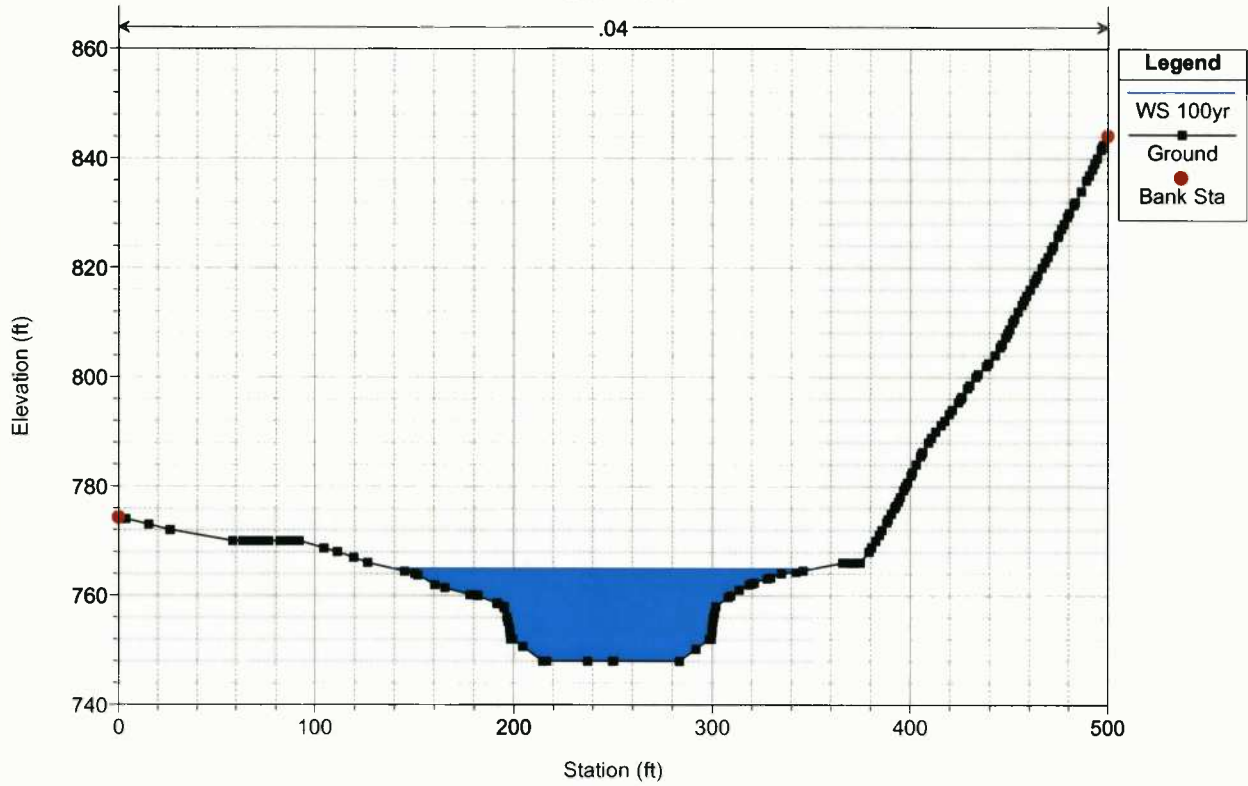
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RS = 900



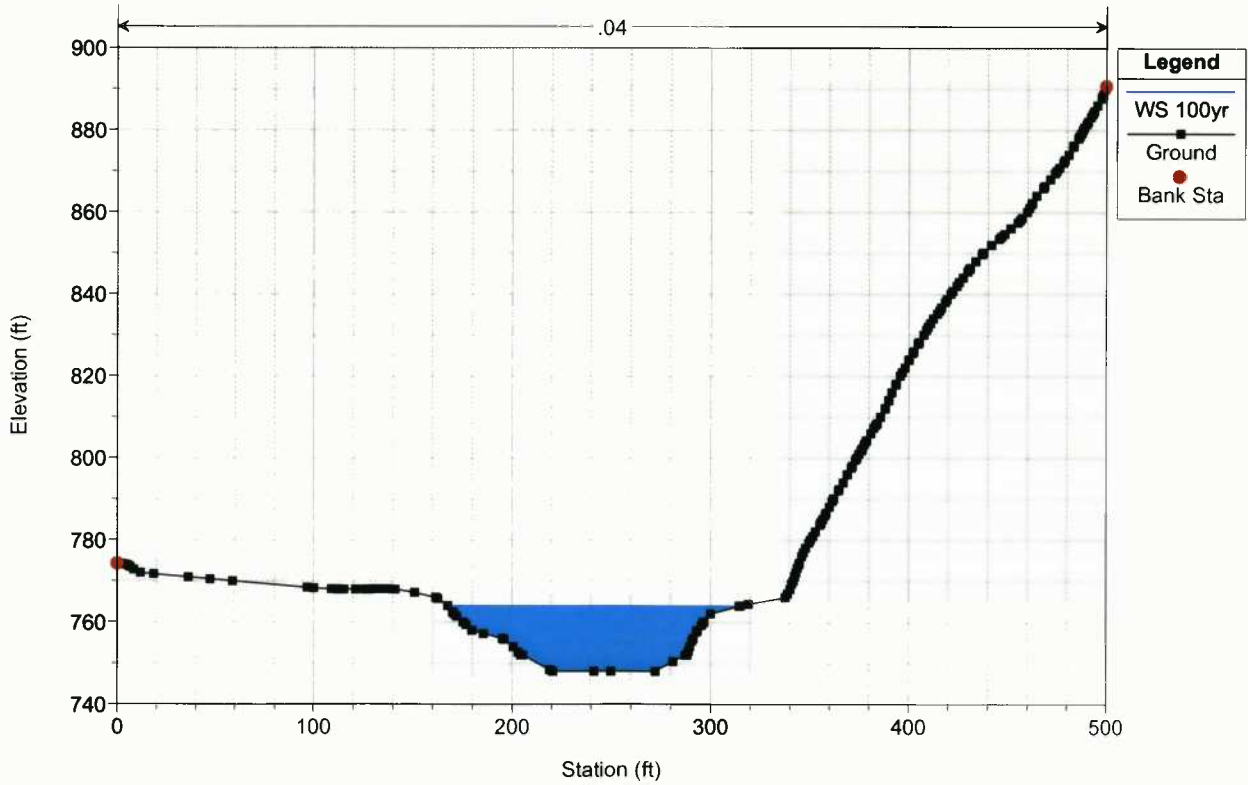
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RS = 700



Middle Island Creek Existing Plan: Middle Island Creek Existing 5/25/2016
RS = 525



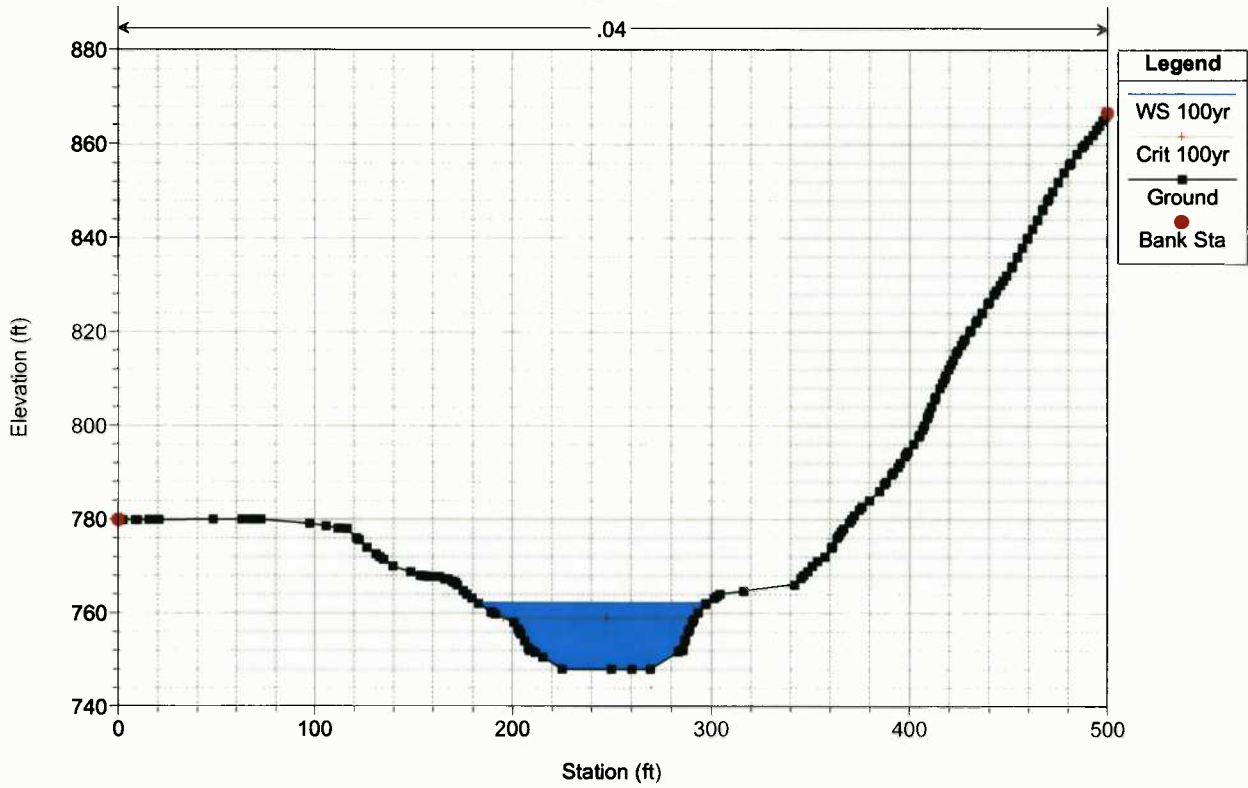
Middle Island Creek Existing Plan: Middle Island Creek Existing 5/25/2016
RS = 300



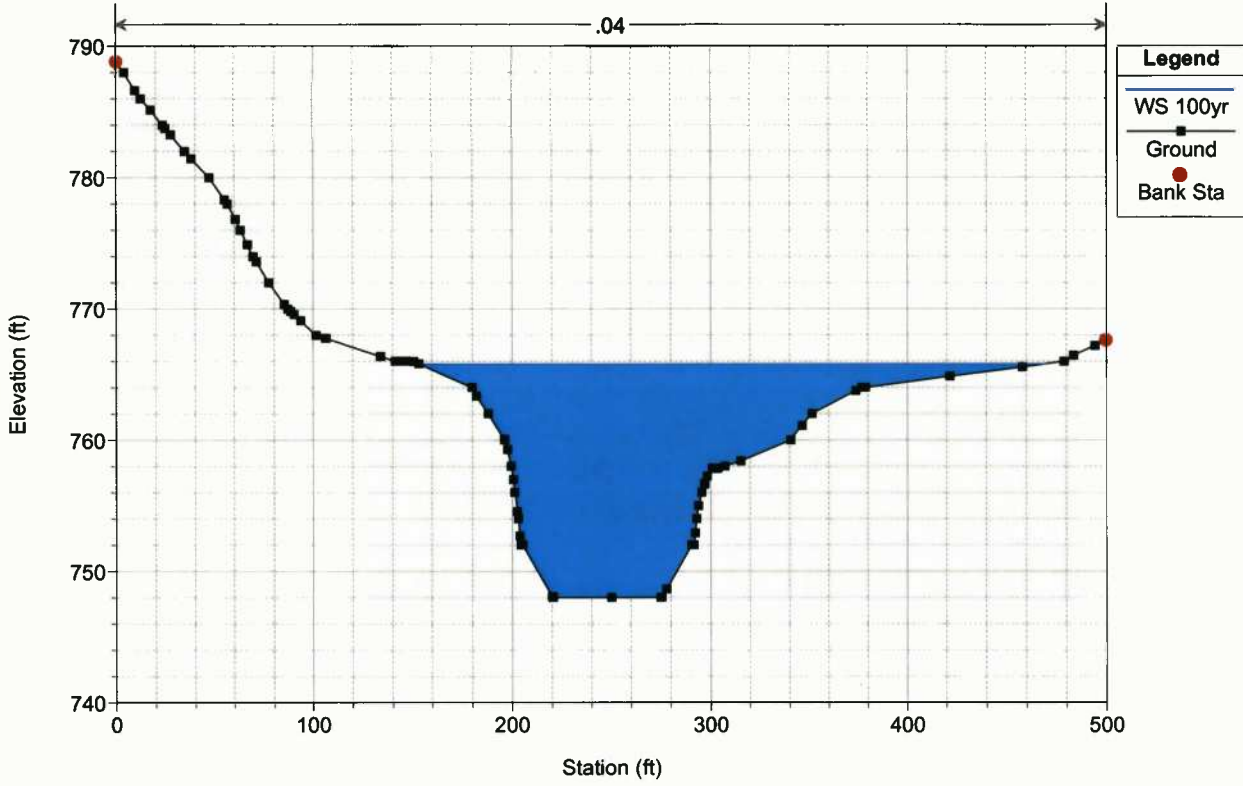
Middle Island Creek Existing

Plan: Middle Island Creek Existing 5/25/2016

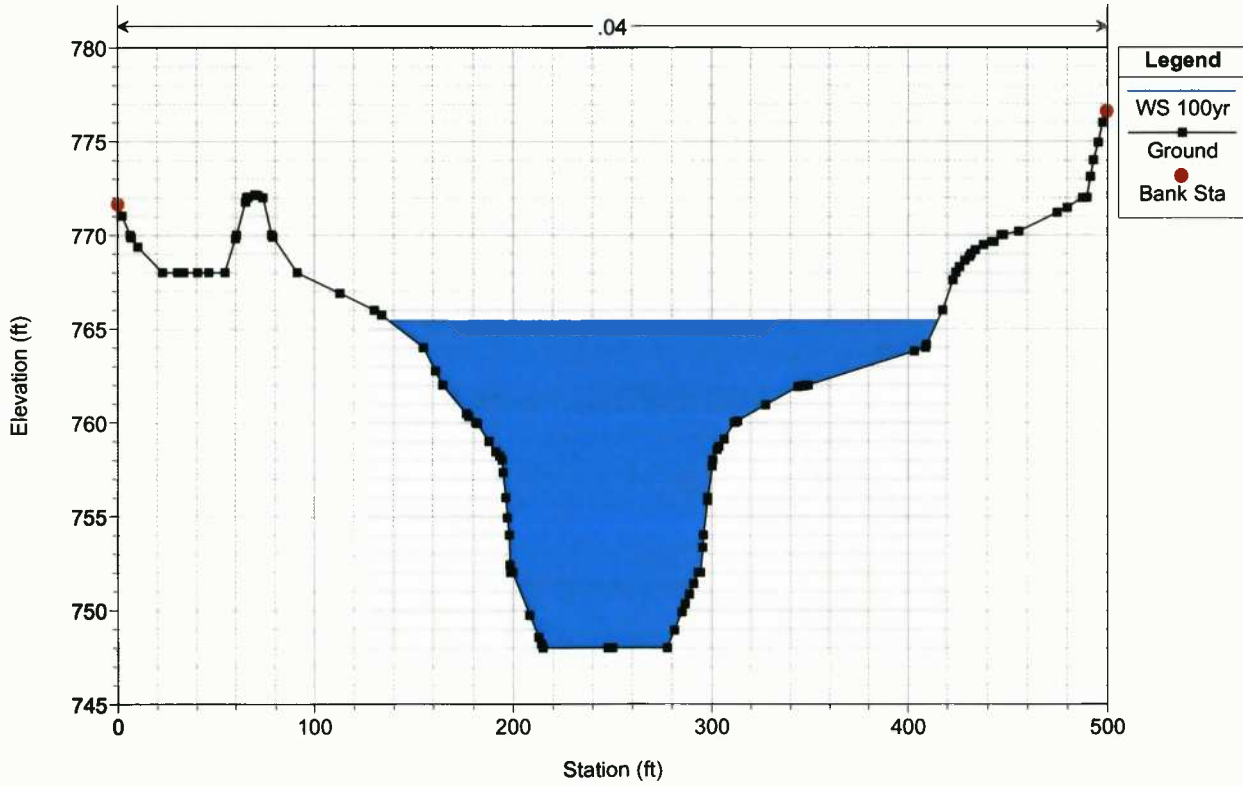
RS = 100



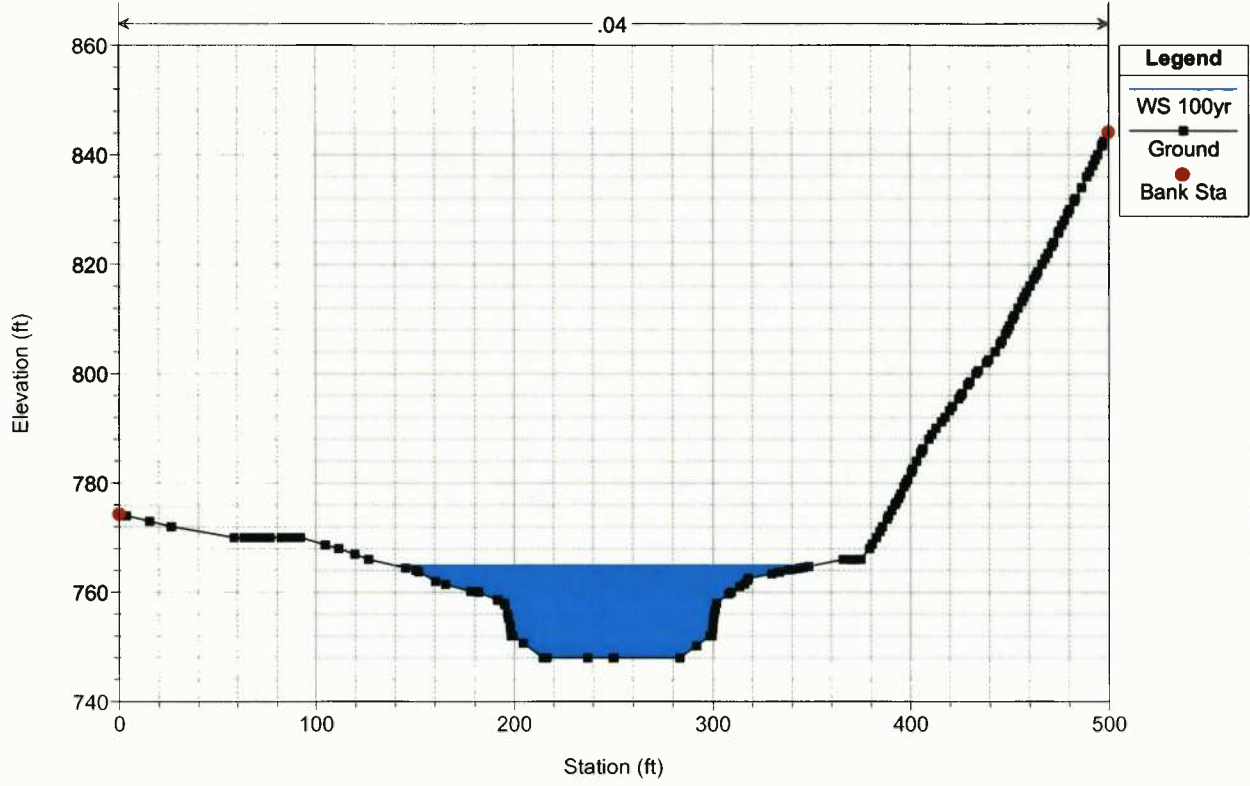
Middle Island Creek Proposed Plan: Middle Island Creek Proposed 5/25/2016
RS = 900



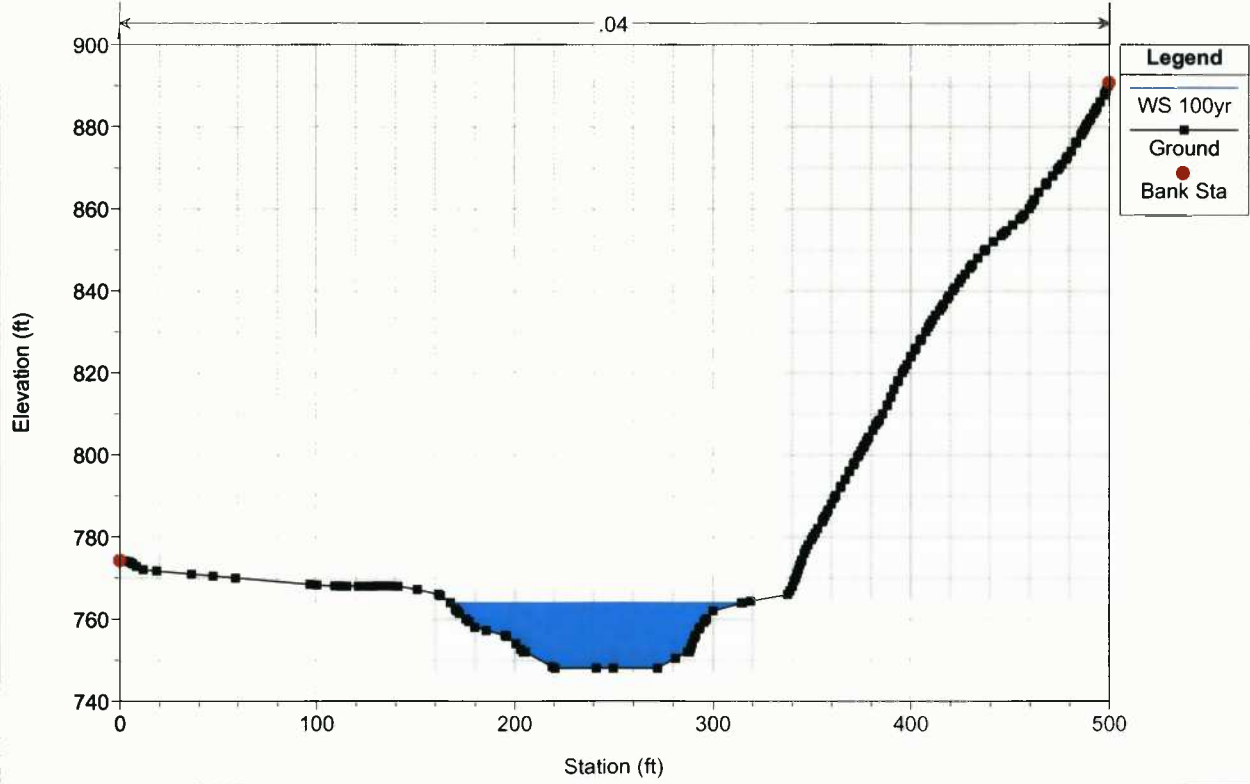
Middle Island Creek Proposed Plan: Middle Island Creek Proposed 5/25/2016
RS = 700



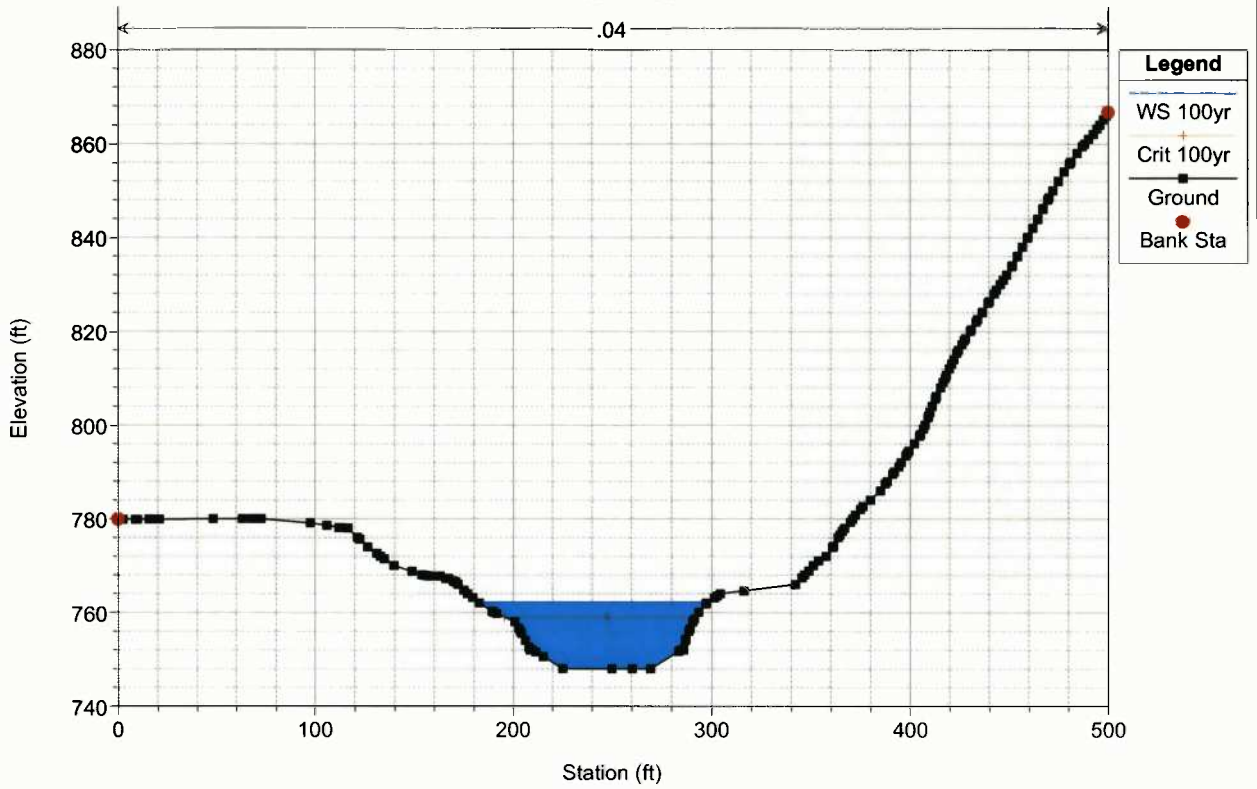
Middle Island Creek Proposed Plan: Middle Island Creek Proposed 5/25/2016
RS = 525



Middle Island Creek Proposed Plan: Middle Island Creek Proposed 5/25/2016
RS = 300

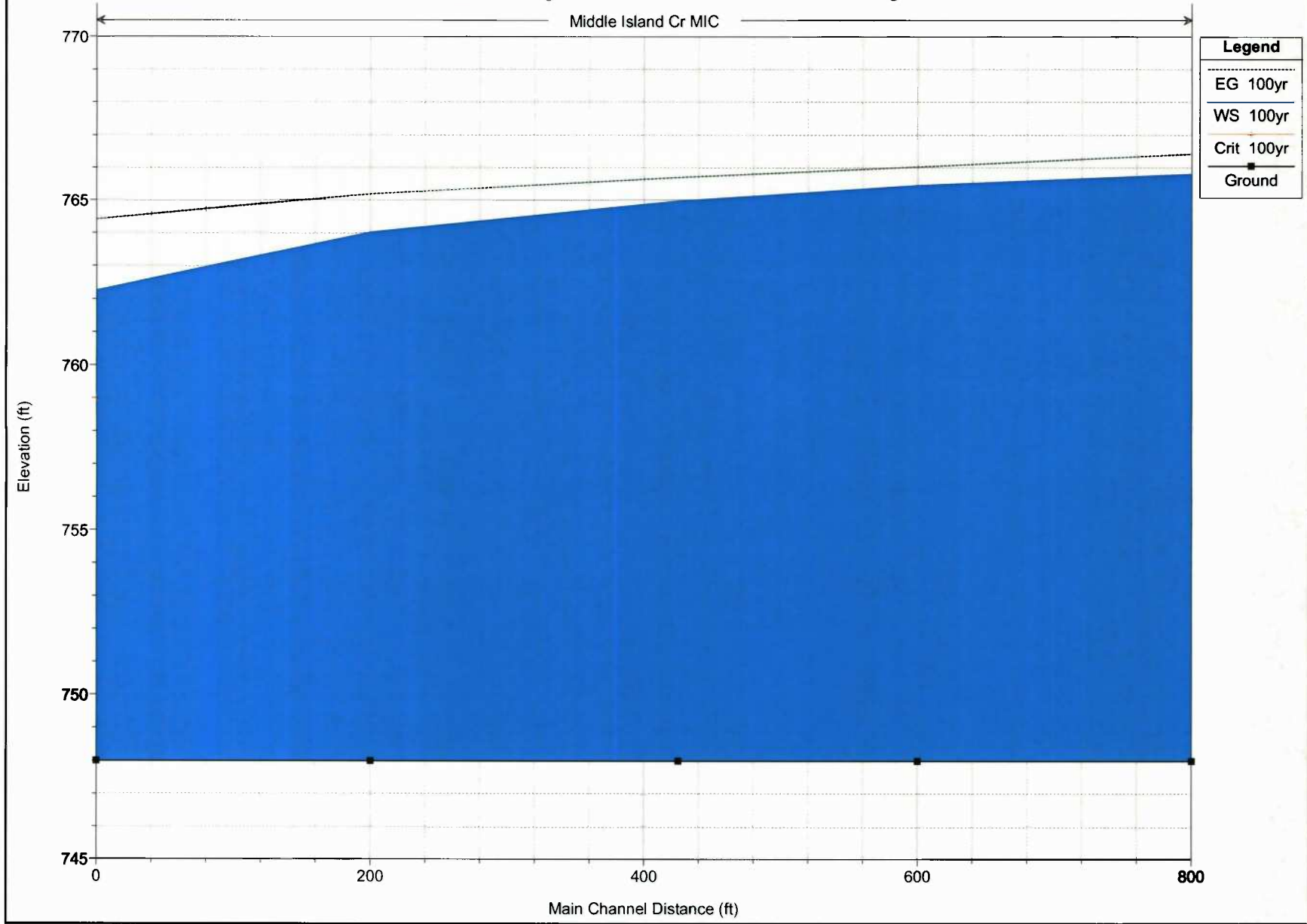


Middle Island Creek Proposed Plan: Middle Island Creek Proposed 5/25/2016
RS = 100



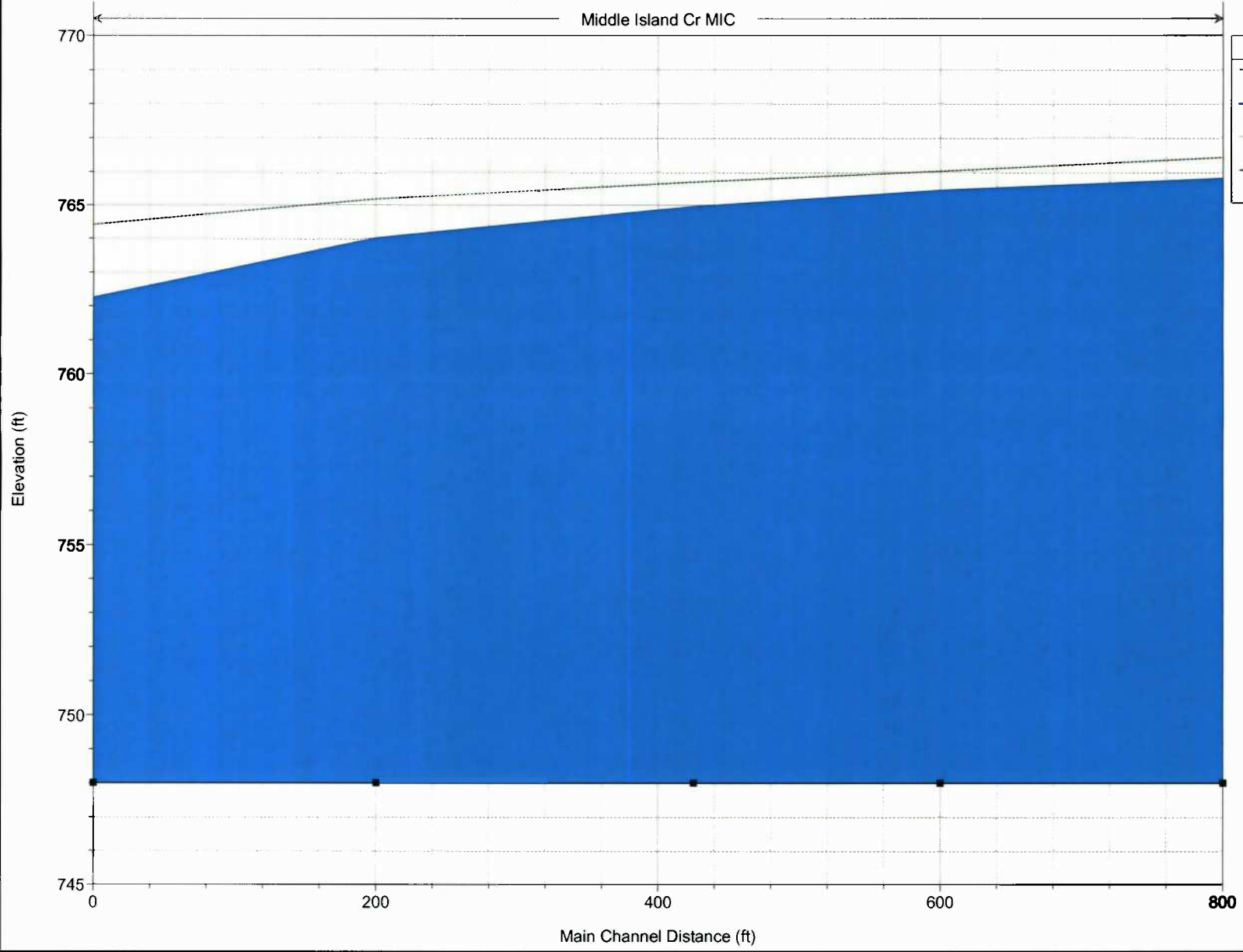
Middle Island Creek Existing Plan: Middle Island Creek Existing 5/25/2016

Middle Island Cr MIC



Middle Island Cr MIC

Legend	
EG 100yr	—
WS 100yr	—
Crit 100yr	—
Ground	■





MIDDLE ISLAND CREEK TRUCK PAD ADDITIONAL ENTRANCE HYDROLOGIC & HYDRAULIC ANALYSIS



LOCATION MAP
WEST UNION, WV 7.5M USGS QUADRANGLE
SCALE: 1"=1000'

WEST UNION DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA



Engineers and Land Surveyors
10125 Mason Dixon Hwy.
Burton, WV 26562-9656
(304) 662-6486

GENERAL NOTES

1. THE EXISTING 2' CONTOURS UTILIZED IN THIS PLAN ARE FROM BLUE MOUNTAIN AERIAL MAPPING. THE AREA WAS FLOWN ON MARCH 27, 2016.
2. PROPERTY BOUNDARIES AND LANDOWNER INFORMATION SHOWN ON THIS PLAN ARE BASED ON TAX ASSESSMENT DATA.
3. THE HORIZONTAL DATUM IS NAD 83 WEST VIRGINIA STATE PLANE, NORTH ZONE.
4. THE COMPUTER PROGRAM HEC-RAS V4.1.0 WAS USED TO DETERMINE THE 100 YR EXITING AND PROPOSED FLOODPLAIN LIMITS SHOWN ON THESE PLANS.

PROPERTY OWNERS

1. CNG TRANSMISSION CORP
08-7-32
2. HUNT, BETTY JEAN (LIFE)
08-7-26

SHEET INDEX	
DRAWING NUMBER	DRAWING NAME
1	COVER SHEET
2	FLOODPLAIN SITE PLAN
3	FLOODPLAIN SITE PLAN W/ ORTHO
4	FLOODPLAIN SECTION (1 OF 2)
5	FLOODPLAIN SECTION (2 OF 2)

PRELIMINARY

NOTE: DRAWING WAS CREATED ON 22x34 PAPER. 11x17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.



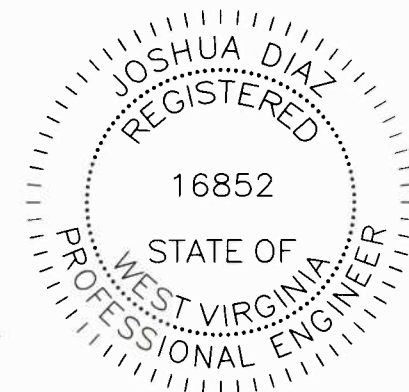
Know what's below.
Call before you dig.

CERTIFICATION:

I DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE EROSION AND SEDIMENT CONTROL PLAN AND SITE RESTORATION PLAN AND POST CONSTRUCTION BMPs ARE TRUE AND CORRECT, REPRESENT ACTUAL FIELD CONDITIONS AND ARE IN ACCORDANCE WITH THE WEST VIRGINIA CODE AND THE DEPARTMENT'S RULES AND REGULATIONS. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

SIGNATURE: _____

DATE: 5/25/2016



Blue Mountain Inc.
Engineers and Land Surveyors
10125 Mason Dixon Hwy.
Burton, WV 26562-9656
(304) 662-6486

120 PROFESSIONAL PLACE
PROFESSIONAL BUILDING FOUR
BRIDGEPORT, WV 26330

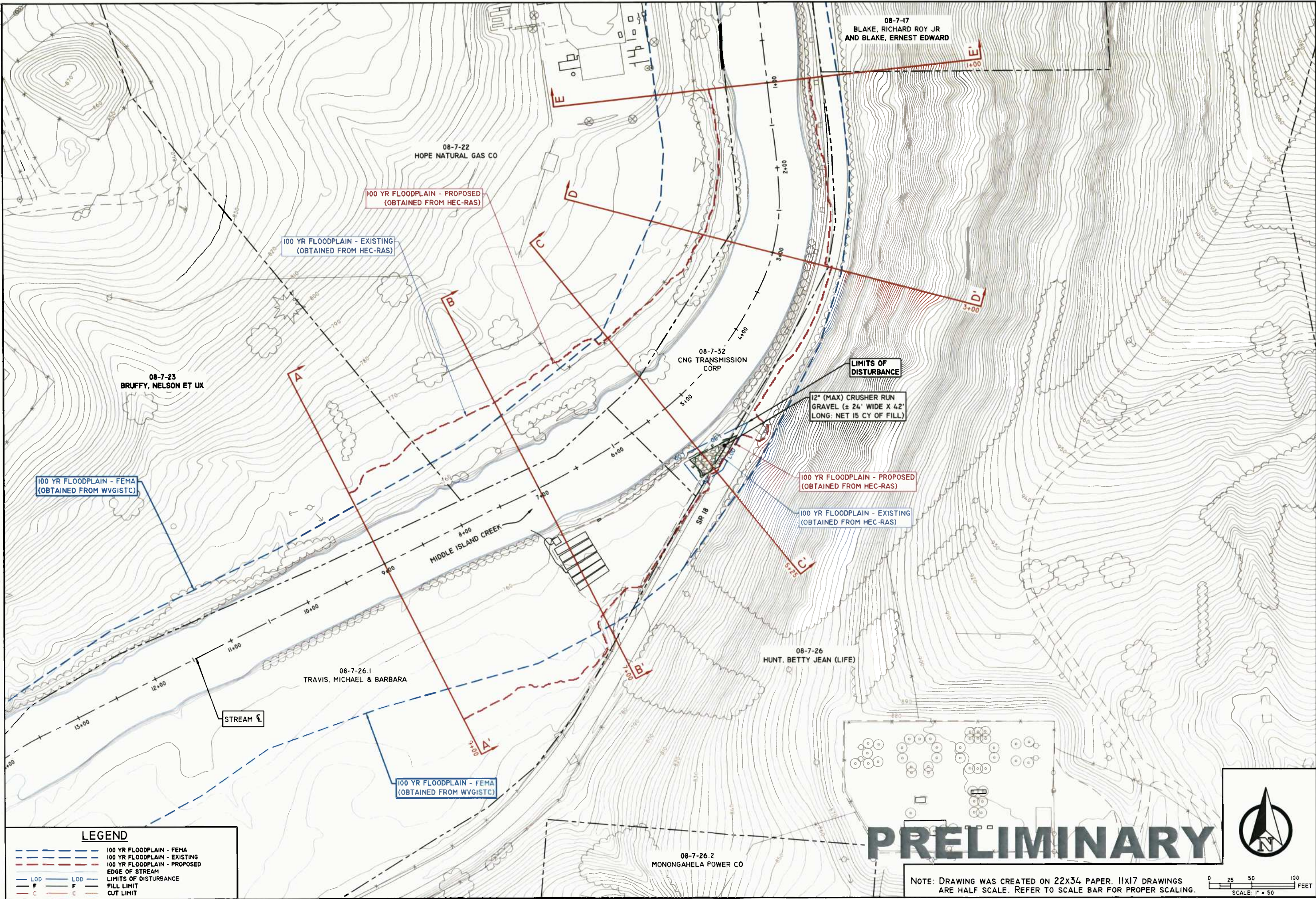


MIDDLE ISLAND CREEK TRUCK
PAD ADDITIONAL ENTRANCE
COVER SHEET

REVISIONS

DATE	TYPE

DRAWN BY: AFF
CHECKED BY: JND
DATE: 05/25/16
SCALE: AS SHOWN
JOB NO:
DRAWING NAME: MIDDLE ISLAND CREEK TRUCK PAD
SHEET NO. 1



REVISIONS

DATE	TYPE

DRAWN BY: APF
CHECKED BY: JND
DATE: 05/25/16
SCALE: AS SHOWN
JOB NO.
DRAWING NAME: MIDDLE ISLAND CREEK TRUCK PAD



100 YR FLOODPLAIN - FEMA
(OBTAINED FROM WVGSTC)

100 YR FLOODPLAIN - EXISTING
(OBTAINED FROM HEC-RAS)

100 YR FLOODPLAIN - PROPOSED
(OBTAINED FROM HEC-RAS)

100 YR FLOODPLAIN - PROPOSED
(OBTAINED FROM HEC-RAS)

100 YR FLOODPLAIN - EXISTING
(OBTAINED FROM HEC-RAS)

08-7-26
HUNT, BETTY JEAN (LIFE)

08-7-26.2
MONONGAHELA POWER CO

LIMITS OF
DISTURBANCE
12" (MAX) CRUSHER RUN
GRAVEL (± 24' WIDE X 42'
LONG: NET 15 CY OF FILL)

LEGEND

--- 100 YR FLOODPLAIN - FEMA
- - - 100 YR FLOODPLAIN - EXISTING
--- 100 YR FLOODPLAIN - PROPOSED
--- EDGE OF STREAM
--- LOD --- LOD --- LIMITS OF DISTURBANCE
--- F --- F --- FILL LIMIT
--- C --- C --- CUT LIMIT

NOTE: DRAWING WAS CREATED ON 22X34 PAPER. 11X17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.



Blue Mountain Inc.
Engineers and Land Surveyors
10135 Mason Drive Hwy
Bartonsville, WV 26632-9656
(304) 662-6486

120 PROFESSIONAL PLACE
PROFESSIONAL BUILDING FOUR
BRIDGEPORT, WV 26330

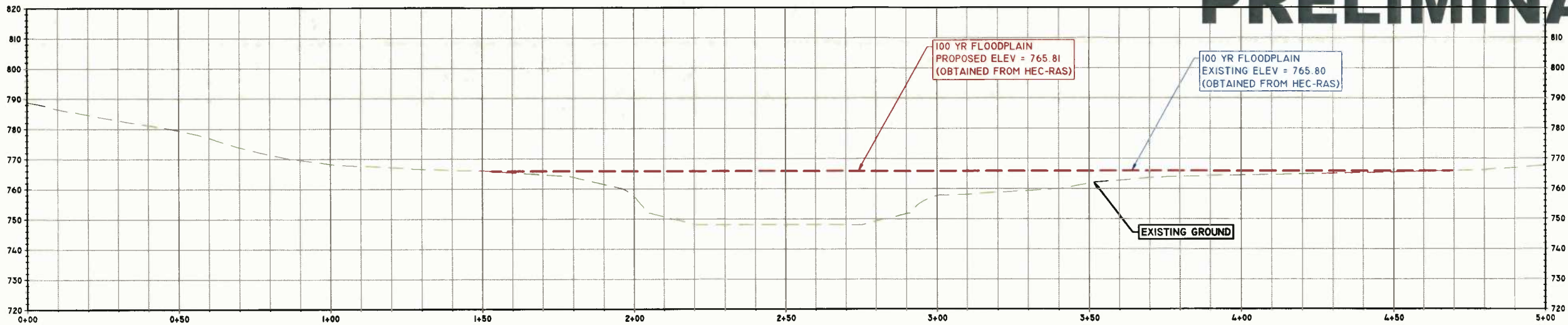
EQT

**MIDDLE ISLAND CREEK TRUCK
PAD ADDITIONAL ENTRANCE
FLOODPLAIN SITE PLAN W/ ORTHO**

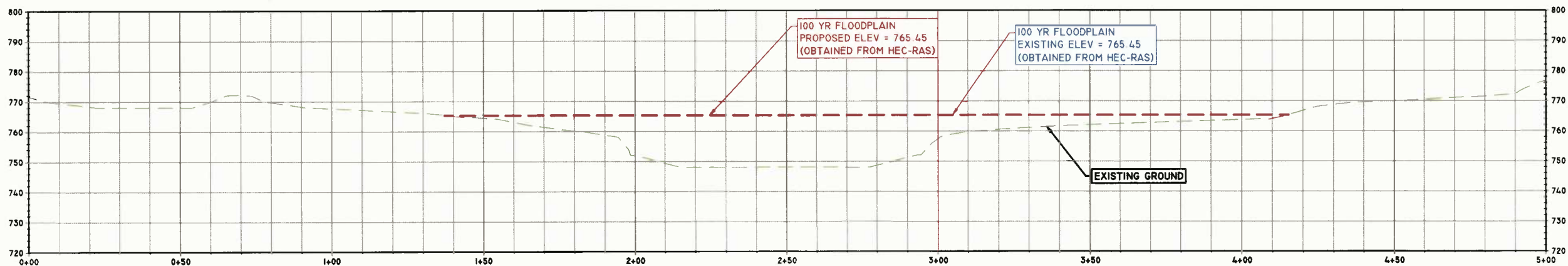
REVISIONS	
DATE	TYPE

DRAWN BY: AFF
CHECKED BY: JMD
DATE: 05/28/16
SCALE: AS SHOWN
JOB NO:
DRAWING NAME: MIDDLE ISLAND CREEK TRUCK PAD
SHEET NO. 3

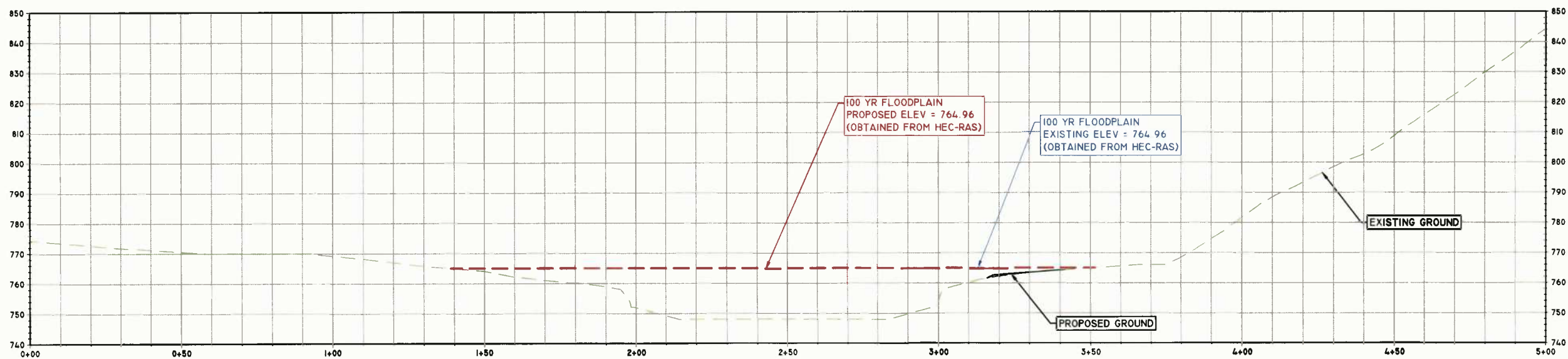
PRELIMINARY



SECTION A-A'
SCALE: 1" = 20'



SECTION B-B'
SCALE: 1" = 20'


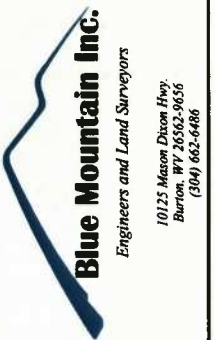


SECTION C-C'
SCALE: 1" = 20'

LEGEND

	100 YR FLOODPLAIN - EXISTING
	100 YR FLOODPLAIN - PROPOSED

NOTE: DRAWING WAS CREATED ON 22x34 PAPER. 11x17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.

120 PROFESSIONAL PLACE
PROFESSIONAL BUILDING FOUR
BRIDGEPORT, WV 26330



MIDDLE ISLAND CREEK TRUCK
PAD ADDITIONAL ENTRANCE
FLOODPLAIN SECTIONS (1 OF 2)

REVISIONS

DATE	TYPE

DRAWN BY: AFF
CHECKED BY: JND
DATE: 05/25/16
SCALE: AS SHOWN
JOB NO.
DRAWING NAME: MIDDLE ISLAND CREEK TRUCK PAD

SHEET NO. 4



Blue Mountain Inc.
11023 Mason Dixon Highway
Burton, WV 26562
Ph: (304) 662-6486
Fax: (304) 662-6501

October 16, 2017

To: Mr. George Eidel
Doddridge County Floodplain Office
105 Court Street, Suite 3
West Union, WV 26456
(304) 873-1343
doddridgecountyfpm@gmail.com

Subject: **Doddridge County Floodplain Permit – Permit Extension**
EQT Production Company
Middle Island Creek Truck Pad

Dear Mr. George Eidel,

Enclosed please find one original and one copy of the completed Doddridge County Floodplain Permit- Permit Extension request and the associated fee for the following project:

Applicant: EQT Production Company

Project Name: Middle Island Creek Truck Pad – Permit Extension

Project Description: EQT Production Company is requesting a year extension of the permit received from Doddridge Co. on July 25, 2016, permit number: 16-426. The proposed work is the installation of a second entrance for an existing truck pad along SR18. This truck pad entrance will require 15 cubic yards of gravel fill for access.

An H&H Study has been performed by Blue Mountain, Inc. on behalf of EQT Production Company. Please find this attached with the permit package.

Please contact Kaley DuCoeur at 304-662-6486 or BMI@bluemtninc.com if you have any questions regarding this request.

Respectfully,
Blue Mountain, Inc.

Kaley DuCoeur
Environmental Scientist

Enclosures
Cc: C. Chalmers



Permit#	<u>17-490</u>
Project Name:	_____
Permittees Name:	_____

Doddridge County, WV

Floodplain Development Permit Application

This document is to be used for projects that impact/potentially impact the FEMA—designated floodplain and/or floodway of Doddridge County, WV pursuant to the rules and regulations established by all applicable Federal, State and local laws and ordinances, including the Doddridge County Floodplain Ordinance.

SECTION 1: GENERAL PROVISIONS (APPLICANT TO READ AND SIGN)

1. No work may start until a permit is issued.
2. The permit may be revoked if any false statements are made herein.
3. If revoked, all work must cease until permit is re-issued.
4. Development shall not be used or occupied until a Certificate of Compliance is issued.
5. The permit will expire if no work is commenced within six months of issuance.
6. Applicant is hereby informed that other permits may be required to fulfill local, state, and federal requirements.
7. Applicant hereby gives consent to the Floodplain Administrator/Manager or his/her representative to make inspections to verify compliance.
8. I THE APPLICANT CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

APPLICANT'S SIGNATURE _____

DATE 10/13/14

Doddridge County Commercial/Industrial
Floodplain Development Permit Application

Applicant Information:

Please provide all pertinent data.

Applicant Information		
Responsible Company Name: EQT Production Corporation		
Corporate Mailing Address: 120 Professional Place		
City: Bridgeport	State: WV	Zip: 26330
Corporate Point of Contact (POC): Mr. Cory Chalmers		
Corporate POC Title: Environmental Coordinator		
Corporate POC Primary Phone: (304) 848-0061		
Corporate POC Primary Email: CChalmers@eqt.com		
Corporate FEIN:	Corporate DUNS:	
Corporate Website: www.eqt.com		
Local Mailing Address: 120 Professional Place		
City: Bridgeport	State: WV	Zip: 26330
Local Project Manager (PM):		
Local PM Primary Phone:		
Local PM Secondary Phone:		
Local PM Primary Email:		
Person Filing Application: Ms. Kaley DuCoeur		
Applicant Title: Project Scientist		
Applicant Primary Phone: (304) 662-6486		
Applicant Secondary Phone: FAX: (304) 662-6501		
Applicant Primary Email: BMI@BlueMtnInc.com		

Doddridge County Commercial/Industrial
Floodplain Development Permit Application

Proposed Development:

Please check all elements of the proposed project that apply.

DESCRIPTION OF WORK (CHECK ALL APPLICABLE BOXES)

A. STRUCTURAL DEVELOPMENT

- | <u>ACTIVITY</u> | <u>STRUCTURAL TYPE</u> |
|--|---|
| <input type="checkbox"/> New Structure | <input type="checkbox"/> Residential (1 – 4 Family) |
| <input type="checkbox"/> Addition | <input type="checkbox"/> Residential (more than 4 Family) |
| <input type="checkbox"/> Alteration | <input type="checkbox"/> Non-residential (floodproofing) |
| <input type="checkbox"/> Relocation | <input type="checkbox"/> Combined Use (res. & com.) |
| <input type="checkbox"/> Demolition | <input type="checkbox"/> Replacement |
| <input type="checkbox"/> Manufactured/Mobil Home | |

B. OTHER DEVELOPMENT ACTIVITIES:

- Fill Mining Drilling Pipelining
- Grading
- Excavation (except for STRUCTURAL DEVELOPMENT checked above)
- Watercourse Alteration (including dredging and channel modification)
- Drainage Improvements (including culvert work)
- Road, Street, or Bridge Construction
- Subdivision (including new expansion)
- Individual Water or Sewer System
- Other (please specify)

Doddridge County Commercial/Industrial
Floodplain Development Permit Application

Development Site/Property Information:

Please provide physical description of the site/property, along with pertinent ownership (surface and mineral rights) data as applicable. Attach appropriate maps from the WV Flood Tool showing location of proposed development. Use additional copies of this page if development spans multiple property boundaries. Designate each property by number (i.e. Property 1 of 1, Property 2 of 7, etc.)

Property Designation: 1 of 1

Site/Property Information:		
Legal Description:		
2.44 AC M I CREEK		
Physical Address/911 Address: W Virginia 18, West Union, WV 26456		
Decimal Latitude/Longitude: 39.308764, -80.780469		
DMS Latitude/Longitude: 39° 18' 31.55"N; 80° 46' 49.69"W		
District: 8	Map: 7	Parcel: 32
Land Book Description:		
Deed Book Reference:		
Book: 110/ Page: 195		
Tax Map Reference:		
West Union		
Existing Buildings/Use of Property:		

Floodplain Location Data: (to be completed by Floodplain Manager or designee)			
Community:	Number:	Panel:	Suffix:
Location (Lat/Long):		Approximate Elevation:	
		Estimated BFE:	
Is the development in the floodway?		Is the development in the floodplain?	
Yes -- No		Yes No Zone: _____	
Notes:			

Doddridge County Commercial/Industrial
Floodplain Development Permit Application

Property Owner Data:

Please provide data on current site/property landowner(s), both surface and mineral rights (as applicable). Use additional copies of this page as needed. Designate each page in relation to each property listed above.

Property Designation: 1 of 1

Property Owner Data:		
Name of Primary Owner (PO): CNG TRANSMISSION CORP % DOMINION TRANS		
PO Address: 625 LIBERTY AV MAIL DROP 18-01		
City: PITTSBURGH	State: PA	Zip: 15221
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Surface Rights Owner Data:		
Name of Primary Owner (PO):		
PO Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Mineral Rights Owner Data: (As Applicable):		
Name of Primary Owner (PO):		
PO Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Doddridge County Commercial/Industrial
Floodplain Development Permit Application

Contractor Data:

Please provide all pertinent data for contractors and sub---contractors that may be participating in this project. Use additional copies of this page as needed. Designate each page in relation to each property listed above.

Property Designation: ___ of ___

Contractor/Sub-Contractor (C/SC) Information:		
C/SC Company Name: ** To Be Determined**		
C/SC WV License Number:		
C/SC FEIN:	C/SC DUNS:	
Local C/SC Point of Contact (POC):		
Local C/SC POC Title:		
C/SC Mailing Address:		
City:	State:	Zip-Code:
Local C/SC Office Phone:		
Local C/SC POC Phone:		
Local C/SC POC E-Mail:		

Engineer Firm Information:		
Engineer Firm Name: Blue Mountain, Inc.		
Engineer WV License Number: 449		
Engineer Firm FEIN: 550704426	Engineer Firm DUNS: 805979713	
Engineer Firm Primary Point of Contact (POC): Nathan Huggins		
Engineer Firm Primary POC Title: Project Designer		
Engineer Firm Mailing Address: 11023 Mason Dixon Hwy		
City: Burton	State: WV	Zip-Code: 26562
Engineer Firm Office Phone: (304) 662-6486		
Engineer Firm Primary POC Phone:		
Engineer Firm Primary POC E-Mail: BMI@BlueMtnInc.com		

UPSTREAM

Adjacent and/or Affected Landowners Data

Please provide data for all adjacent and/or affected surface owners (both up and down stream) whose property may be impacted by proposed development as demonstrated by a floodplain study or survey. Use additional copies of this page as needed.

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Spencer Elizabeth Anne ETAL		
Physical Address: 146 Mastons Road		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Spencer Elizabeth Anne		
Physical Address: 219 Cedar Run Road		
City: Friendly	State: WV	Zip: 26146
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Hope Natural Gas Co.		
Physical Address: 625 Liberty AV Mail Drop 18-01		
City: Pittsburgh	State: PA	Zip: 15221
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Charity Gas Inc.		
Physical Address: 9844 Meathouse Fork Road		
City: Salem	State: WV	Zip: 26426
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

UPSTREAM

Adjacent and/or Affected Landowners Data

Please provide data for all adjacent and/or affected surface owners (both up and down stream) whose property may be impacted by proposed development as demonstrated by a floodplain study or survey. Use additional copies of this page as needed.

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Charity Gas Inc.		
Physical Address: Rt. 3 Box 62		
City: Salem	State: WV	Zip: 26462
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO):		
Physical Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO):		
Physical Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO):		
Physical Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

DOWNSTREAM

Adjacent and/or Affected Landowners Data

Please provide data for all adjacent and/or affected surface owners (both up and down stream) whose property may be impacted by proposed development as demonstrated by a floodplain study or survey. Use additional copies of this page as needed.

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Edgell Gregory & Denise		
Physical Address: 1873 WV Rt. 18		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): McCutchan Ralph & Shelia		
Physical Address: 1905 WV Rt 18		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Weekley Joshua & Kimberly		
Physical Address: 1925 WV Route 18N		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Lapo Joyce		
Physical Address: HC 69 Box 5		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

DOWNSTREAM

Adjacent and/or Affected Landowners Data

Please provide data for all adjacent and/or affected surface owners (both up and down stream) whose property may be impacted by proposed development as demonstrated by a floodplain study or survey. Use additional copies of this page as needed.

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Stamm Jeffery		
Physical Address: Rt 5 Box 350		
City: Salem	State: WV	Zip: 26426
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Paul & Sharon Weekley		
Physical Address: 2374 WV Rt. 18N		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Rogers Brandon		
Physical Address: 2213 WV Rt. 18 N		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Nicholson Rebecca		
Physical Address: 2285 WV Route 18		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

DOWNSTREAM

Adjacent and/or Affected Landowners Data

Please provide data for all adjacent and/or affected surface owners (both up and down stream) whose property may be impacted by proposed development as demonstrated by a floodplain study or survey. Use additional copies of this page as needed.

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Travis Michael & Barbara		
Physical Address: 710 Crystal Lake R.		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Upstream		
Name of Primary Owner (PO): Coastal Forest Resources Co.		
Physical Address: PO Box 709		
City: Buckhannon	State: WV	Zip: 26201
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO): Bruffy Nelson et ux		
Physical Address: 309 Tonkin Station Road		
City: West Union	State: WV	Zip: 26456
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Adjacent Property Owner Data: Downstream		
Name of Primary Owner (PO):		
Physical Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		

Site Plan

A Site Plan is an accurate and detailed map of the proposed development for this project. It shows the size, shape, location and special features of the project property, and the size and location of any development planned to the property, especially as that development will impact the floodplain and/or floodway. Site plans show what currently exists on the project property, and any changes or improvements you are proposing to make. **A certified and licensed engineering firm should complete site plans.**

A SITE PLAN MUST CONTAIN THE FOLLOWING INFORMATION:

1. Legal description of the parcel, north arrow and scale
2. All property lines and their dimensions
3. Names of adjacent roads, location of driveways
4. Location of sloughs, tributaries, streams, rivers, wetlands, ponds, and lakes, with setbacks indicated, and including FEMA floodplain data based on most updated FIRM.
5. Location, size, shape of all buildings, existing and proposed, with elevation of lowest floor indicated.
6. Location and dimensions of existing or proposed on-site sewage systems.
7. Location of all propane tanks, fuel tanks or other liquid storage tanks whether above ground or below ground level.
8. Location and dimensions of any proposed pipeline placement(s) into floodplain/floodway.
9. Location and dimensions of any roadway development into floodplain/floodway. *(Includes initial development access roads)*
10. Location and dimensions of any bridge and/or culvert development into floodplain/floodway.
11. Location and dimensions of any storage yard or facility into the floodplain/floodway.
12. Location of any existing utilities and/or proposed utility placement and/or displacement.
13. Location, dimensions and depth of any existing or proposed fill on site.
14. A survey showing the **existing ground elevations** of at least location on the building site. **ELEVATION NOTE:** All vertical datum will reference either NGVD 29 or NAVD 88. Assumed datum will not be acceptable unless the property is located in an area where vertical datum has not been published. For those areas where vertical datum has not been established, a site plan with contours, elevations using assumed datum, high water marks and existing water levels of sloughs, rivers, lakes or streams and proposed lowest floor elevation.

Applicant

Please read print name, sign and date below:

- I certify that I am authorized to submit this application for the primary project developer.
- I certify that the information included in this application is to the best of my knowledge true and complete.
- I certify that all required Federal, State, and local permits required by law and/or ordinance for the above described development of this project have been properly attained, are current and valid, and must be presented with this application before a Doddridge County Floodplain Permit may be issued.
- I understand that if in the course of the development project additional permits become required that were not needed during the initial proposal, the primary developer must notify the Doddridge County Floodplain Manager within 48 hours of such need, and that a "Stop Work" order may be issued for all project work directly impacting the floodplain or floodway, until such time the required additional permits are acquired.
- I understand that once the floodplain permit is submitted, the application will be entered into official public record at the next regularly scheduled Doddridge County Commission meeting after the date of submittal.
- I understand that from the date of submittal of the fully completed permit application, the Doddridge County Floodplain Manager has ninety (90) days to make a determination to either grant or deny said permit application. During this approval period, the Doddridge County Floodplain Manager may, at his or her discretion, conduct a review and/or additional study of provided documentation by means of an independent engineering firm. All costs associated with said review and/or study must be reimbursed to the County before issuance of approved permit.
- I understand that during the approval period, the Doddridge County Floodplain Manager or designee may at his or her discretion conduct site visits and document conditions of proposed development pursuant to the permit application.
- I understand that once the Floodplain Permit is granted, the permit will be entered into official public record at the next scheduled Doddridge County Commission meeting after the date of issuance. Appeals to the permit may be made no later than twenty (20) days after said issuance. If a valid appeal is submitted, as determined by the Doddridge County Floodplain Manager, a "Stop Work" order will be issued for all project development directly involving the floodplain or floodway. A public hearing by the Doddridge County Appeals Board will be scheduled no less than ten (10) days after the next regularly scheduled Doddridge County Commission meeting.
- I understand that all decisions of the Doddridge County Appeals Board shall be final.
- I understand issuance of a Floodplain Permit authorizes me to proceed with construction as proposed. A Certificate of Compliance is required upon substantial completion of the project.
- In signing this application, the primary developer hereby grants the Doddridge County Floodplain Manager or designee the right to enter onto the above-described location to inspect the development work proposed, in progress, and/or completed.
- I understand that if I do not follow exactly the site-plan submitted and approved by this permit that a "Stop Work" order may be issued by the Wirt County Floodplain Manager and that I must stop all construction immediately until discrepancies of actual work vs. proposed work is resolved.

Applicant Signature

Date: 10/13/17

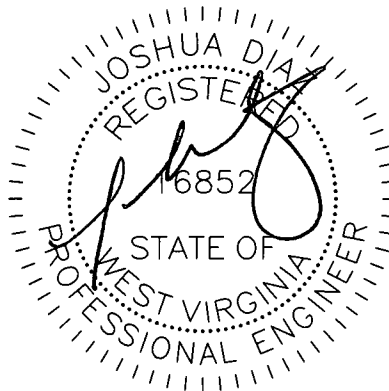
Applicant Printed Name:

Cory Chalmet

HYDROLOGIC AND HYDRAULIC ANALYSIS

MIDDLE ISLAND CREEK TRUCK PAD ADDITIONAL ENTRANCE

JUNE 2016



Summary of Findings: Based on the attached H&H analysis, it was determined that the proposed floodplain is insignificantly raised by 0.01' at the upstream, and the floodway will have no-rise upstream or downstream.

Prepared For:



120 Professional Place
Professional Building Four
Bridgeport, WV 26330

Prepared By:

Blue Mountain, Inc.
10125 Mason Dixon Hwy
Burton, WV 26562



Blue Mountain Inc.

bmi@bluemtninc.com 304.662.6486

www.bluemtninc.com

HYDROLOGIC AND HYDRAULIC ANALYSIS

For the

EQT MIDDLE ISLAND CREEK TRUCK PAD ADDITIONAL ENTRANCE

West Union District,
Doddridge County, West Virginia

A. Purpose

EQT is proposing a second entrance for an existing truck pad along SR 18. This truck pad entrance will require 12" (maximum) of gravel for access. The appropriate permits are being pursued for this fill. This report identifies the 100 year/ 24 hour rainfall event at the proposed gravel entrance.

B. Drainage Area

The contributing drainage area for the site was analyzed utilizing USGS contours. The attached "Watershed Limits" map shows the watershed limits for this site. This contributing drainage area has been identified as 78,700 acres.

C. Runoff Discharge Methods

Runoff from the contributing drainage area in the existing land use configuration was calculated using the USDA TR-55 method for runoff modeling.

A summary of the Curve Number (CN) tabulations can be found within the attached calculations. The resulting composite CN values were entered into a hydrologic modeling program called Hydraflow Hydrographs. Time of Concentration (Tc) values were calculated within this program, utilizing sheet flow, shallow concentrated flow and channel flow. A summary of these values can be found within the attached calculations.

Rainfall data was obtained from NOAA Atlas 14, Volume 2, Version 3 and can be found within the supporting calculations attached within this report.

D. Design Storm

This report analyzes the water elevation of the 100 year/ 24 hour rainfall event at the location of the gravel entrance.

E. Hydrologic Soil Group

The USDA Natural Resources Conservation Service Soil Survey of this area was researched to identify the soil types present within the contributing drainage area of Beham Run. The soil survey showed the presence of Hydrologic soil groups 'A', 'B', 'C' and 'D' within the drainage area. The attached "Web Soil Survey" shows the soil types present within the drainage area.

F. Peak Discharge

The peak discharge has been modeled for the 100 year/ 24 hour rainfall event for the contributing drainage area within Hydraflow Hydrographs. The peak discharge for this storm event has been calculated to be 13,866.08 cfs.

G. Hydraulic Analysis

The computer program Hec-Ras v4.1.0 was used to determine the water surface elevation at the proposed gravel pad. The peak discharge from the 100 year/ 24 hour storm event was used within Hec-Ras. The floodplain limits were mapped using the Hec-Ras program and exported to display on the site plan. Summary output information from Hec-Ras has been provided within the supporting calculations.

H. Results

This report indicates an existing and proposed water surface elevation of 764.96' for the 100 year/ 24 hour rainfall event at this site. The report indicates an existing water surface elevation of 765.80' and a proposed water surface elevation of 765.81' at the adjoining property immediately upstream. The report indicates an existing and proposed water surface elevation of 762.26' at the adjoining property immediately downstream. Based on these findings, it was determined that the proposed floodplain is insignificantly raised by 0.01' at the upstream, and the floodway will have no-rise upstream or downstream.



POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerals](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.332 (0.301-0.367)	0.397 (0.361-0.440)	0.476 (0.432-0.525)	0.536 (0.486-0.592)	0.612 (0.552-0.673)	0.669 (0.602-0.735)	0.723 (0.648-0.792)	0.778 (0.694-0.851)	0.849 (0.754-0.926)	0.900 (0.796-0.981)
10-min	0.517 (0.468-0.570)	0.620 (0.563-0.686)	0.740 (0.671-0.816)	0.828 (0.750-0.913)	0.936 (0.844-1.03)	1.02 (0.912-1.11)	1.09 (0.975-1.19)	1.16 (1.04-1.27)	1.25 (1.11-1.36)	1.31 (1.16-1.43)
15-min	0.633 (0.574-0.698)	0.758 (0.689-0.839)	0.909 (0.824-1.00)	1.02 (0.923-1.12)	1.16 (1.04-1.27)	1.26 (1.13-1.38)	1.35 (1.21-1.48)	1.44 (1.29-1.58)	1.56 (1.38-1.70)	1.64 (1.45-1.79)
30-min	0.838 (0.759-0.924)	1.02 (0.922-1.12)	1.24 (1.13-1.37)	1.41 (1.28-1.56)	1.63 (1.47-1.80)	1.80 (1.61-1.97)	1.95 (1.75-2.14)	2.11 (1.88-2.31)	2.31 (2.05-2.52)	2.46 (2.17-2.68)
60-min	1.02 (0.927-1.13)	1.25 (1.13-1.38)	1.56 (1.42-1.72)	1.80 (1.63-1.99)	2.12 (1.91-2.33)	2.37 (2.13-2.60)	2.61 (2.34-2.86)	2.86 (2.55-3.13)	3.19 (2.83-3.48)	3.45 (3.05-3.76)
2-hr	1.19 (1.07-1.32)	1.44 (1.30-1.61)	1.81 (1.63-2.01)	2.09 (1.87-2.32)	2.47 (2.21-2.73)	2.77 (2.46-3.06)	3.08 (2.73-3.39)	3.39 (2.99-3.73)	3.82 (3.35-4.19)	4.16 (3.62-4.55)
3-hr	1.27 (1.14-1.42)	1.53 (1.38-1.71)	1.92 (1.72-2.13)	2.21 (1.98-2.47)	2.63 (2.34-2.92)	2.95 (2.62-3.27)	3.29 (2.91-3.64)	3.64 (3.20-4.01)	4.12 (3.59-4.53)	4.50 (3.89-4.94)
6-hr	1.51 (1.37-1.68)	1.82 (1.65-2.03)	2.25 (2.04-2.51)	2.60 (2.35-2.89)	3.09 (2.77-3.42)	3.49 (3.11-3.84)	3.90 (3.46-4.28)	4.34 (3.82-4.75)	4.93 (4.31-5.39)	5.42 (4.70-5.91)
12-hr	1.81 (1.64-2.00)	2.16 (1.97-2.39)	2.65 (2.41-2.93)	3.05 (2.76-3.37)	3.62 (3.26-3.98)	4.08 (3.66-4.48)	4.57 (4.07-5.00)	5.09 (4.50-5.55)	5.82 (5.09-6.33)	6.41 (5.56-6.96)
24-hr	2.15 (1.98-2.34)	2.56 (2.36-2.79)	3.10 (2.85-3.38)	3.54 (3.25-3.85)	4.16 (3.81-4.51)	4.65 (4.25-5.05)	5.17 (4.70-5.60)	5.72 (5.17-6.18)	6.46 (5.82-6.97)	7.05 (6.33-7.60)
2-day	2.53 (2.35-2.73)	3.00 (2.78-3.24)	3.60 (3.33-3.89)	4.08 (3.77-4.40)	4.74 (4.38-5.11)	5.27 (4.85-5.67)	5.82 (5.34-6.25)	6.38 (5.83-6.85)	7.13 (6.49-7.65)	7.73 (7.00-8.29)
3-day	2.72 (2.53-2.93)	3.22 (3.00-3.47)	3.85 (3.58-4.14)	4.34 (4.03-4.67)	5.01 (4.64-5.39)	5.55 (5.13-5.95)	6.08 (5.61-6.52)	6.63 (6.09-7.10)	7.36 (6.74-7.88)	7.93 (7.23-8.48)
4-day	2.91 (2.72-3.13)	3.45 (3.22-3.71)	4.09 (3.82-4.40)	4.60 (4.29-4.94)	5.29 (4.91-5.67)	5.82 (5.40-6.23)	6.35 (5.88-6.80)	6.89 (6.36-7.35)	7.60 (6.98-8.10)	8.13 (7.46-8.68)
7-day	3.56 (3.34-3.79)	4.20 (3.93-4.47)	4.92 (4.61-5.24)	5.48 (5.13-5.82)	6.20 (5.80-6.59)	6.75 (6.31-7.17)	7.29 (6.80-7.74)	7.82 (7.27-8.30)	8.50 (7.88-9.01)	9.00 (8.32-9.55)
10-day	4.11 (3.88-4.36)	4.84 (4.56-5.13)	5.62 (5.29-5.94)	6.21 (5.84-6.57)	6.97 (6.55-7.37)	7.54 (7.08-7.97)	8.08 (7.58-8.54)	8.61 (8.06-9.09)	9.27 (8.66-9.79)	9.75 (9.09-10.3)
20-day	5.83 (5.52-6.15)	6.83 (6.48-7.22)	7.81 (7.40-8.25)	8.55 (8.10-9.02)	9.47 (8.96-9.98)	10.1 (9.59-10.7)	10.8 (10.2-11.3)	11.4 (10.7-12.0)	12.1 (11.4-12.7)	12.6 (11.9-13.3)
30-day	7.40 (7.04-7.78)	8.63 (8.22-9.08)	9.76 (9.29-10.3)	10.6 (10.1-11.1)	11.6 (11.1-12.2)	12.4 (11.8-13.0)	13.1 (12.4-13.7)	13.7 (13.0-14.4)	14.4 (13.7-15.2)	15.0 (14.2-15.7)
45-day	9.51 (9.07-9.96)	11.1 (10.6-11.6)	12.4 (11.8-13.0)	13.3 (12.7-14.0)	14.5 (13.8-15.2)	15.3 (14.6-16.1)	16.1 (15.3-16.8)	16.8 (16.0-17.6)	17.6 (16.7-18.4)	18.1 (17.2-19.0)
60-day	11.5 (11.0-12.0)	13.4 (12.8-13.9)	14.8 (14.2-15.5)	15.9 (15.2-16.6)	17.2 (16.4-17.9)	18.1 (17.3-18.9)	18.9 (18.0-19.7)	19.6 (18.7-20.4)	20.4 (19.5-21.3)	21.0 (20.0-21.9)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerals](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	3.98 (3.61-4.40)	4.76 (4.33-5.28)	5.71 (5.18-6.30)	6.43 (5.83-7.10)	7.34 (6.62-8.08)	8.03 (7.22-8.82)	8.68 (7.78-9.50)	9.34 (8.33-10.2)	10.2 (9.05-11.1)	10.8 (9.55-11.8)
10-min	3.10 (2.81-3.42)	3.72 (3.38-4.12)	4.44 (4.03-4.90)	4.97 (4.50-5.48)	5.62 (5.06-6.18)	6.09 (5.47-6.68)	6.53 (5.85-7.16)	6.97 (6.22-7.62)	7.48 (6.65-8.17)	7.86 (6.95-8.57)
15-min	2.53 (2.30-2.79)	3.03 (2.76-3.36)	3.64 (3.30-4.01)	4.07 (3.69-4.50)	4.62 (4.17-5.09)	5.02 (4.52-5.52)	5.41 (4.84-5.92)	5.78 (5.15-6.32)	6.23 (5.53-6.80)	6.55 (5.79-7.14)
30-min	1.68 (1.52-1.85)	2.03 (1.84-2.25)	2.49 (2.26-2.74)	2.83 (2.56-3.12)	3.27 (2.94-3.59)	3.59 (3.23-3.94)	3.91 (3.50-4.28)	4.22 (3.76-4.61)	4.61 (4.10-5.03)	4.91 (4.34-5.35)
60-min	1.02 (0.927-1.13)	1.25 (1.13-1.38)	1.56 (1.42-1.72)	1.80 (1.63-1.99)	2.12 (1.91-2.33)	2.37 (2.13-2.60)	2.61 (2.34-2.86)	2.86 (2.55-3.13)	3.19 (2.83-3.48)	3.45 (3.05-3.76)
2-hr	0.595 (0.534-0.662)	0.722 (0.650-0.804)	0.904 (0.813-1.00)	1.04 (0.935-1.16)	1.24 (1.10-1.37)	1.39 (1.23-1.53)	1.54 (1.37-1.69)	1.70 (1.50-1.86)	1.91 (1.67-2.09)	2.08 (1.81-2.27)
3-hr	0.422 (0.380-0.471)	0.510 (0.459-0.570)	0.638 (0.573-0.710)	0.737 (0.660-0.821)	0.875 (0.779-0.971)	0.983 (0.873-1.09)	1.10 (0.968-1.21)	1.21 (1.07-1.34)	1.37 (1.20-1.51)	1.50 (1.30-1.65)
6-hr	0.253 (0.228-0.281)	0.304 (0.275-0.339)	0.376 (0.340-0.419)	0.435 (0.392-0.483)	0.517 (0.463-0.571)	0.582 (0.520-0.642)	0.652 (0.578-0.715)	0.724 (0.638-0.793)	0.824 (0.719-0.900)	0.905 (0.785-0.987)
12-hr	0.150 (0.136-0.166)	0.179 (0.163-0.199)	0.220 (0.200-0.243)	0.253 (0.229-0.279)	0.300 (0.271-0.330)	0.339 (0.304-0.372)	0.379 (0.338-0.415)	0.422 (0.374-0.461)	0.483 (0.422-0.525)	0.532 (0.462-0.578)
24-hr	0.090 (0.082-0.098)	0.107 (0.098-0.116)	0.129 (0.119-0.141)	0.148 (0.136-0.161)	0.173 (0.159-0.188)	0.194 (0.177-0.210)	0.216 (0.196-0.233)	0.238 (0.216-0.257)	0.269 (0.242-0.290)	0.294 (0.264-0.317)
2-day	0.053 (0.049-0.057)	0.063 (0.058-0.068)	0.075 (0.069-0.081)	0.085 (0.079-0.092)	0.099 (0.091-0.106)	0.110 (0.101-0.118)	0.121 (0.111-0.130)	0.133 (0.121-0.143)	0.149 (0.135-0.159)	0.161 (0.146-0.173)
3-day	0.038 (0.035-0.041)	0.045 (0.042-0.048)	0.053 (0.050-0.058)	0.060 (0.056-0.065)	0.070 (0.064-0.075)	0.077 (0.071-0.083)	0.084 (0.078-0.091)	0.092 (0.085-0.099)	0.102 (0.094-0.109)	0.110 (0.100-0.118)
4-day	0.030 (0.028-0.033)	0.036 (0.034-0.039)	0.043 (0.040-0.046)	0.048 (0.045-0.051)	0.055 (0.051-0.059)	0.061 (0.056-0.065)	0.066 (0.061-0.071)	0.072 (0.066-0.077)	0.079 (0.073-0.084)	0.085 (0.078-0.090)
7-day	0.021 (0.020-0.023)	0.025 (0.023-0.027)	0.029 (0.027-0.031)	0.033 (0.031-0.035)	0.037 (0.034-0.039)	0.040 (0.038-0.043)	0.043 (0.040-0.046)	0.047 (0.043-0.049)	0.051 (0.047-0.054)	0.054 (0.050-0.057)
10-day	0.017 (0.016-0.018)	0.020 (0.019-0.021)	0.023 (0.022-0.025)	0.026 (0.024-0.027)	0.029 (0.027-0.031)	0.031 (0.029-0.033)	0.034 (0.032-0.036)	0.036 (0.034-0.038)	0.039 (0.036-0.041)	0.041 (0.038-0.043)
20-day	0.012 (0.012-0.013)	0.014 (0.013-0.015)	0.016 (0.015-0.017)	0.018 (0.017-0.019)	0.020 (0.019-0.021)	0.021 (0.020-0.022)	0.022 (0.021-0.024)	0.024 (0.022-0.025)	0.025 (0.024-0.027)	0.026 (0.025-0.028)
30-day	0.010 (0.010-0.011)	0.012 (0.011-0.013)	0.014 (0.013-0.014)	0.015 (0.014-0.015)	0.016 (0.015-0.017)	0.017 (0.016-0.018)	0.018 (0.017-0.019)	0.019 (0.018-0.020)	0.020 (0.019-0.021)	0.021 (0.020-0.022)
45-day	0.009 (0.008-0.009)	0.010 (0.010-0.011)	0.011 (0.011-0.012)	0.012 (0.012-0.013)	0.013 (0.013-0.014)	0.014 (0.014-0.015)	0.015 (0.014-0.016)	0.016 (0.015-0.016)	0.016 (0.015-0.017)	0.017 (0.016-0.018)
60-day	0.008 (0.008-0.008)	0.009 (0.009-0.010)	0.010 (0.010-0.011)	0.011 (0.011-0.012)	0.012 (0.011-0.012)	0.013 (0.012-0.013)	0.013 (0.013-0.014)	0.014 (0.013-0.014)	0.014 (0.014-0.015)	0.015 (0.014-0.015)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical

**MIDDLE ISLAND
CREEK TRUCK PAD**

WATERSHED LIMITS



Blue Mountain Inc.
Engineers and Land Surveyors
10125 Mason Dixon Hwy.
Barlow, WV 26562-9656
(304) 662-6466

120 PROFESSIONAL PLACE
PROFESSIONAL BUILDING FOUR
BRIDGEPORT, WV 26330



**MIDDLE ISLAND CREEK TRUCK
PAD ADDITIONAL ENTRANCE**
COVER SHEET

REVISIONS

DATE	TYPE

DRAWN BY: AFF
CHECKED BY: JND
DATE: 05/25/16
SCALE: AS SHOWN
JOB NO:
DRAWING NAME: MIDDLE ISLAND CREEK TRUCK PAD - WATERSHED

WATERSHED LIMITS

WEST UNION, WV 7.5M USGS QUADRANGLE
SCALE: 1"=4000'



SHEET NO. 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 and 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 used 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 Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

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 for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 17. The horizontal datum was NAD 83, GRS 1980 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 Geodetic 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:

NGS Information Services
NOAA, NHDGS-12
National Geodetic Survey
SSAC-3, 90202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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 its website at <http://www.ngs.noaa.gov>.

Base map created by the WV Statewide Addressing and Mapping Board (SAMB). Imagery was captured at a scale of 1:24000 in the spring of 2003 for the purpose of producing natural color digital orthophotos at a 2' pixel resolution.

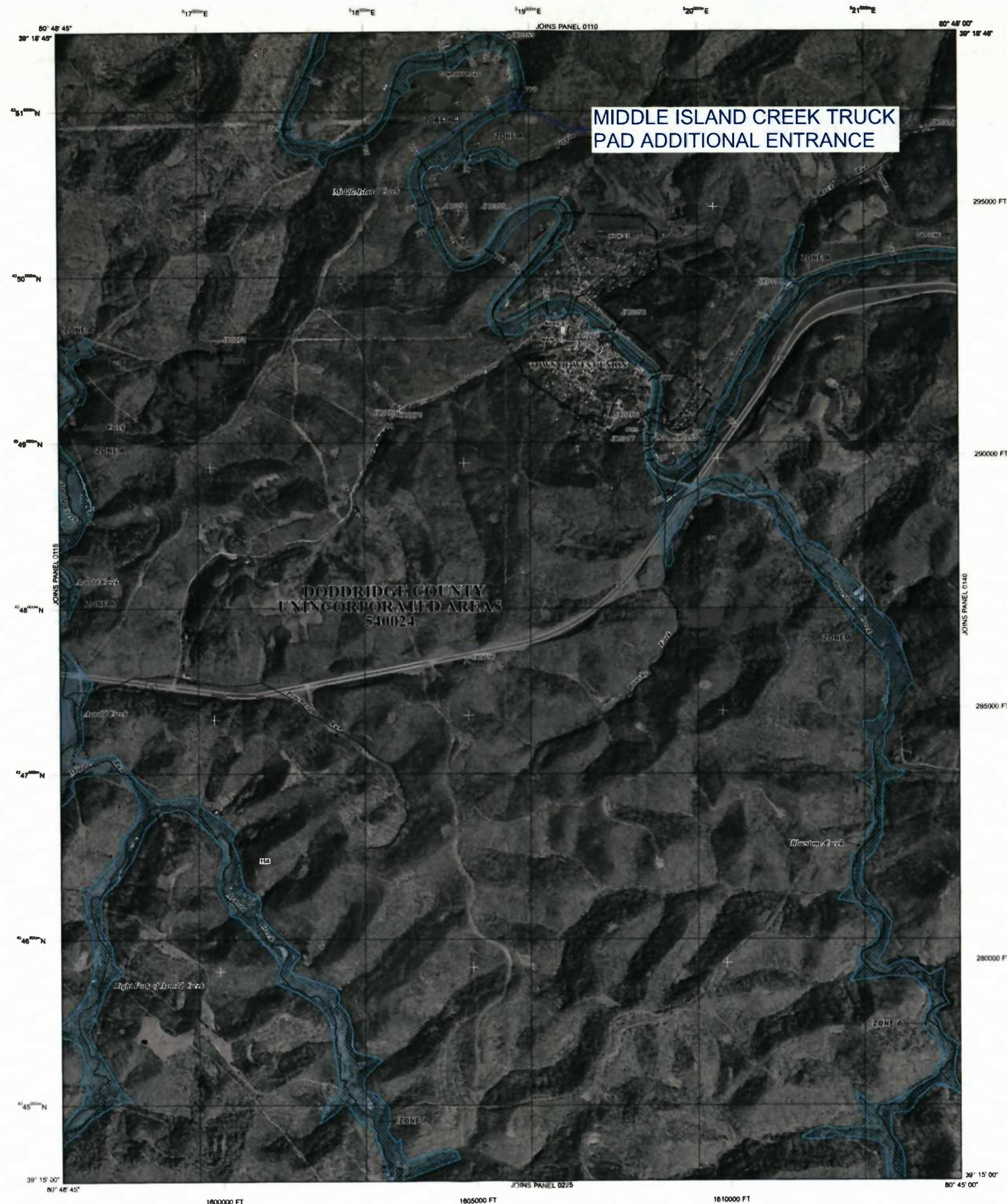
This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains 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 table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the Map Service Center (MSC) website at <http://www.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have questions about this map, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/info>.



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, ARB, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.
- ZONE AE**
No Base Flood Elevations determined.
Base Flood Elevations determined.
- ZONE AR**
Flood depths of 1 to 3 feet (usually areas of ponds). Base Flood Elevation determined.
- ZONE AO**
Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain). Average depths determined. The areas of sheet flow flooding, velocities also determined.
- ZONE AR**
Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently abandoned. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE ARB**
Coastal flood area with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE Y**
Coastal flood area with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE**
Coastal flood area 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 1 square mile, and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
ZONE D
Areas 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.
1% Annual Chance Floodplain Boundary
0.2% Annual Chance Floodplain Boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundaries dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
Base Flood Elevation line and value; elevation in feet
Base Flood Elevation value where uniform within zone; elevation in feet

- *Referenced to the North American Vertical Datum of 1988
- Cross section line
- Traverse line
- 45° 02' 08" 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 2100000 FT 3000-foot ticks: West Virginia State Plane North Zone (FIPS Zone 4703), Lambert Conformal Conic projection
- 100-meter Universal Transverse Mercator grid values, zone 17
- DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile
- MAP REPOSITORIES
Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
March 18, 1991
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
October 4, 2011: to update corporate limits, to decrease Base Flood Elevations, to change Special Flood Hazard Areas, to update map panel and to add roads and road names.

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 the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6629.

MAP SCALE 1" = 1000'

PANEL 0120C

FIRM
FLOOD INSURANCE RATE MAP
DODDRIDGE COUNTY,
WEST VIRGINIA
AND INCORPORATED AREAS

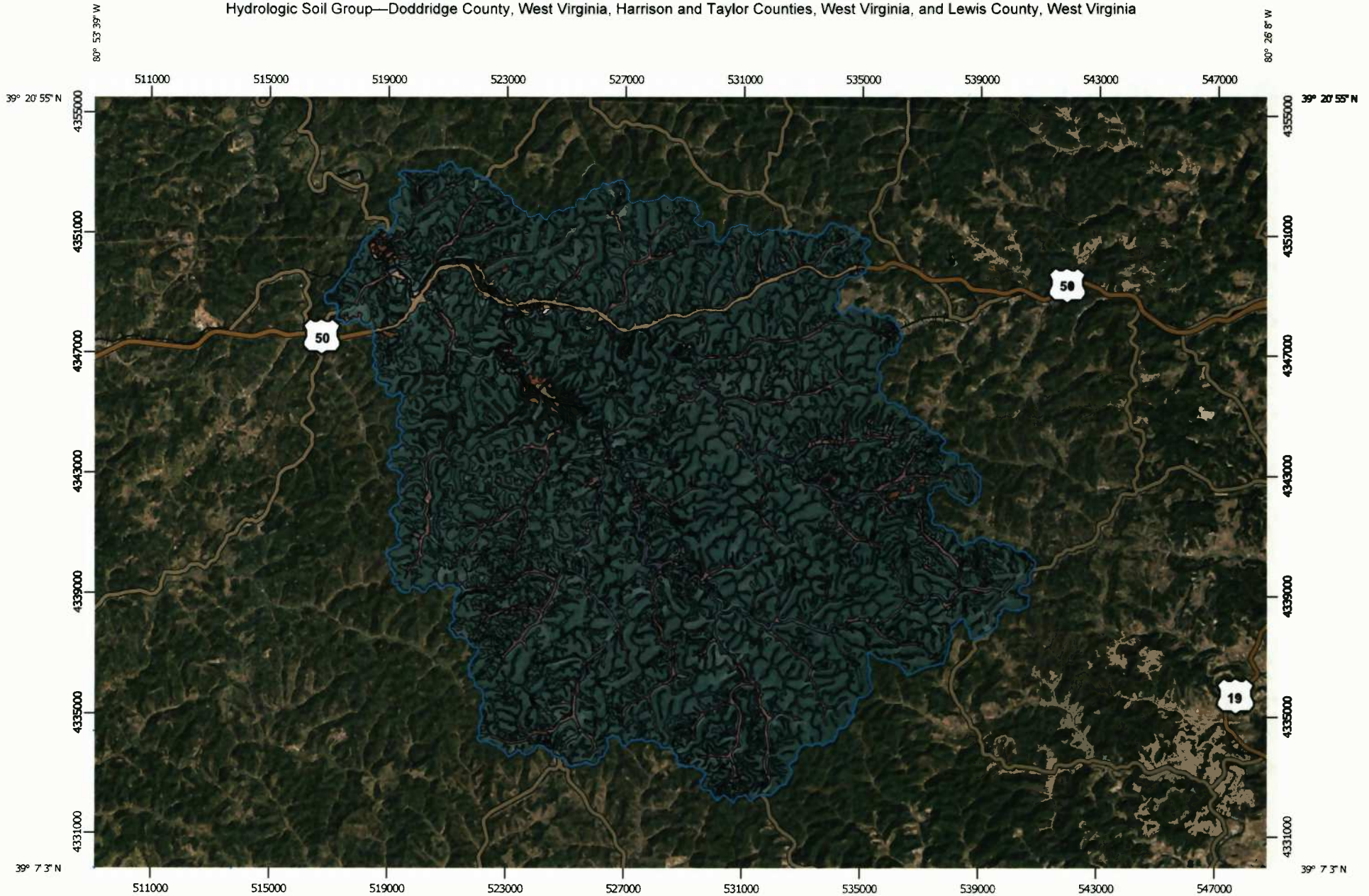
PANEL 120 OF 325
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

COMMUNITY	NUMBER	PANEL	DATE
DODDRIDGE COUNTY	54024	0120C	C
WEST UNION TOWNSHIP	54025	0120C	C

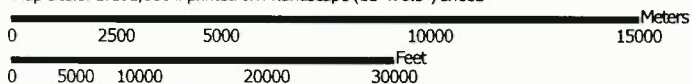
Notice to User: The Map Number shown below should be used when placing map orders, the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
54017C0120C
MAP REVISED
OCTOBER 4, 2011
Federal Emergency Management Agency

Hydrologic Soil Group—Doddridge County, West Virginia, Harrison and Taylor Counties, West Virginia, and Lewis County, West Virginia



































Map Scale: 1:181,000 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84



MAP LEGEND

Area of Interest (AOI)		 C	
 Area of Interest (AOI)		 C/D	
Soils		 D	
Soil Rating Polygons		 Not rated or not available	
 A		Water Features	
 A/D		 Streams and Canals	
 B		Transportation	
 B/D		 Rails	
 C		 Interstate Highways	
 C/D		 US Routes	
 D		 Major Roads	
 Not rated or not available		 Local Roads	
Soil Rating Lines		Background	
 A		 Aerial Photography	
 A/D			
 B			
 B/D			
 C			
 C/D			
 D			
 Not rated or not available			
Soil Rating Points			
 A			
 A/D			
 B			
 B/D			

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:20,000 to 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Doddridge County, West Virginia
 Survey Area Data: Version 11, Sep 24, 2015

Soil Survey Area: Harrison and Taylor Counties, West Virginia
 Survey Area Data: Version 9, Sep 24, 2015

Soil Survey Area: Lewis County, West Virginia
 Survey Area Data: Version 7, Sep 24, 2015

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Doddridge County, West Virginia (WV017)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ch	Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded	B	1,049.0	1.3%
Co	Cotaco silt loam	B/D	122.6	0.2%
GpE	Gilpin-Peabody silt loams, 25 to 35 percent slopes	D	349.2	0.4%
GsE	Gilpin-Peabody complex, 15 to 35 percent slopes, very stony	C	17,129.0	21.8%
GsF	Gilpin-Peabody complex, 35 to 70 percent slopes, very stony	C	47,862.8	60.8%
GuC	Gilpin-Upshur silt loams, 8 to 15 percent slopes	C	881.2	1.1%
GuD	Gilpin-Upshur silt loams, 15 to 25 percent slopes	C	3,247.5	4.1%
GyD	Gilpin-Upshur-Urban land complex, 15 to 25 percent slopes	C	71.6	0.1%
Ka	Kanawha loam, 0 to 3 percent slopes, rarely flooded	B	383.7	0.5%
Ku	Kanawha-Urban land complex	B	34.0	0.0%
Me	Melvin silt loam, 0 to 3 percent slopes, rarely flooded	B/D	43.3	0.1%
MoB	Monongahela silt loam, 3 to 8 percent slopes	D	74.6	0.1%
MoC	Monongahela silt loam, 8 to 15 percent slopes	D	88.8	0.1%
MuB	Monongahela-Urban land complex, 3 to 8 percent slopes	C	34.3	0.0%
MuC	Monongahela-Urban land complex, 8 to 15 percent slopes		39.9	0.1%
Se	Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded	A	2,390.4	3.0%

Hydrologic Soil Group—Doddridge County, West Virginia, Harrison and Taylor Counties, West Virginia, and Lewis County, West Virginia

Hydrologic Soil Group— Summary by Map Unit — Doddridge County, West Virginia (WV017)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
SeB	Sensabaugh silt loam, 3 to 8 percent slopes, rarely flooded	A	2,067.6	2.6%
Su	Sensabaugh-Urban land complex	A	117.2	0.1%
SuB	Sensabaugh-Urban land complex, 3 to 8 percent slopes, rarely flooded	A	56.1	0.1%
Ud	Udorthents, smoothed		841.9	1.1%
VaC	Vandalia silt loam, 8 to 15 percent slopes	C	122.3	0.2%
VaD	Vandalia silt loam, 15 to 25 percent slopes	C	626.0	0.8%
VaE	Vandalia silt loam, 25 to 35 percent slopes	C	53.2	0.1%
VsE	Vandalia silt loam, 15 to 35 percent slopes, very stony	C	694.3	0.9%
VuD	Vandalia-Urban land complex, 15 to 25 percent slopes	C	51.5	0.1%
W	Water		161.1	0.2%
Subtotals for Soil Survey Area			78,593.1	99.9%
Totals for Area of Interest			78,703.4	100.0%

Hydrologic Soil Group— Summary by Map Unit — Harrison and Taylor Counties, West Virginia (WV610)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GIF	Gilpin silt loam, 35 to 70 percent slopes	C	1.1	0.0%
GuC	Gilpin-Upshur complex, 8 to 15 percent slopes	C	1.8	0.0%
GuC3	Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded	D	0.6	0.0%
GuD	Gilpin-Upshur complex, 15 to 25 percent slopes	C	4.5	0.0%
GuD3	Gilpin-Upshur complex, 15 to 25 percent slopes, severely eroded	D	1.6	0.0%
GuE	Gilpin-Upshur complex, 25 to 35 percent slopes	C	15.5	0.0%
GuE3	Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded	C	11.6	0.0%

Hydrologic Soil Group— Summary by Map Unit — Harrison and Taylor Counties, West Virginia (WV610)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GuF3	Gilpin-Upshur complex, 35 to 70 percent slopes, severely eroded	C	38.2	0.0%
UL	Urban land		10.2	0.0%
VaC	Vandalia silty clay loam, 8 to 15 percent slopes	C	6.4	0.0%
VaD	Vandalia silty clay loam, 15 to 25 percent slopes	C	5.3	0.0%
Subtotals for Soil Survey Area			96.7	0.1%
Totals for Area of Interest			78,703.4	100.0%

Hydrologic Soil Group— Summary by Map Unit — Lewis County, West Virginia (WV041)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GaD	Gilpin silt loam, 15 to 25 percent slopes	C	0.8	0.0%
GuD	Gilpin-Upshur silt loams, 15 to 25 percent slopes	C	0.7	0.0%
GuE	Gilpin-Upshur silt loams, 25 to 35 percent slopes	C	1.3	0.0%
GwF3	Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded	C	10.9	0.0%
Subtotals for Soil Survey Area			13.6	0.0%
Totals for Area of Interest			78,703.4	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Weighted CN Values

PROJECT: Middle Island Creek Truck Pad
DATE: 5/24/2016
PREPARED BY: AFF

HYDROLOGIC SOIL GROUPS				
COVER TYPE/CONDITION	SOIL NAME	HYDROLOGIC GROUP	AREA (ac.)	CN
Woods	GsF, GsE, GuC, GuD	C	66400	70
Meadow	Ch, Se, SeB, Su, VaD	A/B/C	8500	71
Residential	GyD, MuB, MuC	C	2200	80
Industrial	Co, GpE, Me, VsE	B/C/D	1600	93

Total Area: 78700 ac.
Weighted CN: 70.9



TR55 Tc Worksheet

Hyd. No. 1

MIC Truck Pad

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.800	0.011	0.011	
Flow length (ft)	= 300.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 2.56	0.00	0.00	
Land slope (%)	= 25.00	0.00	0.00	
Travel Time (min)	= 36.65	+ 0.00	+ 0.00	= 36.65
Shallow Concentrated Flow				
Flow length (ft)	= 6025.00	0.00	0.00	
Watercourse slope (%)	= 6.80	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	=4.21	0.00	0.00	
Travel Time (min)	= 23.87	+ 0.00	+ 0.00	= 23.87
Channel Flow				
X sectional flow area (sqft)	= 30.00	100.00	350.00	
Wetted perimeter (ft)	= 23.00	104.00	85.00	
Channel slope (%)	= 0.50	0.50	0.50	
Manning's n-value	= 0.040	0.040	0.040	
Velocity (ft/s)	=3.15			
		2.57		
			6.80	
Flow length (ft)	47230.0	47230.0	47230.0	
Travel Time (min)	= 250.12	+ 306.81	+ 115.78	= 672.71
Total Travel Time, Tc				733.23 min

Hydrograph Report

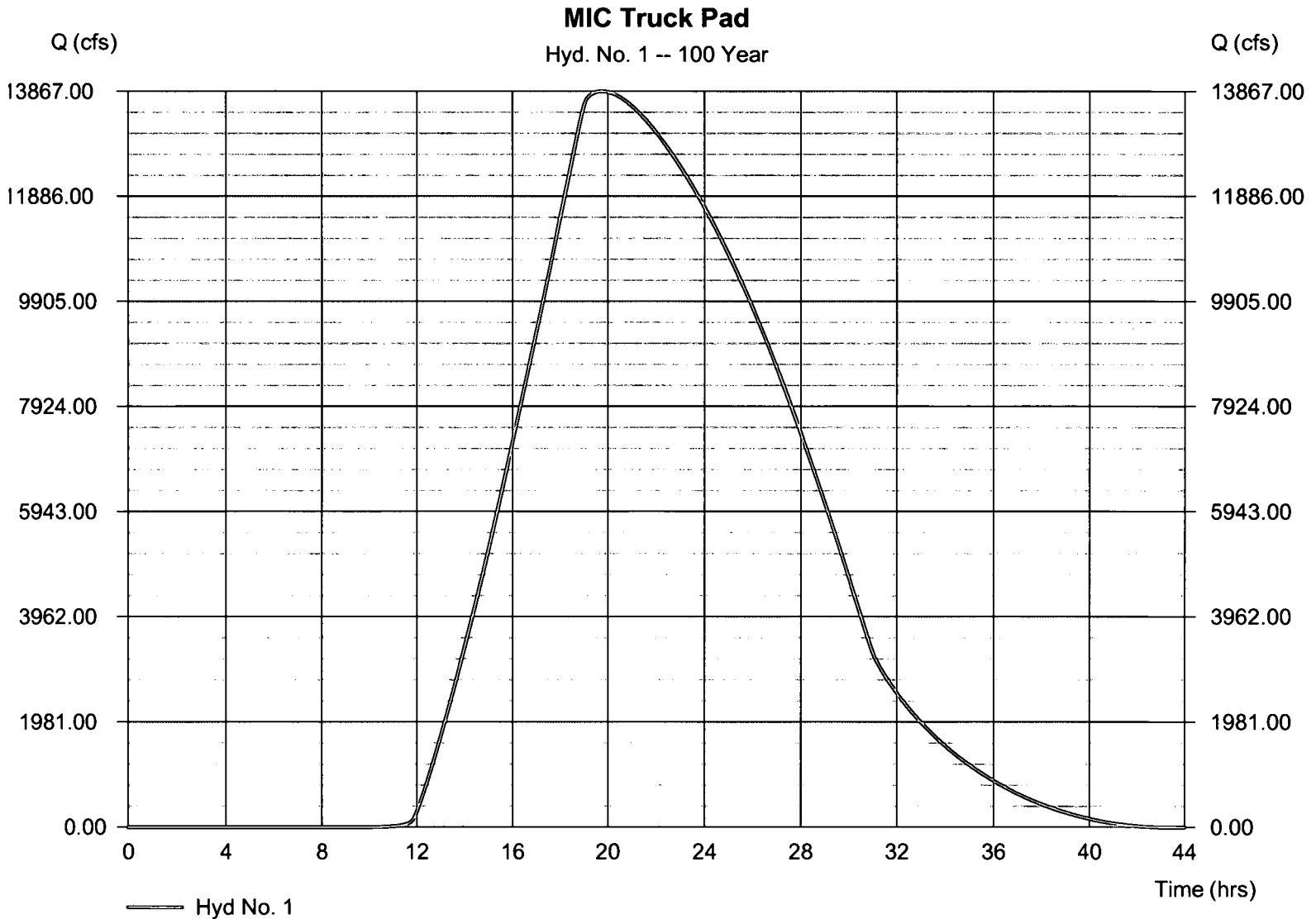
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.5

Wednesday, 05 / 25 / 2016

Hyd. No. 1

MIC Truck Pad

Hydrograph type	= SCS Runoff	Peak discharge	= 13866.08 cfs
Storm frequency	= 100 yrs	Time to peak	= 19.77 hrs
Time interval	= 2 min	Hyd. volume	= 639,215,488 cuft
Drainage area	= 78700.000 ac	Curve number	= 70.9
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 733.20 min
Total precip.	= 5.17 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



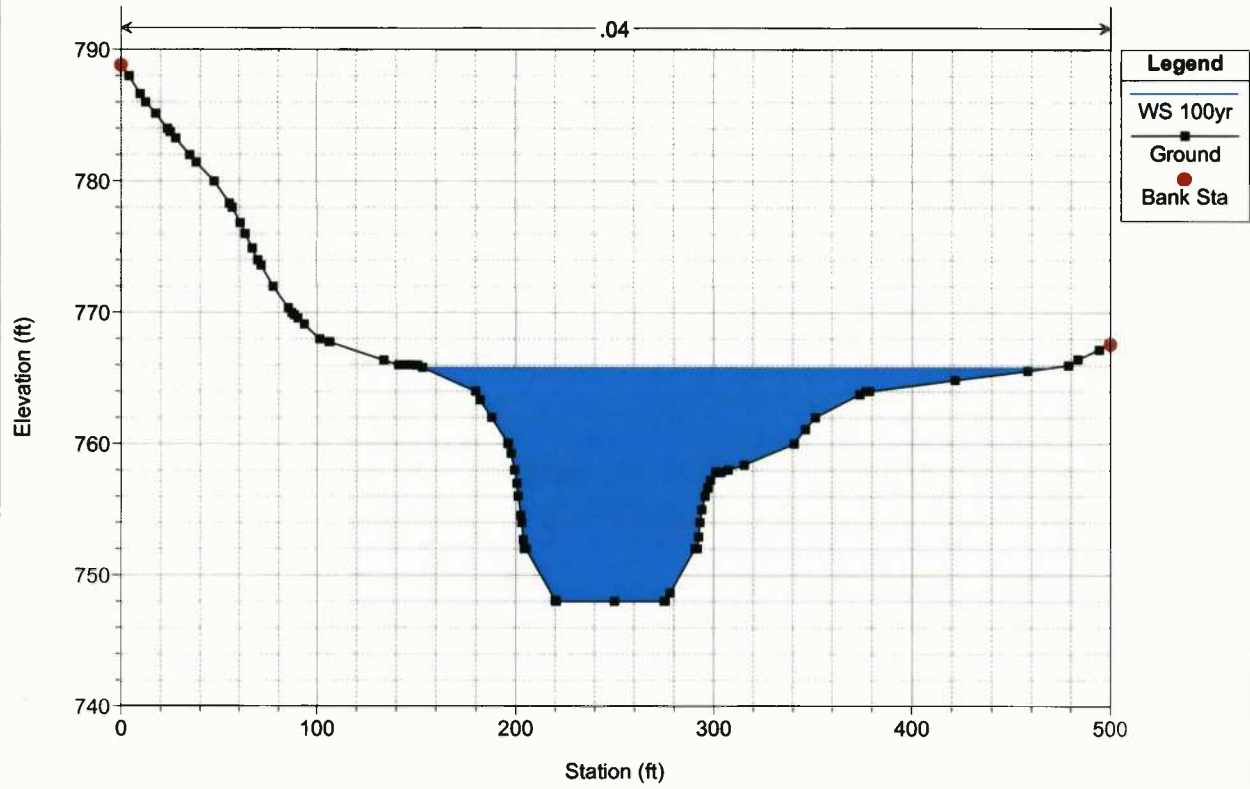
HEC-RAS SUMMARY OUTPUT - EXISTING CONDITIONS

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
MIC	900	100yr	13866.08	748	765.8		766.41	0.002154	6.24	2222.78	315.43	0.41
MIC	700	100yr	13866.08	748	765.45		766.02	0.001662	6.06	2288.09	278.09	0.37
MIC	525	100yr	13866.08	748	764.96		765.7	0.001826	6.89	2012.62	212.55	0.39
MIC	300	100yr	13866.08	748	764.02		765.18	0.002433	8.67	1598.71	147.67	0.46
MIC	100	100yr	13866.08	748	762.26	759	764.41	0.004998	11.77	1177.71	116.34	0.65

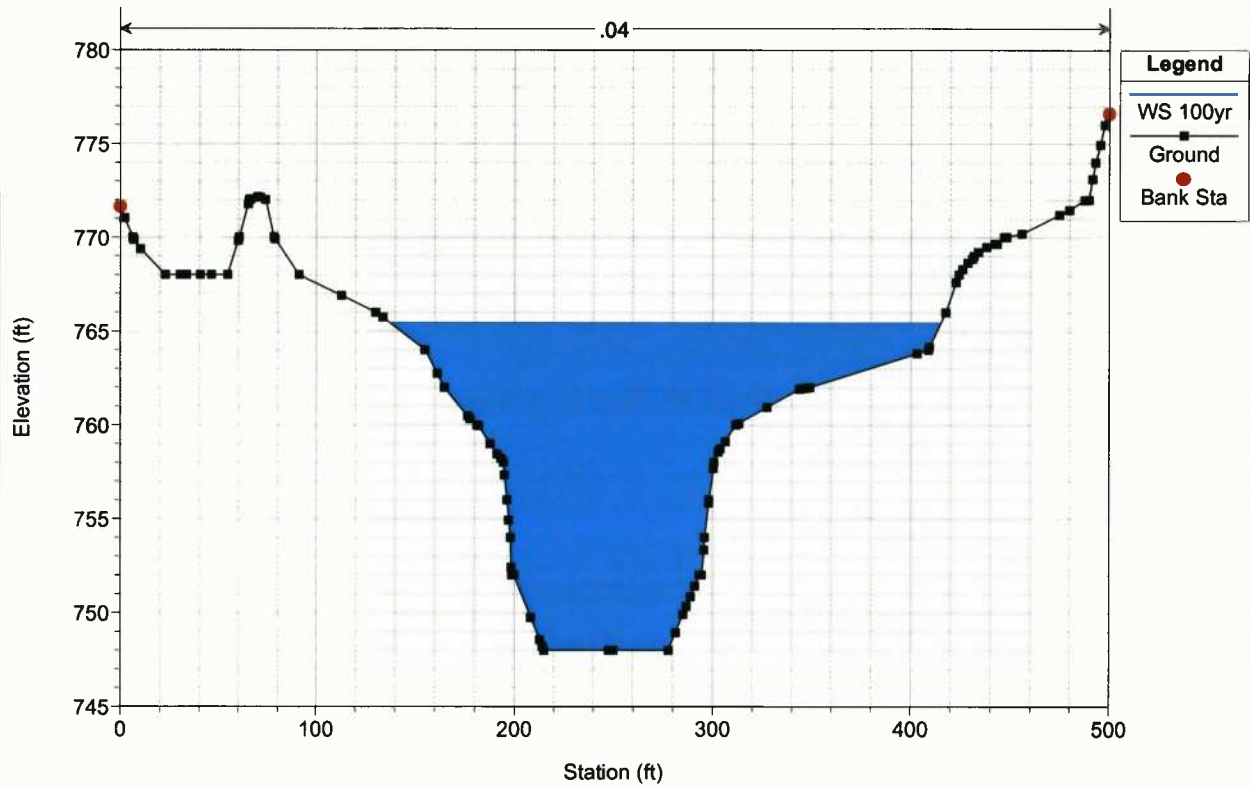
HEC-RAS SUMMARY OUTPUT - PROPOSED CONDITIONS

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
MIC	900	100yr	13866.08	748	765.81		766.41	0.002153	6.24	2223.72	315.62	0.41
MIC	700	100yr	13866.08	748	765.45		766.02	0.00166	6.06	2288.96	278.14	0.37
MIC	525	100yr	13866.08	748	764.96		765.7	0.001838	6.9	2008.83	212.55	0.4
MIC	300	100yr	13866.08	748	764.02		765.18	0.002433	8.67	1598.71	147.67	0.46
MIC	100	100yr	13866.08	748	762.26	759	764.41	0.004998	11.77	1177.71	116.34	0.65

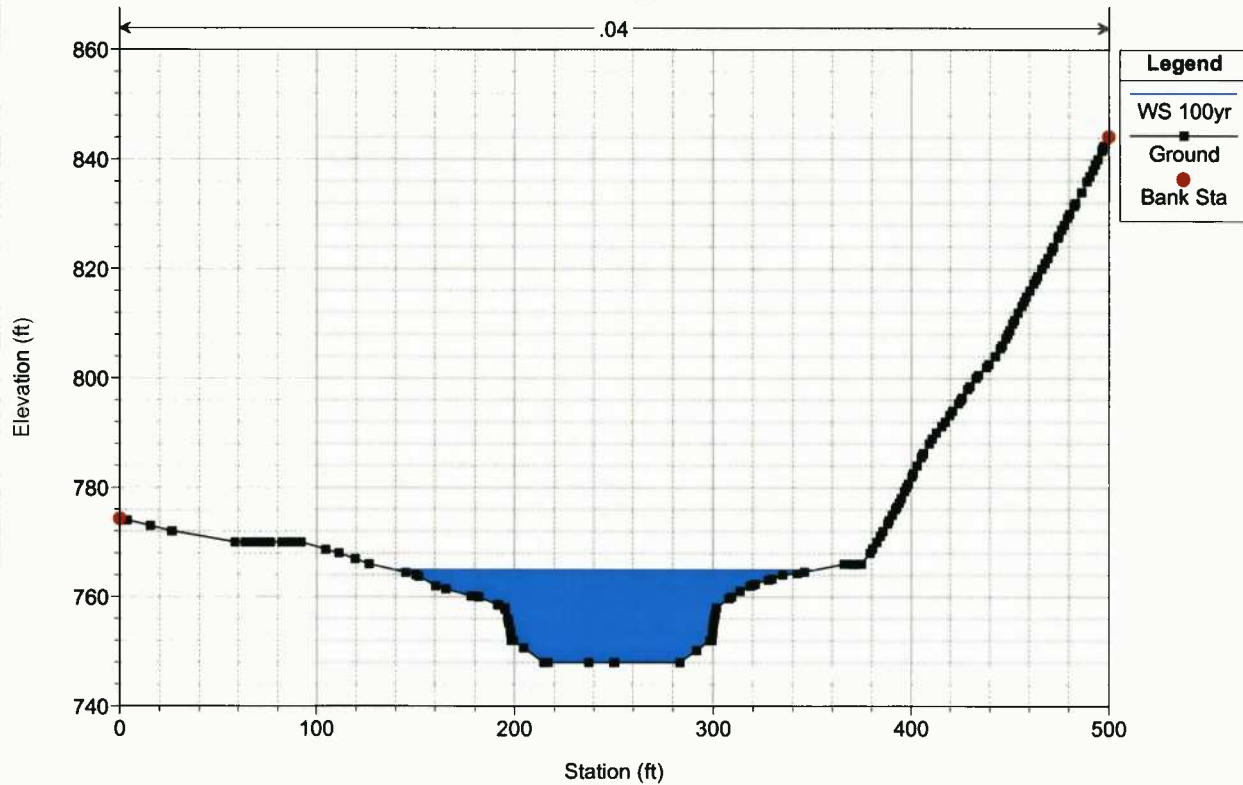
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RS = 900



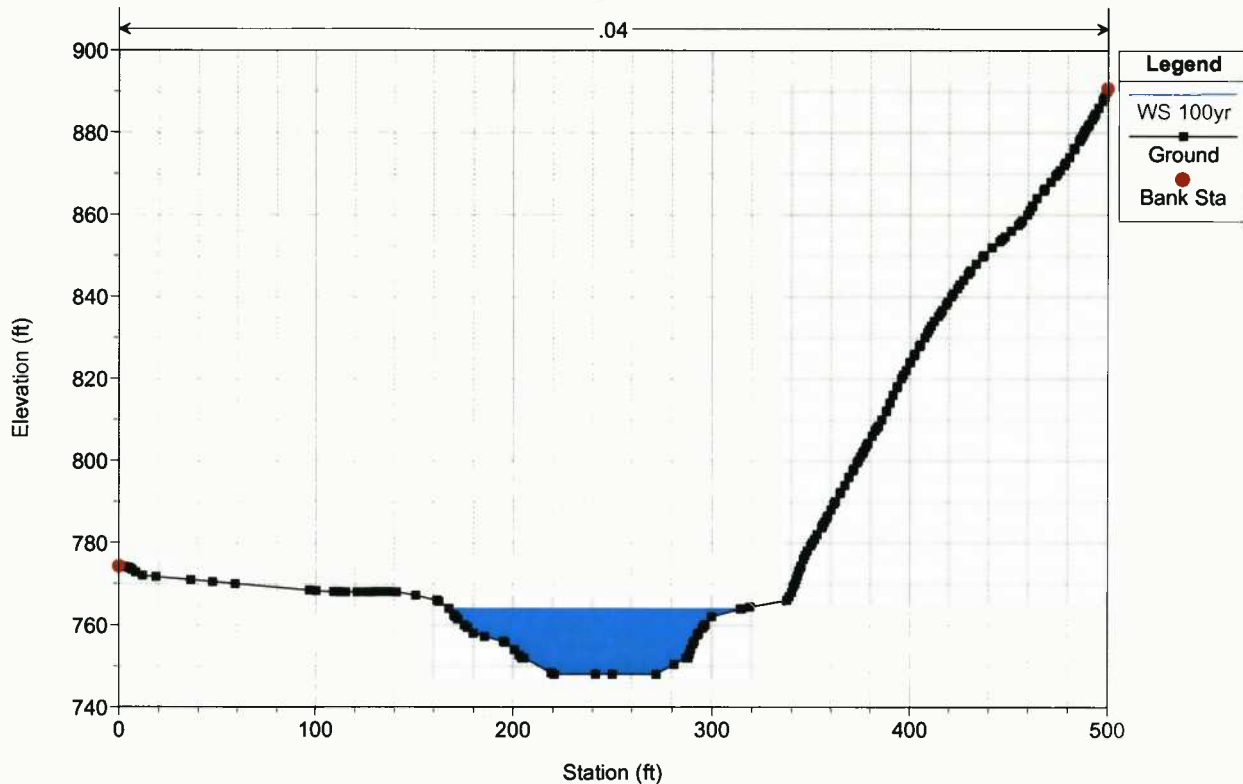
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RS = 700



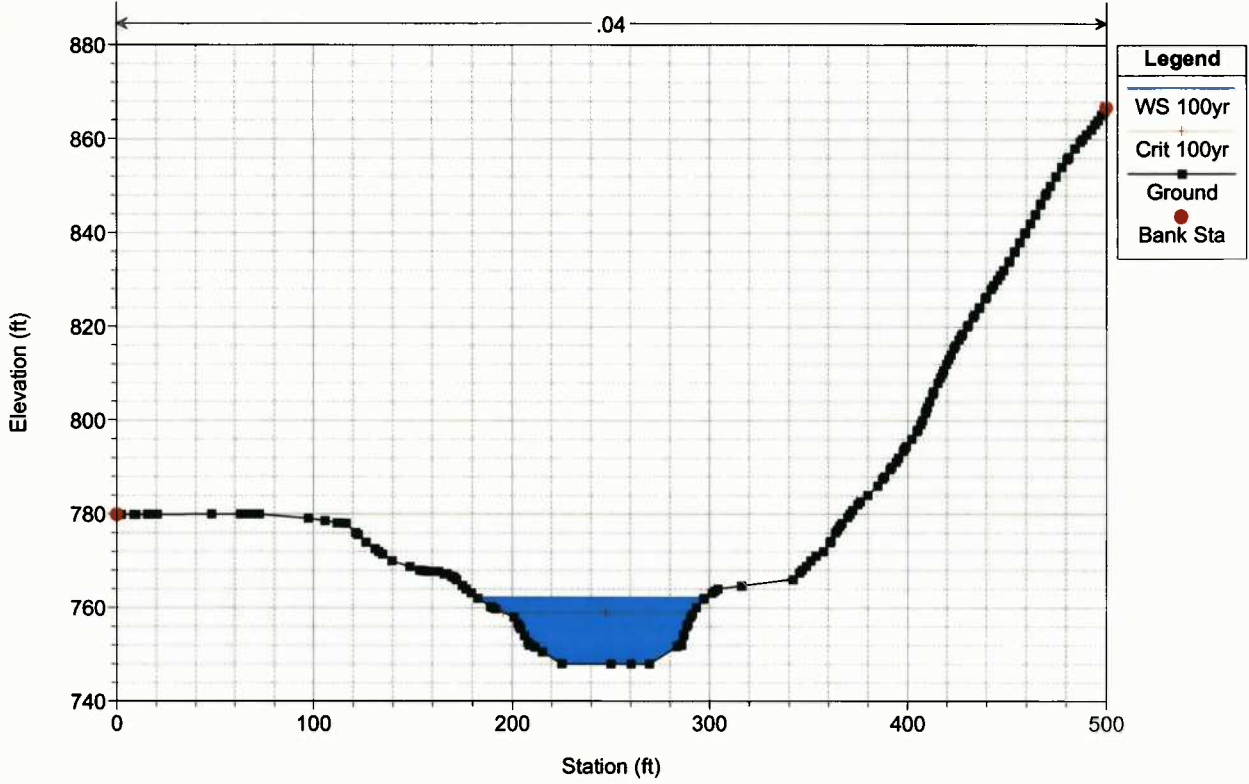
Middle Island Creek Existing Plan: Middle Island Creek Existing 5/25/2016
RS = 525



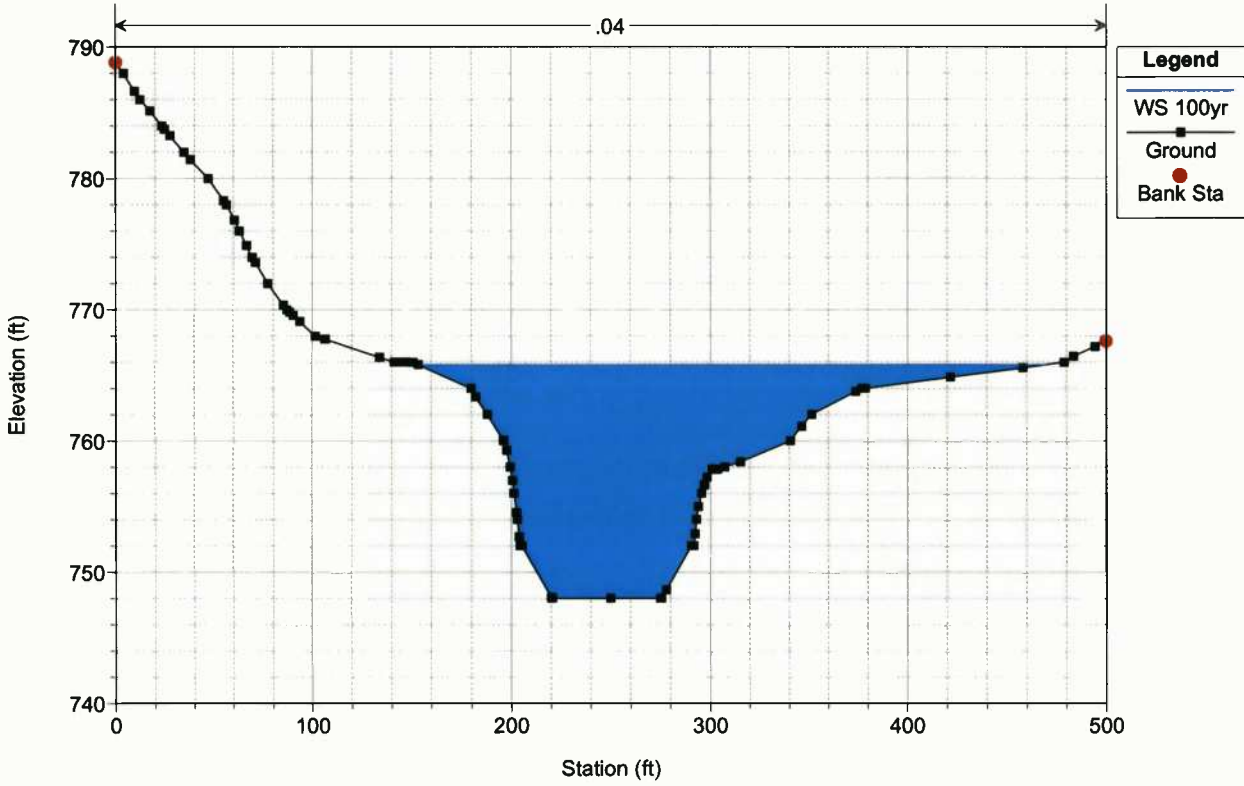
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RS = 300



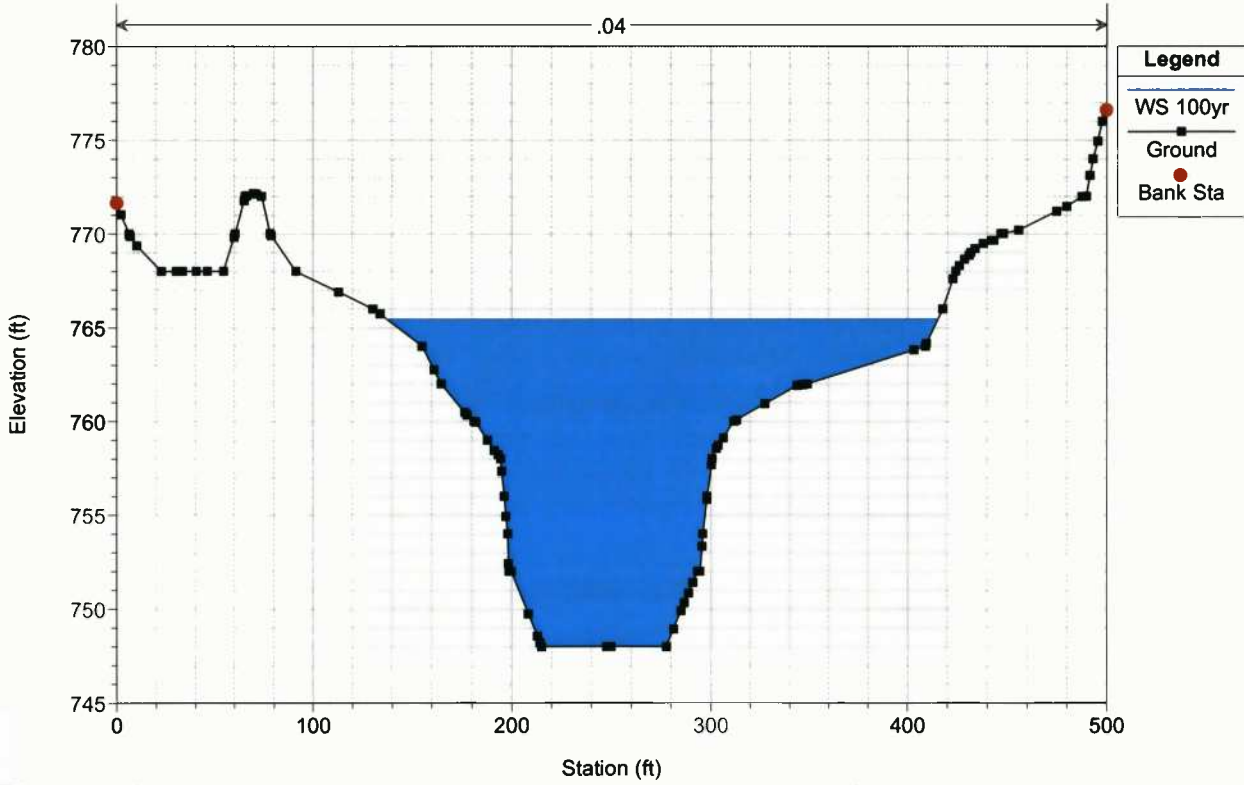
Middle Island Creek Existing Plan: Middle Island Creek Existing 5/25/2016
RS = 100



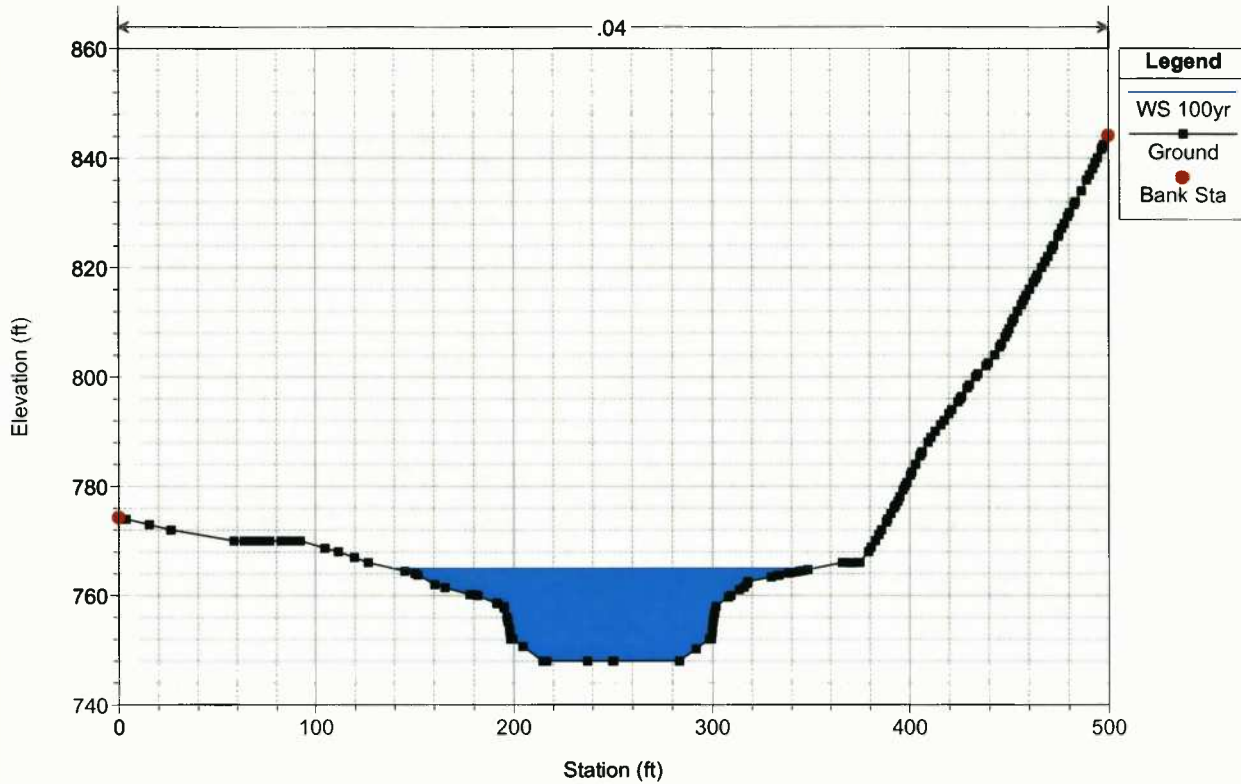
Middle Island Creek Proposed Plan: Middle Island Creek Proposed 5/25/2016
RS = 900



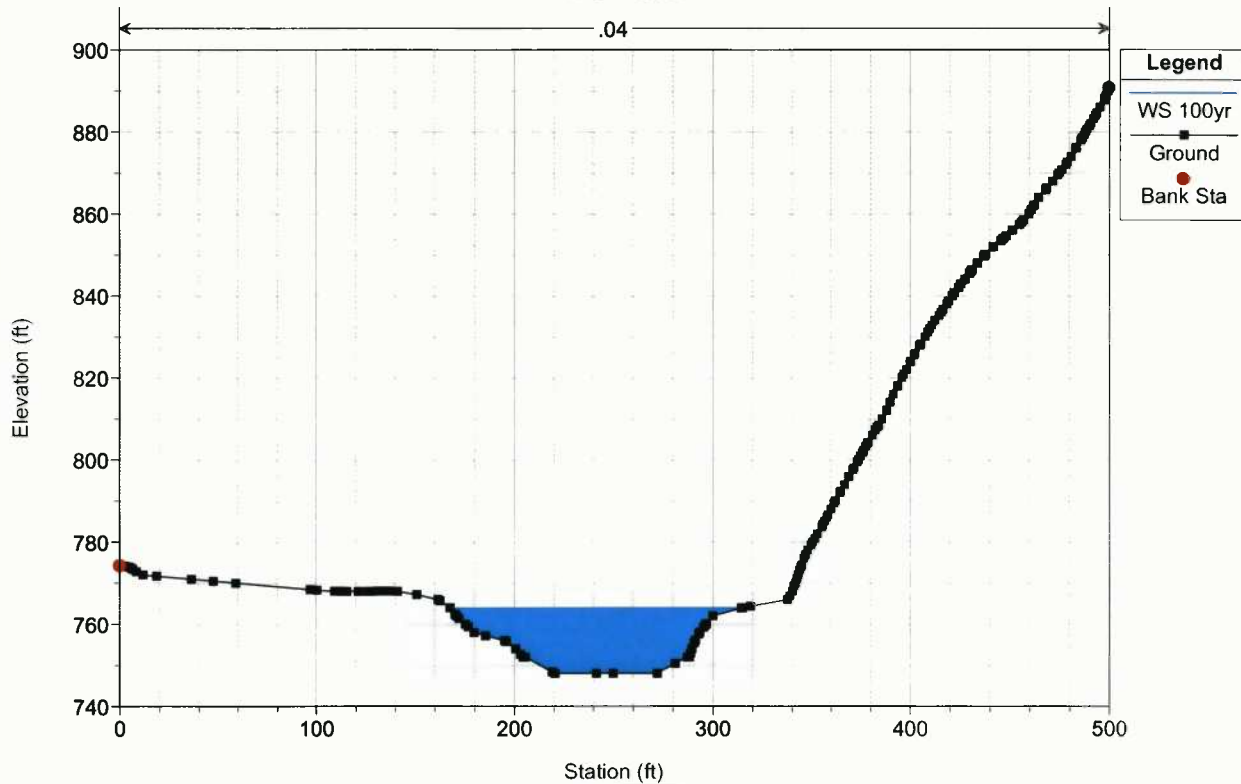
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RS = 700



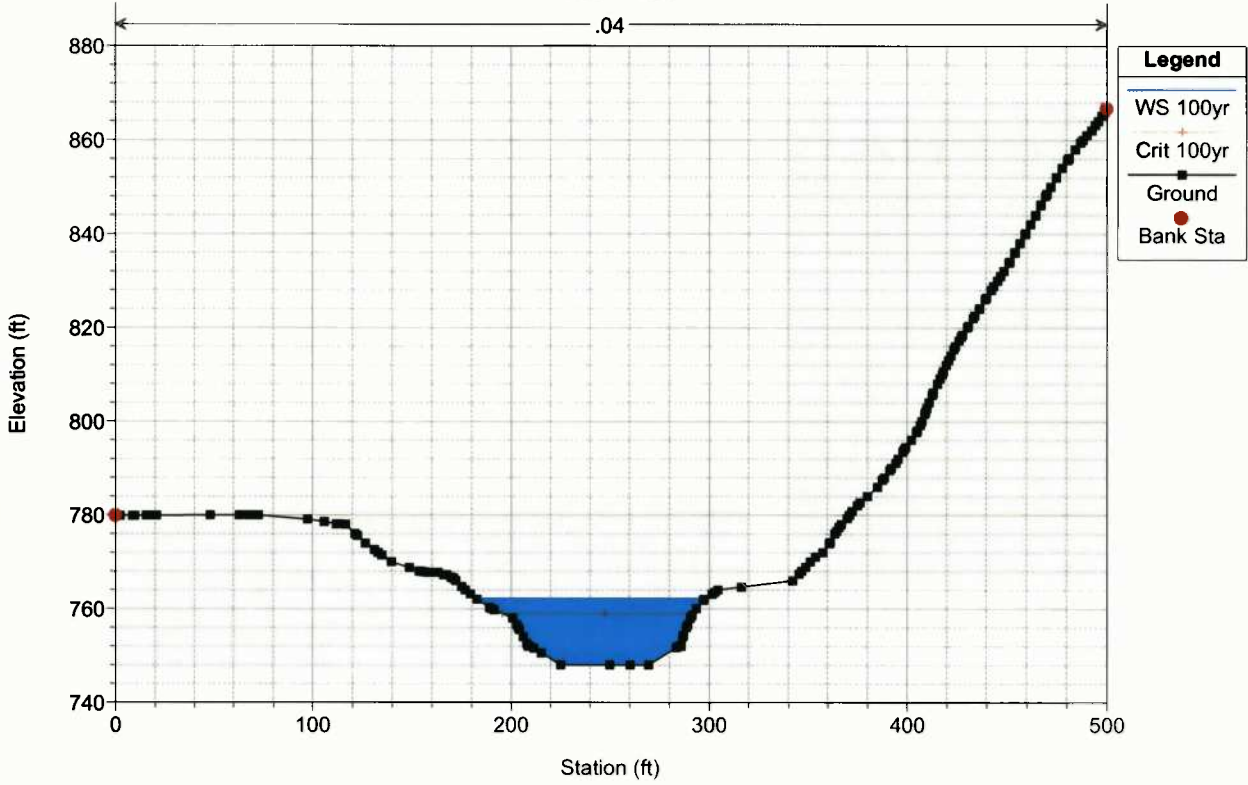
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Middle Island Creek Proposed Plan: Middle Island Creek Proposed 5/25/2016
RS = 300



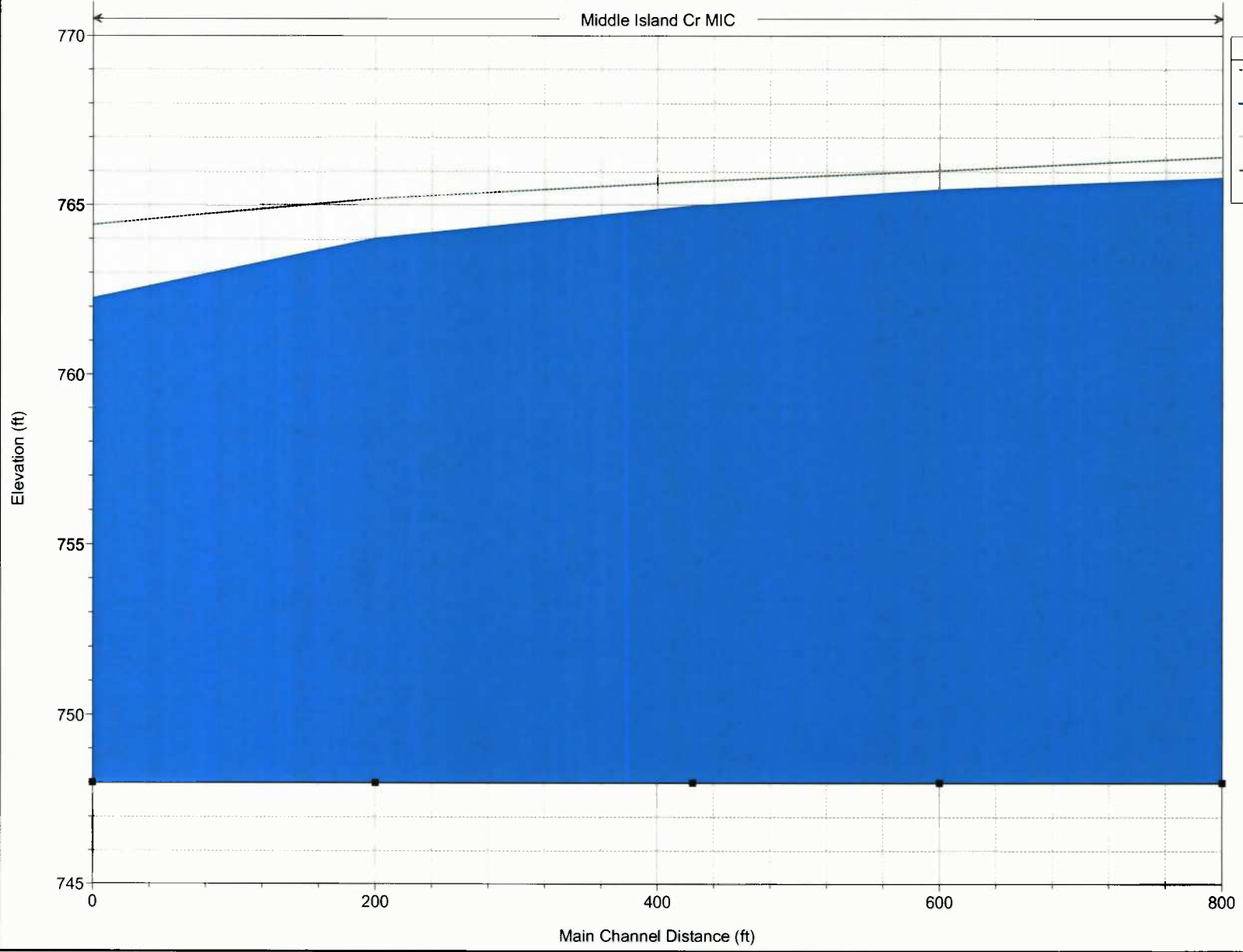
Middle Island Creek Proposed Plan: Middle Island Creek Proposed 5/25/2016
RS = 100



Middle Island Creek Existing Plan: Middle Island Creek Existing 5/25/2016

Middle Island Cr MIC

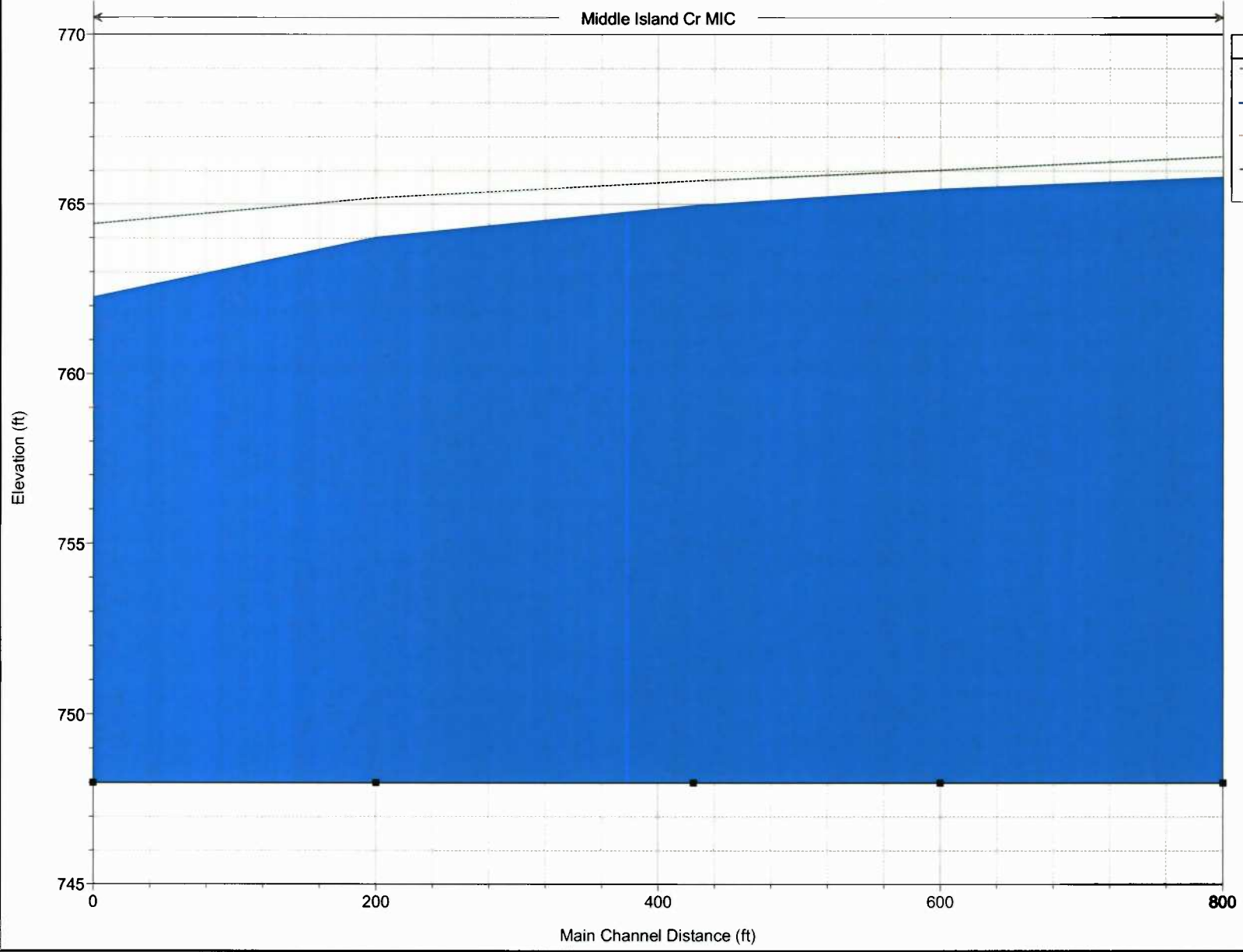
Legend	
EG 100yr	—
WS 100yr	—
Crit 100yr	—
Ground	■



Middle Island Cr MIC

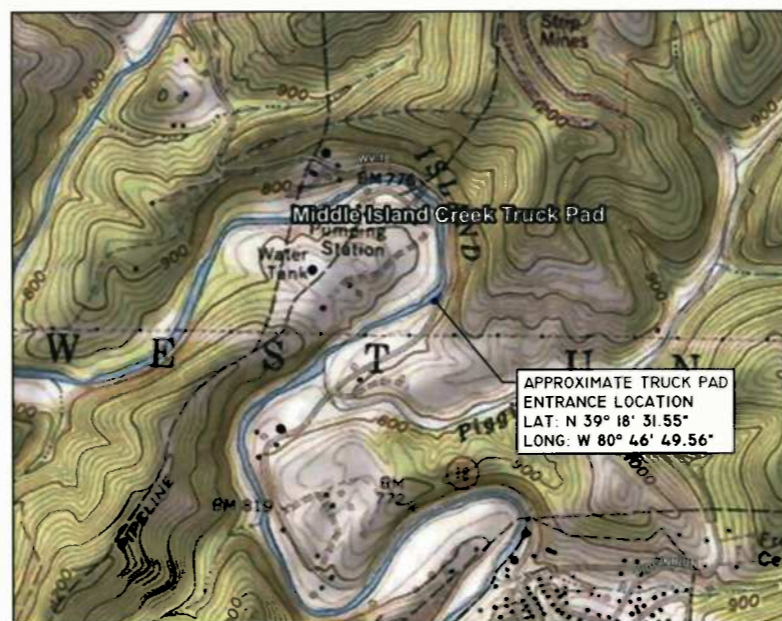
Legend

- EG 100yr
- WS 100yr
- Crit 100yr
- Ground





MIDDLE ISLAND CREEK TRUCK PAD ADDITIONAL ENTRANCE HYDROLOGIC & HYDRAULIC ANALYSIS



LOCATION MAP
WEST UNION, WV 7.5M USGS QUADRANGLE
SCALE: 1"=1000'

WEST UNION DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA



10125 Mason Dixon Hwy.
Burton, WV 26562-9656
(304) 662-6486

GENERAL NOTES

1. THE EXISTING 2" CONTOURS UTILIZED IN THIS PLAN ARE FROM BLUE MOUNTAIN AERIAL MAPPING. THE AREA WAS FLOWN ON MARCH 27, 2016.
2. PROPERTY BOUNDARIES AND LANDOWNER INFORMATION SHOWN ON THIS PLAN ARE BASED ON TAX ASSESSMENT DATA.
3. THE HORIZONTAL DATUM IS NAD 83 WEST VIRGINIA STATE PLANE, NORTH ZONE.
4. THE COMPUTER PROGRAM HEC-RAS v4.1.0 WAS USED TO DETERMINE THE 100 YR EXITING AND PROPOSED FLOODPLAIN LIMITS SHOWN ON THESE PLANS.



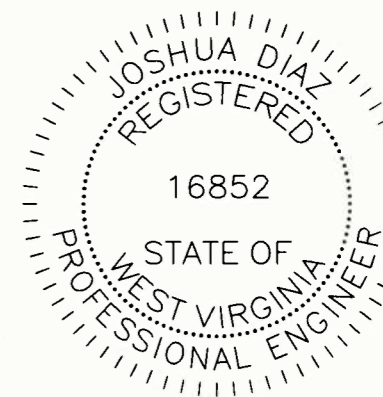
Know what's below.
Call before you dig.

CERTIFICATION:

I DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE EROSION AND SEDIMENT CONTROL PLAN AND SITE RESTORATION PLAN AND POST CONSTRUCTION BMPs ARE TRUE AND CORRECT, REPRESENT ACTUAL FIELD CONDITIONS AND ARE IN ACCORDANCE WITH THE WEST VIRGINIA CODE AND THE DEPARTMENT'S RULES AND REGULATIONS. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

SIGNATURE: _____

DATE: 5/25/2016



PROPERTY OWNERS

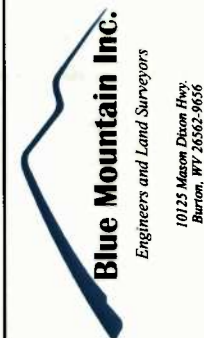
1. CNG TRANSMISSION CORP
08-7-32
2. HUNT, BETTY JEAN (LIFE)
08-7-26

SHEET INDEX

DRAWING NUMBER	DRAWING NAME
1	COVER SHEET
2	FLOODPLAIN SITE PLAN
3	FLOODPLAIN SITE PLAN W/ ORTHO
4	FLOODPLAIN SECTION (1 OF 2)
5	FLOODPLAIN SECTION (2 OF 2)

PRELIMINARY

NOTE: DRAWING WAS CREATED ON 22x34 PAPER. 11x17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.



120 PROFESSIONAL PLACE
PROFESSIONAL BUILDING FOUR
BRIDGEPORT, WV 26330

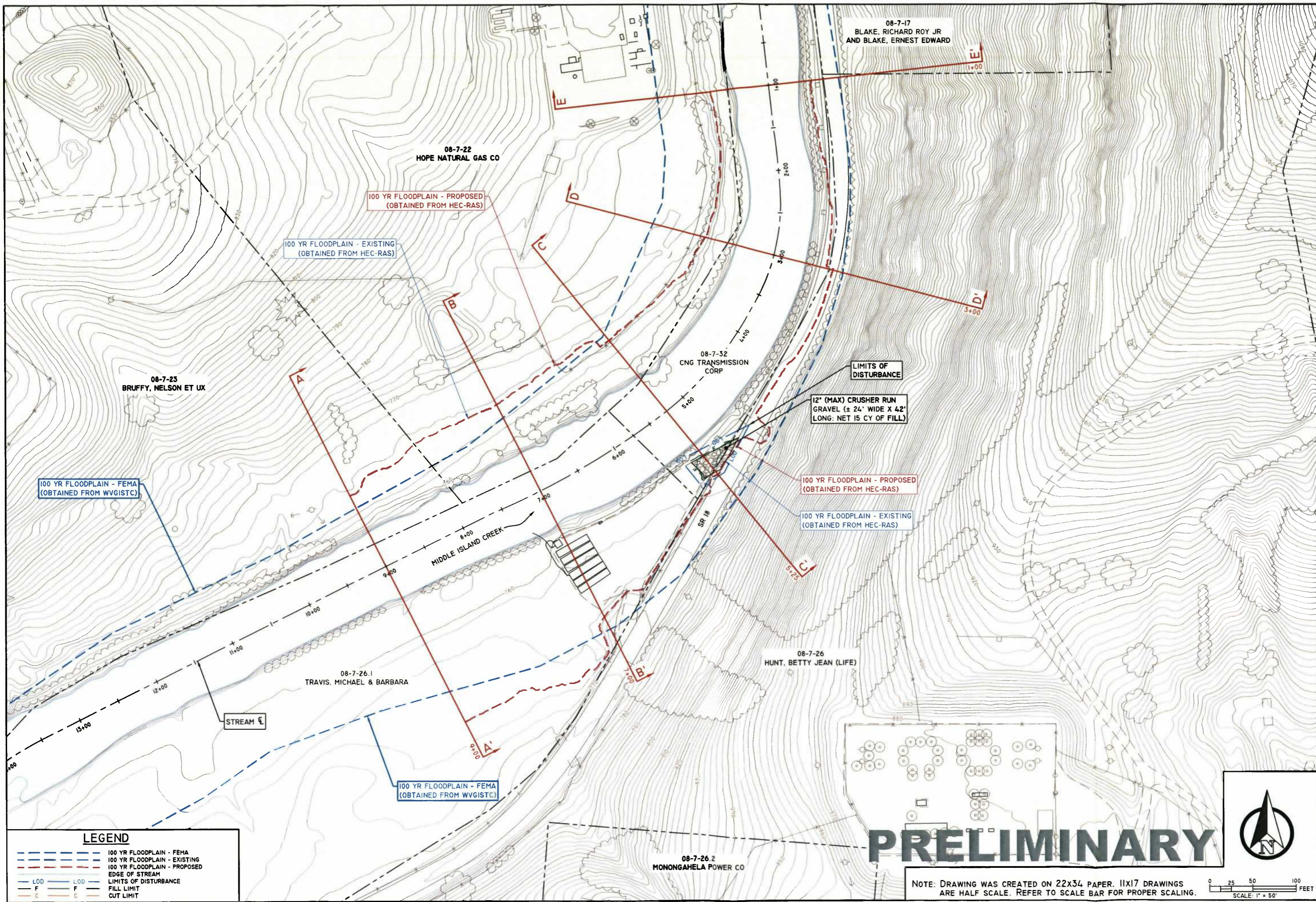


MIDDLE ISLAND CREEK TRUCK
PAD ADDITIONAL ENTRANCE
COVER SHEET

REVISIONS

DATE	TYPE

DRAWN BY: AFF
CHECKED BY: JMD
DATE: 05/25/16
SCALE: AS SHOWN
JOB NO.
DRAWING NAME: MIDDLE ISLAND CREEK TRUCK PAD
SHEET NO. 1



100 YR FLOODPLAIN - PROPOSED
(OBTAINED FROM HEC-RAS)

100 YR FLOODPLAIN - EXISTING
(OBTAINED FROM HEC-RAS)

100 YR FLOODPLAIN - FEMA
(OBTAINED FROM WVGISTC)

100 YR FLOODPLAIN - PROPOSED
(OBTAINED FROM HEC-RAS)

100 YR FLOODPLAIN - EXISTING
(OBTAINED FROM HEC-RAS)

100 YR FLOODPLAIN - FEMA
(OBTAINED FROM WVGISTC)

12" (MAX) CRUSHER RUN
GRAVEL (± 24' WIDE X 42'
LONG: NET 15 CY OF FILL)

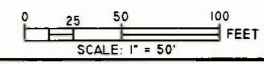
LIMITS OF
DISTURBANCE

LEGEND

- 100 YR FLOODPLAIN - FEMA
- 100 YR FLOODPLAIN - EXISTING
- 100 YR FLOODPLAIN - PROPOSED
- EDGE OF STREAM
- LOD
- LOD
- LIMITS OF DISTURBANCE
- F
- F
- FILL LIMIT
- C
- C
- CUT LIMIT

PRELIMINARY

NOTE: DRAWING WAS CREATED ON 22X34 PAPER. 11X17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.



REVISIONS

DATE	TYPE

REVISIONS

DATE	TYPE

DRAWN BY: AFF
 CHECKED BY: JNO
 DATE: 06/28/16
 SCALE: AS SHOWN
 JOB NO:
 DRAWING NAME: MIDDLE ISLAND CREEK TRUCK PAD

SHEET NO. 3

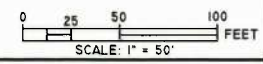


LEGEND

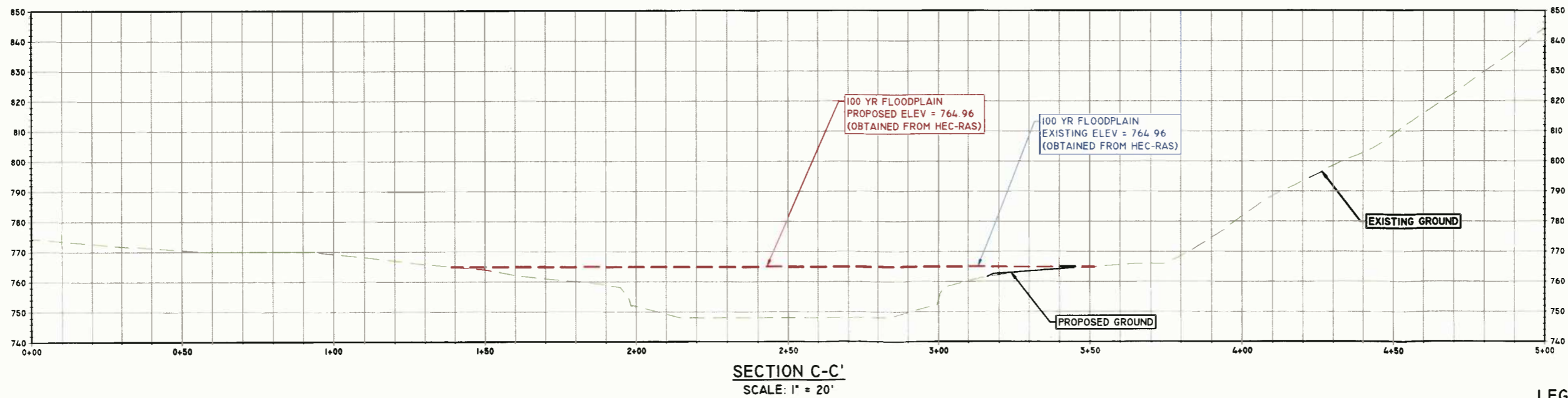
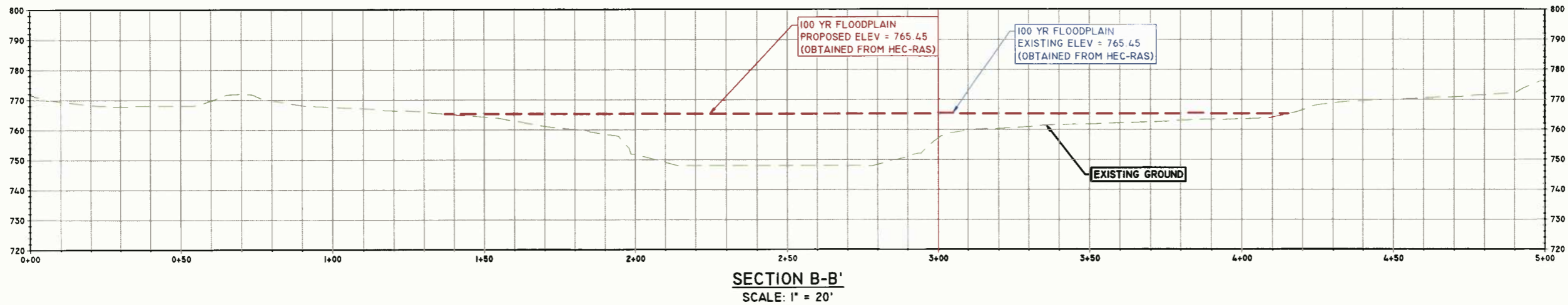
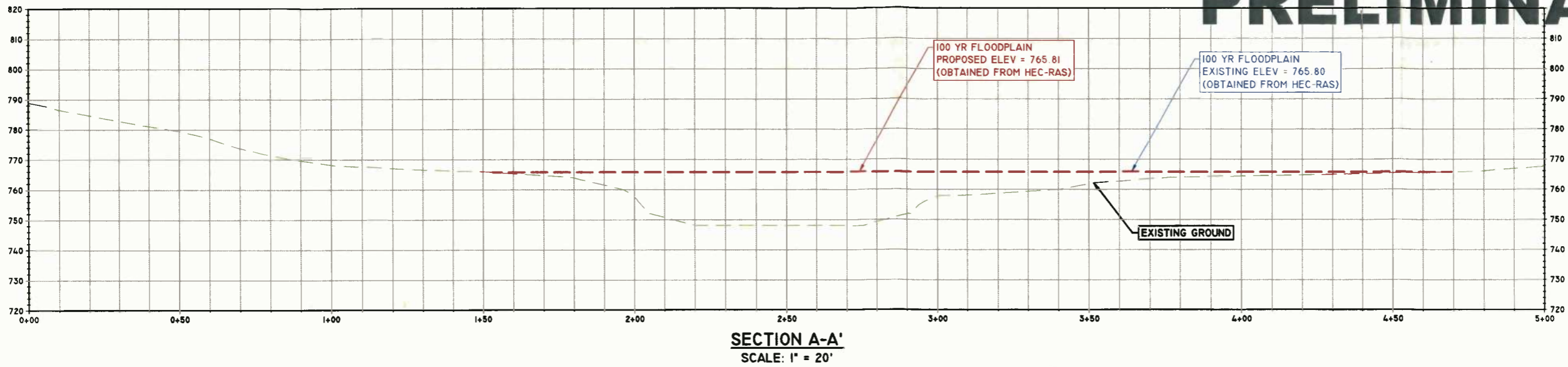
	100 YR FLOODPLAIN - FEMA
	100 YR FLOODPLAIN - EXISTING
	100 YR FLOODPLAIN - PROPOSED
	EDGE OF STREAM
	L00
	L00
	LIMITS OF DISTURBANCE
	FILL LIMIT
	CUT LIMIT

PRELIMINARY

NOTE: DRAWING WAS CREATED ON 22X34 PAPER. 11X17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.



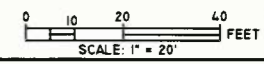
PRELIMINARY



LEGEND

	100 YR FLOODPLAIN - EXISTING
	100 YR FLOODPLAIN - PROPOSED

NOTE: DRAWING WAS CREATED ON 22X34 PAPER. 11X17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING.



Blue Mountain Inc.
Engineers and Land Surveyors
10125 Mason Dixon Hwy.
Burton, NY 13826-9556
(607) 662-9466

120 PROFESSIONAL PLACE
PROFESSIONAL BUILDING FOUR
BRIDGEPORT, WV 26330

EQT

MIDDLE ISLAND CREEK TRUCK
PAD ADDITIONAL ENTRANCE
FLOODPLAIN SECTIONS (1 OF 2)

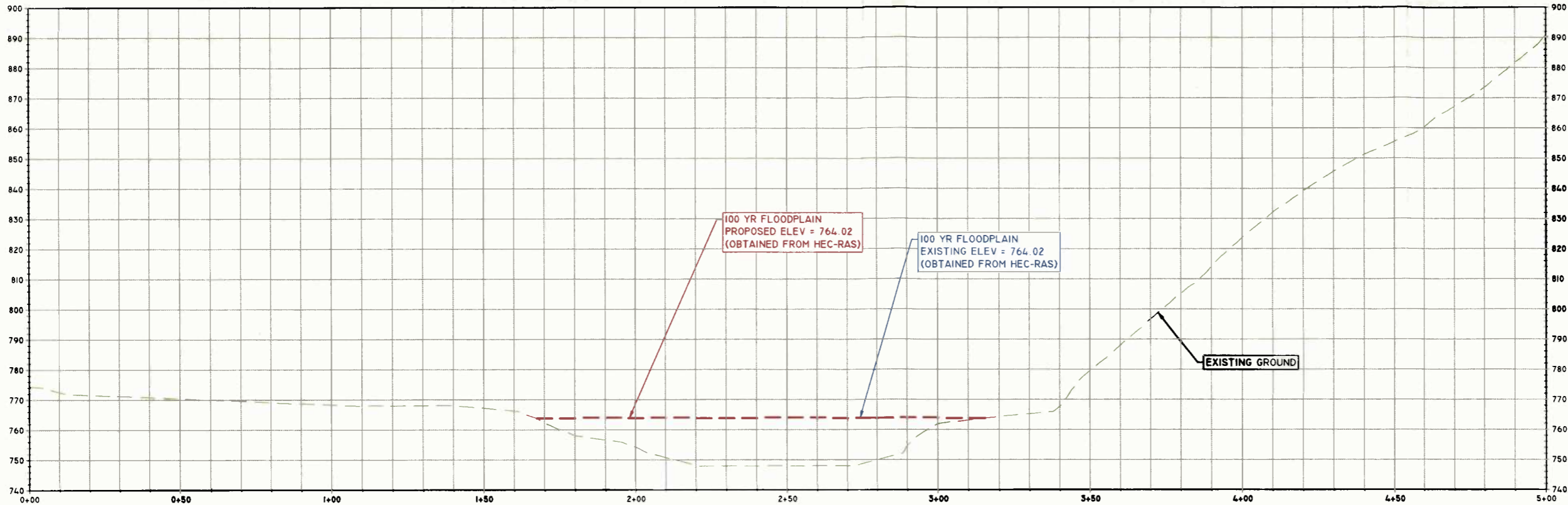
REVISIONS

DATE	TYPE

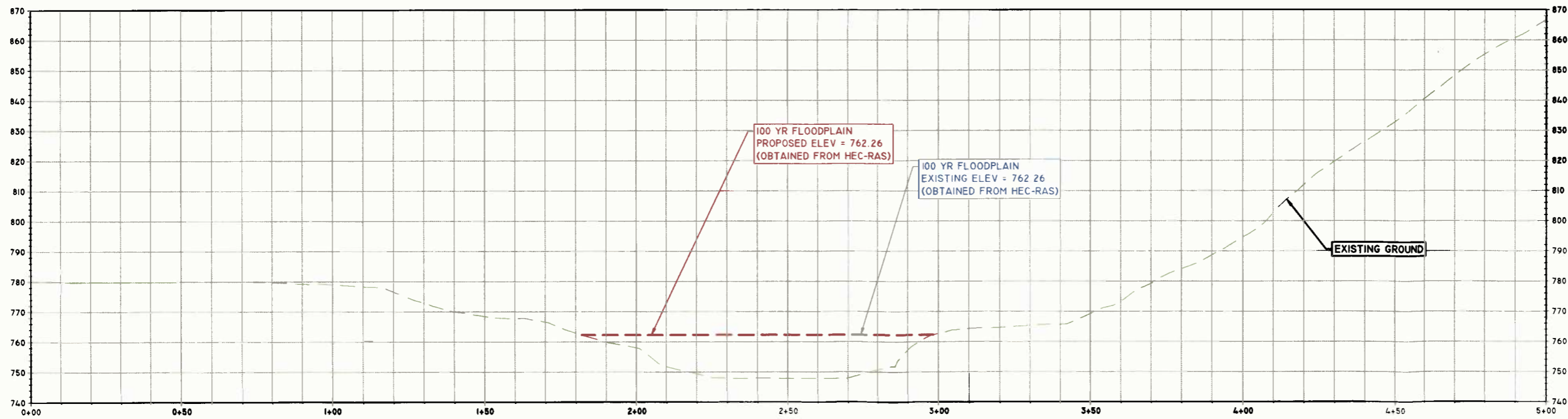
DRAWN BY: AFF
CHECKED BY: JND
DATE: 05/25/16
SCALE: AS SHOWN
JOB NO

DRAWING NAME: MIDDLE ISLAND CREEK TRUCK PAD
SHEET NO. 4

PRELIMINARY

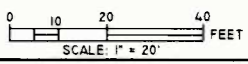


SECTION D-D'
SCALE: 1" = 20'



SECTION E-E'
SCALE: 1" = 20'

- LEGEND**
- 100 YR FLOODPLAIN - EXISTING
 - 100 YR FLOODPLAIN - PROPOSED

NOTE: DRAWING WAS CREATED ON 22x34 PAPER. 11x17 DRAWINGS ARE HALF SCALE. REFER TO SCALE BAR FOR PROPER SCALING. 

120 PROFESSIONAL PLACE
PROFESSIONAL BUILDING FOUR
BRIDGEPORT, WV 26330



MIDDLE ISLAND CREEK TRUCK
PAD ADDITIONAL ENTRANCE
FLOODPLAIN SECTIONS (2 OF 2)

REVISIONS

DATE	TYPE

DRAWN BY: AFF
CHECKED BY: JND
DATE: 05/25/16
SCALE: AS SHOWN
JOB NO:
DRAWING NAME: MIDDLE ISLAND CREEK TRUCK PAD