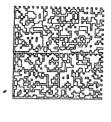
George Eidel Doddridge County OEM/Floodplain Mngr 108 Court St. Ste 1 West Union, WV 26456



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16-429

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 mallpiece, or on the front if space permits. B. Received by (Printed Name) C. Da B. Received by (Printed Name) C. Da If YES, enter delivery address below: Wilma C. Polan HC 68 Box 23

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West Union, WV 26456

2. Article Number (Transfer from service label)

Domestic Return Receipt

☐ Agent

C. Date of Delivery

☐ Yes

☐ No

☐ Addressee

Doddridge County Office of Emergency Management/Floodplain Management 108 Court Street Suite 1 Tel 304-873-1343 doddridgecountyfpm@gmail.com



Dear Sir or Ma'am,

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,

George Eidel

Doddridge County Floodplain Manager



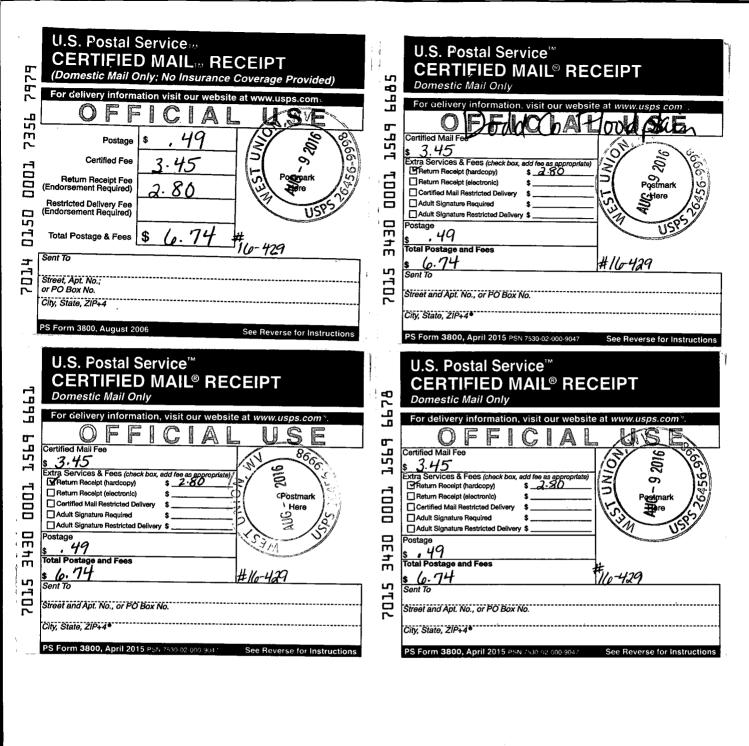
Doddridge County Floodplain Permits

(Week of Aug 8, 2016)

Please take notice that on the 5th day of August, 2016, Kleinfelder Group on behalf of Energy Transfer Company (ETC) has filed an application for a Floodplain Permit (#16-429) to develop land located at or about Eibs Camp Rd. 39.256498°, -80.707736°. 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 September 6, 2016 (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 to improve 1.1 miles of road

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7	or PO Box No.
	City, State, ZIP+4
	PS Form 8800, August 2003 See Reverse for Instructions



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 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. 	A. Signature A. Signature Agent Addressee B. Received by (Printed Name) C. Date of Deliyery
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PS Form 3811, July 2015 PSN 7530-02-000-9053	Domestic Return Receipt





United States Postal Service

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

George Eidel Doddridge County OEM/Floodplain Mngr 108 Court St. Ste 1 West Union, WV 26456

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Marven E. & Robin E. Travis 67 Eibs Camp Rd New Milton, WV 26411	D. Is delivery address different from If YES, enter delivery address	
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First-Class Mail Postage & Fees Paid USPS Permit No. G-10

United States
Postal Service

George Eidel Doddridge County OEM/Floodplain Mngr 108 Court St. Ste 1

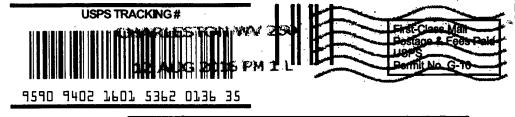
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West Union, WV 26456

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United States Postal Service

> George Eidel Doddridge County OEM/Floodplain Mngr 108 Court St. Ste 1 West Union, WV 26456

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

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16-429 Winford G. Bowen

217 Big Lake Dr. Andrew, SC 29510



2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature ☐ Agent Addressee C. Date of Delivery

B. Received by (Printed Name)

D. Is delivery address different from item 1? If YES, enter delivery address below:

☐ Priority Mail Express®

☐ Yes

□ No

3. Service Type ☐ Adult Signature Adult Signature Restricted Delivery

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☐ Certified Mail®

☐ Collect on Delivery Restricted Delivery

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☐ Insured Mail Restricted Delivery (over \$500) PS Form 8811 July 2015 PSN 7530-02-000-9053

☐ Insured Mail

Domestic Return Receipt



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®

George Eidel Doddridge County OEM/Floodplain Mngr 108 Court St. Ste 1 West Union, WV 26456

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SENDER: COMPLETE THIS SECTION

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

Domestic Return Receipt





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®

George Eidel Doddridge County OEM/Floodplain Mngr 108 Court St. Ste 1 West Union, WV 26456

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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 #: 16-429

Date Approved: September 6, 2016 Expires: September 6, 2017

Issued to: Kleinfelder Group on behalf POC: Matt Albright 724-831-5101 Energy Transfer Company Buffy Thompson 719-989-2844

Company Address: 1300 Main Street, Houston, Texas 77002

Project Address: Eibs Camp Road

Firm: Lat/Long: 39.256498, -80.707736

Purpose of development: Improve 1.1 miles of road

Issued by: George C. Eidel, Doddridge County CFM (or designee)

Date: September 6, 2016

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S	GSC/KLEINFELDER 230 EXECUTIVE DR STE 122 CRANBERRY TOWNSHIP, PA 16066-6415	2563
	PAY TO THE ORDER OF Doddridge County Commission \$704	PCHECK VEWOR
	PNCBANK PNC Bank, N.A. 001	
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Doddridge County, West Virginia

RECEIPT NO:

7534

DATE: 2016/08/10

FROM: GSC/KLEINFELDER

AMOUNT: \$

704.55

SEVEN HUNDRED FOUR DOLLARS AND 55 CENTS

FOR: #16-429 EIBS CAMP ROAD ROAD IMPROVEMENT

00000002563 FP-BUILDING PERMITS

020-318

TOTAL:

\$704.55

MICHAEL HEADLEY

SHERIFF &TREASURER

MEC

CLERK

Customer Copy

DETAIL SHEET EIBS CAMP ROAD IMPROVEMENT PROJECT ENERGY TRANSFER COMPANY

Bid Sheet for Meathouse Fork Floodplain Crossing							
Item Pipeline Size & Type Units Quantity Unit Cost							
Ground Surface Improvement & Reclamation	Road Improvement	Feet	695	\$50.00	\$34,750.00		
Culvert Installation	Road Improvement	Each	3	\$1,500.00	\$4,500.00		
E&S for Stream Crossing	Road Improvement	Each	1	\$160.00	\$160.00		
Stabilized Construction Entrance	Road Improvement	Each	1	\$1,500.00	\$1,500.00		
Total Improvemen	it Cost				\$40,910.00		

Doddridge County Floodplain Development Permit Application Fee Calculation (Inside Floodplain)				
Estimated Construction Costs \$40,910.00				
Amount over \$100,000	-\$59,090.00			
Deposit for additional charges	\$1,000.00			
\$5 per \$1,000 over \$100,000	-\$295.45			
Amount Due with application	\$704.55			



Doddridge County Floodplain Permits

(Week of Aug 8, 2016)

Please take notice that on the 5th day of August, 2016, Kleinfelder Group on behalf of Energy Transfer Company (ETC) has filed an application for a Floodplain Permit (#16-429) to develop land located at or about Eibs Camp Rd. 39.256498°, -80.707736°. 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 September 6, 2016 (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 to improve 1.1 miles of road

Property Owner Table - Doddridge County
Energy Transfer Company - Eibs Camp Road Improvement Project

Property Owner Name	Mailing Address	Parcel ID	Deed Book Reference	Land Book Description
A STATE OF THE STA	HOST P	ROPERTIES - WITHIN F	LOODPLAIN	7014 0150 0001 7356 7993
MARVEN E. TRAVIS & ROBIN E. TRAVIS	67 Eibs Camp Rd New Milton, WV 26411	42290490	DEED BOOK 261 PAGE 52	3.06 ACRES PER DEED
MARVEN E. TRAVIS & ROBIN E. TRAVIS	67 Eibs Camp Rd New Milton, WV 26411	422904035	DEED BOOK 261 PAGE 52	3.06 ACRES PER DEED
HAESSLY HARDWOOD LUMBER	Route #1 Box 185, Marietta, OH 45750	422907724	DEED BOOK 250 PAGE 625	7014 0150 0001 7356 7979 —————————————————————————————————
WILMA C. POLAN	Hc 68 #BX 23, West Union, WV 26456	422904136	DEED BOOK 274 PAGE	23.5 ACRES PER DEED
Property Owner Name	Mailing Address	Parcel ID	Deed Book Reference	Land Book Description
1000mmに対象を表現した。 1000mmmに対象を表現した。 1000mmに対象を表現した。 100	HOST PI	ROPERTIES - OUTSIDE I	LOODPLAIN	7015 3430 0001 1569 6678
CAROL S. LOWTHER	629 Ruby St. Belmont, WV 26134	422904141	DEED BOOK 188 PAGE 411	2.35 ACRES PER DEED
CAROL S. LOWTHER	629 Ruby St. Belmont, WV 26134	422904207	DEED BOOK 188 PAGE 411	14.525 ACRES PER DEED
BLAND ROBERT C & ARLENE	4101 Wv 18 Rte S, West Union, WV 26456	422904064	DEED BOOK 261 PAGE 55	7015 3430 0001 1569 6661
In care of: WINFORD G BOWEN	217 Big Lake Dr. Andrew, SC 29510	422904286	DEED BOOK 257 PAGE 279	7014 0150 0001 7356 7962



August 4, 2016

AUG 5 16 1:22PM

Mr. George Eidel Floodplain Coordinator Doddridge County Commission 118 East Court Street West Union, WV 26456

Re: Doddridge County Floodplain Development Permit Application

Eibs Camp Road Improvement Project Doddridge County, West Virginia Energy Transfer Company

Dear Mr. Eidel:

Energy Transfer Company (ETC) is proposing to upgrade the existing 1.1-mile, Eibs Camp Road (County Route 18/6) known as the Eibs Camp Road Improvement Project (Project) in Doddridge County, West Virginia (Figure 1). The Project will widen and realign portions of existing Eibs Camp Road; replace, repair, and clean existing culverts; perform ditch maintenance; and perform berm improvements to support oil and gas development activity in the area. The site can be accessed from West Virginia State Route 18 at 39.256498°, -80.707736°. Kleinfelder, Inc. (Kleinfelder), on behalf of ETC, has enclosed a Doddridge County Floodplain Development Permit Application for your review and approval along with a Permit Fee Detail Sheet and a check in the amount of \$704.55.

A list of property owners located within and immediately adjacent downstream to the Federal Emergency Management Agency (FEMA) 100 year floodplain within the proposed Project are included as Attachment A. Figures 1 and 2 present the Project on USGS Topographic and Aerial Maps, respectively and depict the proposed area-of-interest (AOI) and limit-of-disturbance associated with the Project.

Kleinfelder biologists conducted a stream and wetland investigation and habitat assessment on June 21, 2016 and June 28, 2016 to identify streams and wetlands within a 19.8-acre AOI surrounding the proposed Project. During the site review, fifteen (15) aquatic features were observed within the AOI, including three (3) ephemeral streams, four (4) intermittent streams, one (1) perennial stream and seven (7) palustrine emergent (PEM) wetlands.

Based on the engineered design plans (Attachment B), construction activities will include the upgrade and replacement of two (2) culverts within Eibs Camp Road and the installation of one (1) culvert at a driveway entrance within the designated FEMA regulated flood zone according to FIRM Map # 54017C0140C.

CRA16L44264

Page 1 of 2

August 4, 2016

<u>Directions to the Site from West Union, WV:</u> Head south on WV-18 and continue for 4.5 miles. The entrance to the Project will be on your left.

The Floodplain Map (Attachment C) depicts locations where construction activities will enter and exit the floodplain. Approximately 695 feet of the proposed road improvement will be inside the Meathouse Fork floodplain with a construction disturbance of 0.70 acres. Above grade improvements occurring inside the Meathouse Fork floodplain will require less than six inches of stone and therefore will not affect base flood elevations. In addition, the West Virginia Flood Tool Map for this proposed floodplain crossing is included as Attachment E.

Please reference Attachment D for required permits and their status.

We appreciate your timely review of this request. Please contact Matt Albright (724-831-5101) of Kleinfelder with any questions.

Respectfully submitted,

Matthew J. Albright Project Manager

matthing, curilt

Troy B. Daniels, PE Project Engineer

cc: Buffy Thomason, ETC

Enclosures (10)

Doddridge County Floodplain Development Permit Application, Detail Sheet and Check

Figure 1 – Project Location Map
Figure 2 – Aquatic Resources Map
Attachment A – Property Owner Table
Attachment B – Engineered Design Plans
Attachment C – Flood Insurance Rate Map
Attachment D – Required Permits and Status

Attachment E - West Virginia Flood Tool Map

CRA16L44264 Page 2 of 2 August 4, 2016

Project Narrative:

Describe in detail the proposed development including project name/title, type of development, estimated start and completion timeline, and its potential impact on the floodplain. Use additional copies of this page as needed.

Project Narrative:

Energy Transfer Company (ETC) is proposing to upgrade the existing 1.1-mile, Eibs Camp Road (County Route 18/6) known as the Eibs Camp Road Improvement Project (Project) in Doddridge County, West Virginia (Figure 1). The Project will widen and realign portions of existing Eibs Camp Road (County Route 18/6); replace, repair, and clean existing culverts; perform ditch maintenance; and perform berm improvements to support oil and gas development activity in the area.

The project will include the upgrade and replacement of two (2) culverts and the installation of one (1) culvert within the designated floodplain. It is anticipated that the project will have minimal impacts on the floodplain.

CONSTRUCTION DESCRIPTION

Eibs Camp Road Improvement Project Doddridge County, West Virginia

Construction on the Eibs Camp Road Improvement Project within <u>Doddridge County</u> may consist of silt fence, compost filter sock, diversions, and temporary and permanent seeding and mulching. Best management practices (BMP) specifications for the Erosion and Sediment Control Plans (ESCPs) are to be utilized by the construction contractor according to the provided plan. Straw/hay bales will not be used as an erosion and sediment (E&S) control.

Descriptions of the Project construction activities are outlined in the sequence below:

- 1. Prior to beginning land disturbing activities, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area. These shall be clearly marked, both in the field and on the plans, to prevent damage and offsite impacts.
- Install rock construction entrance and associated culvert immediately before initial disturbances. The rock construction entrance is to be underlain by filter fabric. Construction traffic should only use this entrance for ingress and egress. No sediment tracking on the roadway is allowed. In the event that sediment is inadvertently tracked onto the road, the road shall be cleaned thoroughly by the end of each day. Sediment shall be removed from roads by shoveling or pickup sweeping and shall be transported to a controlled sediment disposal area. Street washing of sediments to the storm drain system is not allowed. If street wash wastewater can be controlled from entering the storm drainage system, then it shall be pumped back onto the site, contained and disposed of properly.
- 3. Install temporary E&S controls (silt fence, diversions, etc.) prior to any earth disturbing activities, which includes grubbing and excavation, to ensure to the maximum extent practicable, that no significant erosion or sedimentation occurs. All compost filter socks and sediment fence shall be installed as close to parallel to contours as possible.
- 4. Diversions and/or other erosion and sediment control devices will be installed as needed. If clearing and grubbing is required, see below regarding the management and disposal of debris.
- 5. Stream and wetland crossings will be kept to a minimum and will be stabilized by placing timber

mats or prefabricated swamp mats. All materials used to stabilize wetland areas will be removed from the wetland upon completion of construction.

- 6. After access to and along the proposed Project has been provided, the general clearing and grubbing of the trees and brush along the limit of disturbance (LOD) may commence to the width specified in the ESCPs. All pollutants, including waste materials and demolition debris, that occur on-site during construction shall be handled and disposed of in a manner that does not cause contamination of surface waters. Woody debris may be chopped and spread on-site.
- 7. Commence grading on the county road, associated ditches and install culverts with outlet protection. The earth moving activity shall begin in area of cut so that the cuts can be placed in areas of fill. The county road shall initially receive a stone surface and then a chip and seal surface following construction.
- 8. Grading within the LOD will be conducted for the county road improvements and where necessary to provide an even surface for safe and efficient operation of construction equipment. Grading will be the minimum amount necessary and BMPs will be installed promptly. Tree stumps, and large rocks and boulders will also be removed for safety at this time.
- 9. The proposed construction LOD will be used as a work area for grading, equipment movement, and the storage of soil stockpiles, as needed. Equipment soil stockpiles, and other materials area to remain upslope of BMPs during construction activities.
- 10. Segregation of topsoil and subsoil will be performed where excavation takes place in an agricultural, wetland, or residential areas.
- 11. Finalize the county road widening and place topsoil on the cut and fill areas. Immediately install erosion control blankets or hydraulically applied blankets on cut and fill slopes.
- 12. Sediment laden runoff shall not be allowed to flow directly into, onto or through unprotected inlets, storm drains, water bodies, adjacent streams or wetlands.
- 13. Any exposed topsoil piles should be immediately stabilized & seeded per tables shown on the approved erosion control plans and mulched with straw as specified by the Project owner.
- 14. Selected soil stabilization measures shall be appropriate for the time of year, site conditions, and estimated duration of use.
- 15. Soil stockpiles must be stabilized and protected with sediment trapping measures.
- 16. Prior to any seeding, lime, and fertilization application, a soil test shall be performed to determine the pH factor. Additional lime and fertilizer may be required.
- 17. All E&S controls will be inspected, at a minimum, once every seven calendar days in areas of active construction and within 24 hours after any storm event greater than 0.5-inch per 24-hour period until there is a uniform, perennial 70 percent vegetative coverage established. Temporary BMPs will be removed upon achieving vegetative stabilization. The 70 percent requirement refers to the total area vegetated and not a percent of the site.

Following completion of construction activities, the ROW will be restored to pre-construction contours (with the exception of the county road). No permanent structures will be constructed within the floodplain. Improvements to the county road within the floodplain will require less than six inches of stone. As a result, there will be no change to Meathouse Fork base flood elevation of 810 feet.

RELATIVE TIME LINE OF OVERALL CONSTRUCTION ACTIVITIES

Tree Clearing - November 15, 2016 to December 1, 2016
Erosion & Sediment Controls - December 1, 2016 to December 10, 2016
Grubbing - December 10, 2016 to December 20, 2016
Construction/Road Improvements - December 20, 2016 to March 1, 2017
Stabilization - March 1, 2017 to June 15, 2017



Permit# 16-429

Project Name: Elbs Camp Rd

Improvement

Permittees Name: Kleinfelder

For Every transfer

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	nua aine	
DATE	8/4/16	

Applicant Information:

Please provide all pertinent data.

Applicant Information	3	
Responsible Company Name: Energy Trans	fer Company	
Corporate Mailing Address: 1300 Main Stre	et	
City: Houston	State: TX	Zip: 77002
Corporate Point of Contact (POC): Buffy Th	omason	
Corporate POC Title: Senior Environmental	Scientist	
Corporate POC Primary Phone: 713-989-28	344	
Corporate POC Primary Email: Buffy.Thoma	ason@energytransfe	er.com
Corporate FEIN: 47-1958303	Corporate D	UNS:
Corporate Website:	I	
Local Mailing Address: 1300 Main Street	···········	
City: Houston	State: TX	Zip: 77002
Local Project Manager (PM): Buffy Thomas	on	
Local PM Primary Phone: 713-989-2844		
Local PM Secondary Phone: N/A		
Local PM Primary Email: Buffy.Thomason@	energytransfer.com	
Person Filing Application: Matt Albright		
Applicant Title: Project Manager		
Applicant Primary Phone: 724-831-5101		
Applicant Secondary Phone: 724-772-7072		
Applicant Primary Email: MAlbright@Klein	felder.com	
		4, 4 years and a second

Proposed Development:

Please check all elements of the proposed project that apply.

DESCRIPTION OF WORK (CHECK ALL APPLICABLE BOXES)

A. STRUCTURAL DEVELOPMENT

ACTIVITY					STRUCTURAL TYPE			
[X]	New Structure				[]	Residential (1 – 4 Family)		
[]	Addition				[]	Residential (more than 4 Family		
[]	Alteration				[X]	Non-reside	ential (floodproofing)	
[]	Relocation				[]	Combined	Use (res. & com.)	
[]	Demolition	1				Replacement		
[]	Manufacti	ured/Mo	bil Home					
В.	OTHER DE	VELOPI	MENT ACTI	VITIES:				
[]	Fill	[]	Mining	[]	Drilling	g ()	Pipelining	
[]	Grading							
[]	Excavation	(except	for STRUCTUR	RAL DEVE	LOPMEN	T checked a	bove)	
[]	Watercour	se Altera	tion (including	g dredgii	ng and ch	annel modif	ication)	
[X]	Drainage Ir	mprovem	nents (includin	ng culver	t work)			
[X]	Road, Stree	et, or Bri	dge Construct	ion				
[]	Subdivision	n (includi	ng new expan	sion)				
[]	Individual '	Water or	Sewer Systen	n				
[]	Other (plea	ase speci	fy)					

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.)

	Is the development in the floodway?		··	he floodplain?	
Location (Lat/Long):		Approximate Elevation: Estimated BFE:			
Community:	Number:	Panel:		Suffix:	
at odpsod mathous	ze (tá he Smintagá	Бу Яваг і рінің Вина	ger in લેઇકો	(gi)(etc)	
Existing Buildings/Use	of Property:				
Tax Map Reference.					
Tax Map Reference:					
Deed Book Reference:					
		**************************************	'		
Land Book Description:					
District: Smithburg	Мар:	Мар:		Parcel:	
DMS Latitude/Longitud	e:			-	
Decimal Latitude/Long	itude:				
Physical Address/911 A	Address:				
Legal Description: Pleas	se Reference Attachm	ent A – Property Owi	ner Table		
	(1)));	and the state of t	بينين لمدين	كالأمان أملك الطاء أأمماعا الم	

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 Owner Data		
Property Owner Data: Name of Primary Owner (PO): Ple	ease Reference Attachment	A – Property Owner Table
PO Address:		
City:	State:	Zip:
<u> </u>	State.	Zip.
PO Primary Phone:		
PO Secondary Phone:		
PO Primary Email:		
Surface Rights Owner Data:		
Name of Primary Owner (PO): Pl	ease Reference Attachment	A – Property Owner Table
PO Address:		
City:	State:	Zip:
PO Primary Phone:		
PO Secondary Phone:	•	
PO Primary Email:		
PO Primary Email:	pplicable)	
PO Primary Email:	pplicable)	
PO Primary Email: Mineral Rights Owner Data: (As A	pplicable)	
PO Primary Email: Mineral Rights Owner Data: (As A Name of Primary Owner (PO): PO Address:	pplicable) State:	Zip:
PO Primary Email: Mineral Rights Owner Data: (As A Name of Primary Owner (PO): PO Address: City:		Zip:
PO Primary Email: Mineral Rights Owner Data: (As A Name of Primary Owner (PO): PO Address:		Zip:

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) Informat	iôn:			
C/SC Company Name: TBD				
C/SC WV License Number: TBD				
C/SC FEIN: TBD	C/SC DUNS: T	C/SC DUNS: TBD		
Local C/SC Point of Contact (POC): TBD				
Local C/SC POC Title: TBD				
C/SC Mailing Address: TBD				
City: TBD	State: TBD	Zip-Code: TBD		
Local C/SC Office Phone: TBD	-			
Local C/SC POC Phone: TBD				
Local C/SC POC E-Mail: TBD				

Engineer Firm Information:			
Engineer Firm Name: Kleinfelder, Inc.			
Engineer WV License Number: WV 20043			
Engineer Firm FEIN: 27-0123832	Engineer Fir	Engineer Firm DUNS:	
Engineer Firm Primary Point of Contact (POC): Troy B. Daniel			
Engineer Firm Primary POC Title: Project	Engineer		
Engineer Firm Mailing Address: 555 Mark	et Ave, North Suite 10	00	
City: Canton	State: OH	Zip-Code: 44702	
Engineer Firm Office Phone: 330-453-223	0		
Engineer Firm Primary POC Phone: 330-4	53-2230		
Engineer Firm Primary POC E-Mail: TDaniel@Kleinfelder.com			

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): Please Reference	Attachment A –	Property Owner Table		
Physical Address:				
City:	State: WV	Zip:		
PO Primary Phone:				
PO Secondary Phone:				
PO Primary Email:				
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Adjacent Property Owner Data: Upstream		. ,		
Name of Primary Owner (PO): Please Reference	e Attachment A –	Property Owner Table		
Physical Address:				
City:	State: WV	Zip:		
PO Primary Phone:				
PO Secondary Phone:				
PO Primary Email:				
Adjacent Property Owner Data: Downstream				
Name of Primary Owner (PO): Please Reference	e Attachment A –	Property Owner Table		
Physical Address:				
City:	State: WV	Zip:		
PO Primary Phone:				
PO Secondary Phone:				
PO Primary Email:				
Adjacent Property Owner Data: Downstream				
Name of Primary Owner (PO): Please Reference Attachment A – Property Owner Table				
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 of 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:	The Clinica	
Applicant Printed Name: _	mutt Albright	

FIGURES

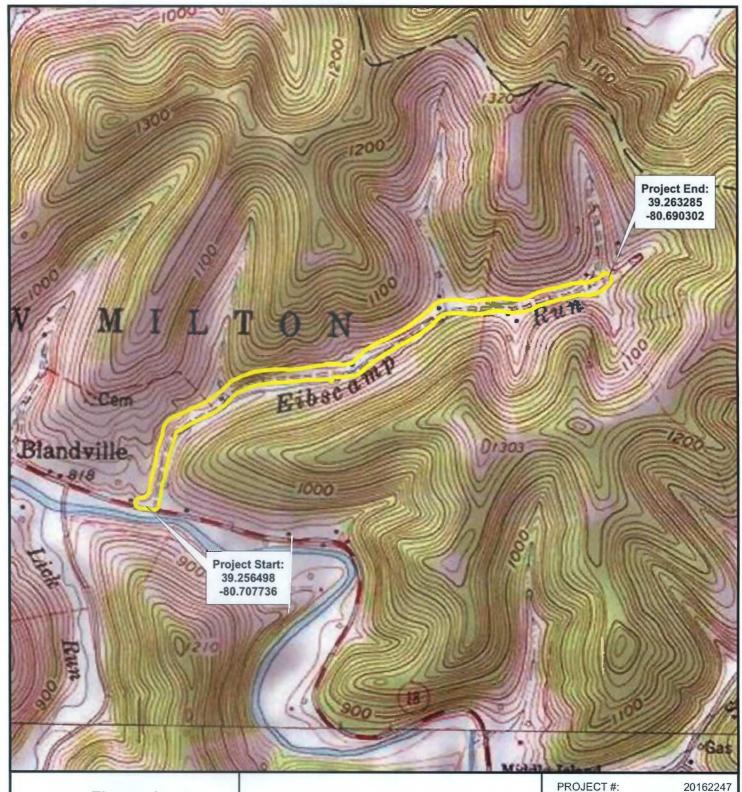


Figure 1 Project Location Map

Eibs Camp Road Improvement Project Energy Transfer Company Doddridge County, West Virginia





FILE NAME:

EibsCamp_WDSIR_Fig1



DRAWN:

DRAWN BY:

CHECKED BY:

0 500 1,000 Feet

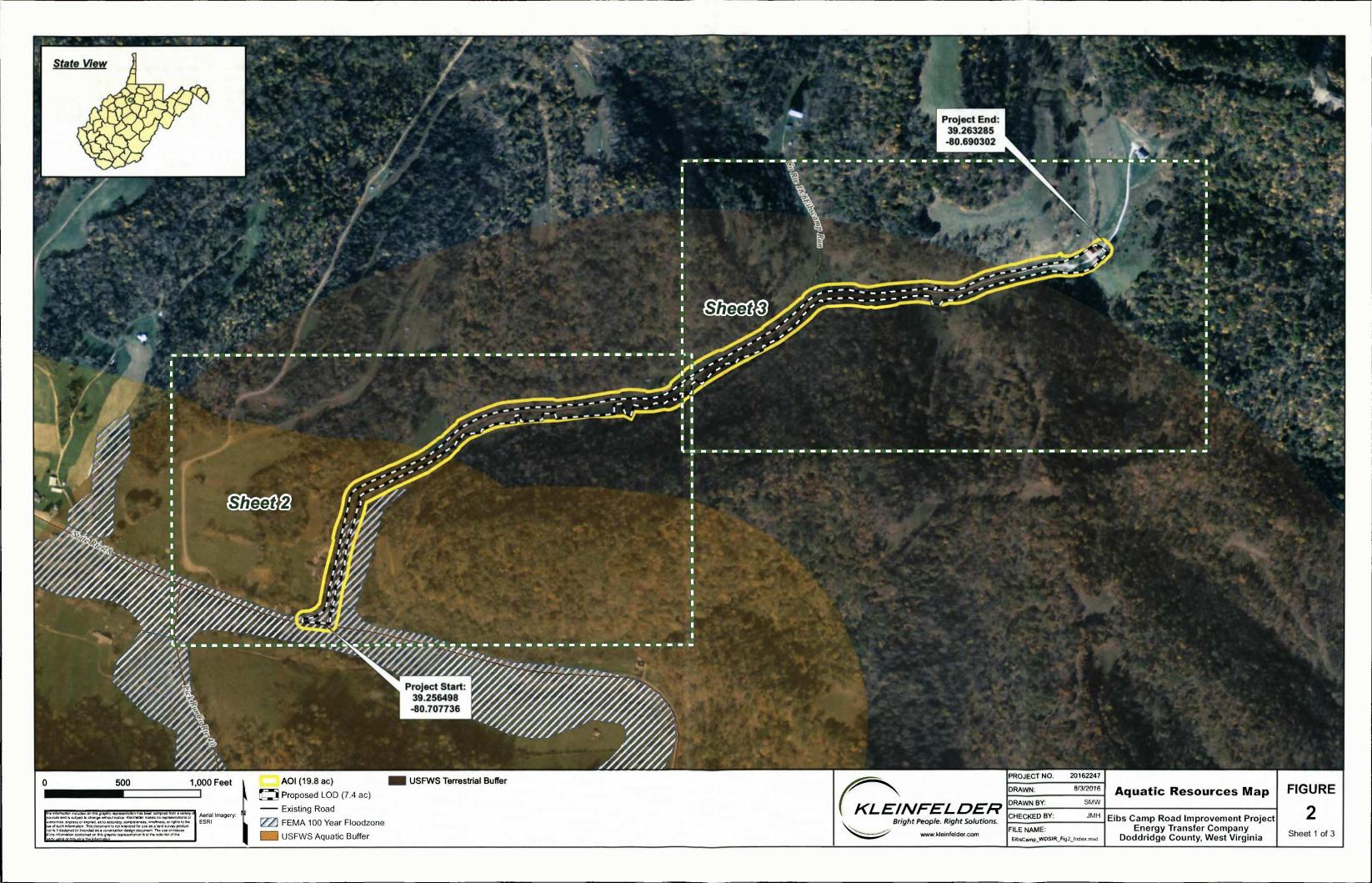
8/2/2016

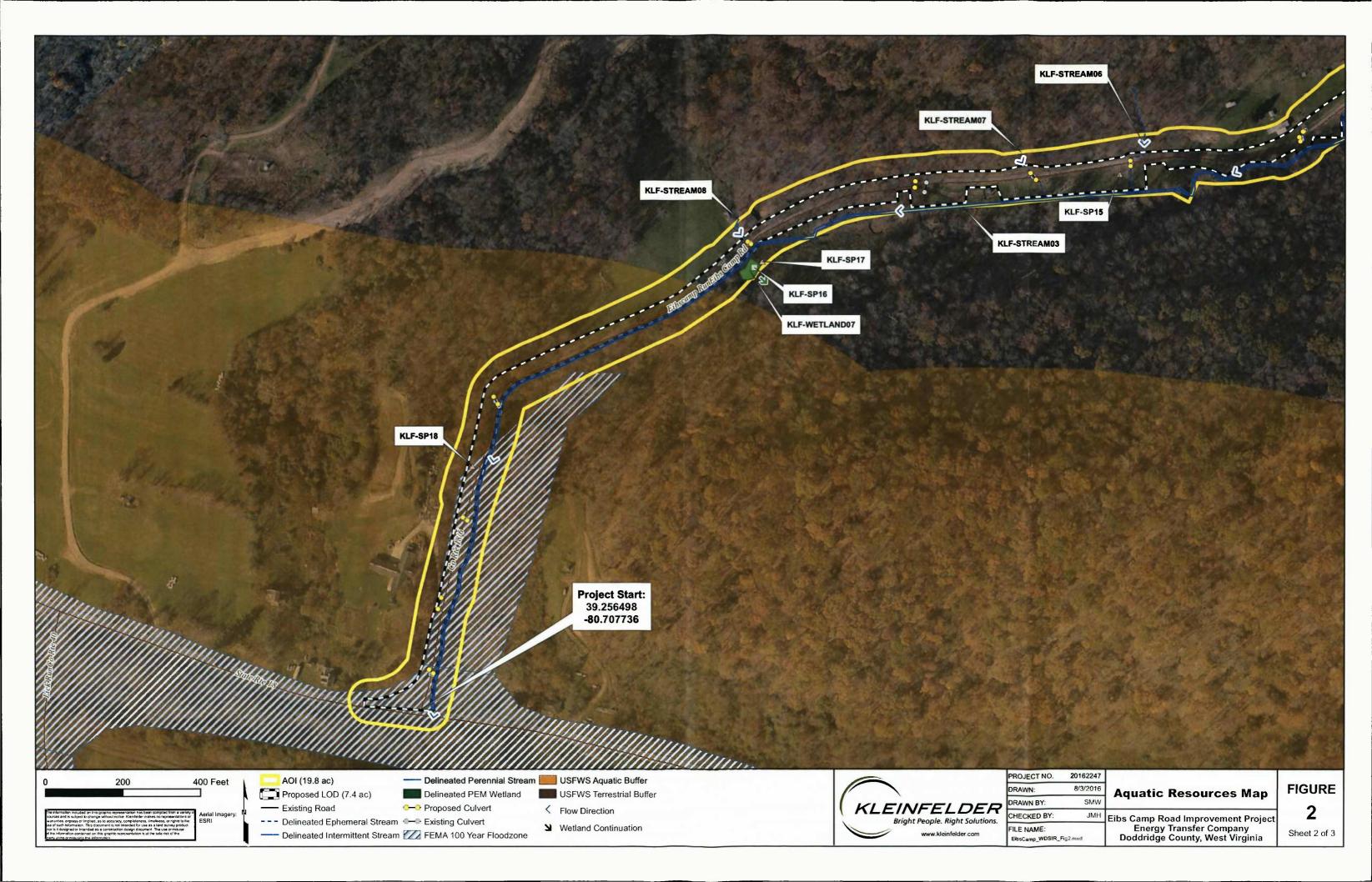
SMW

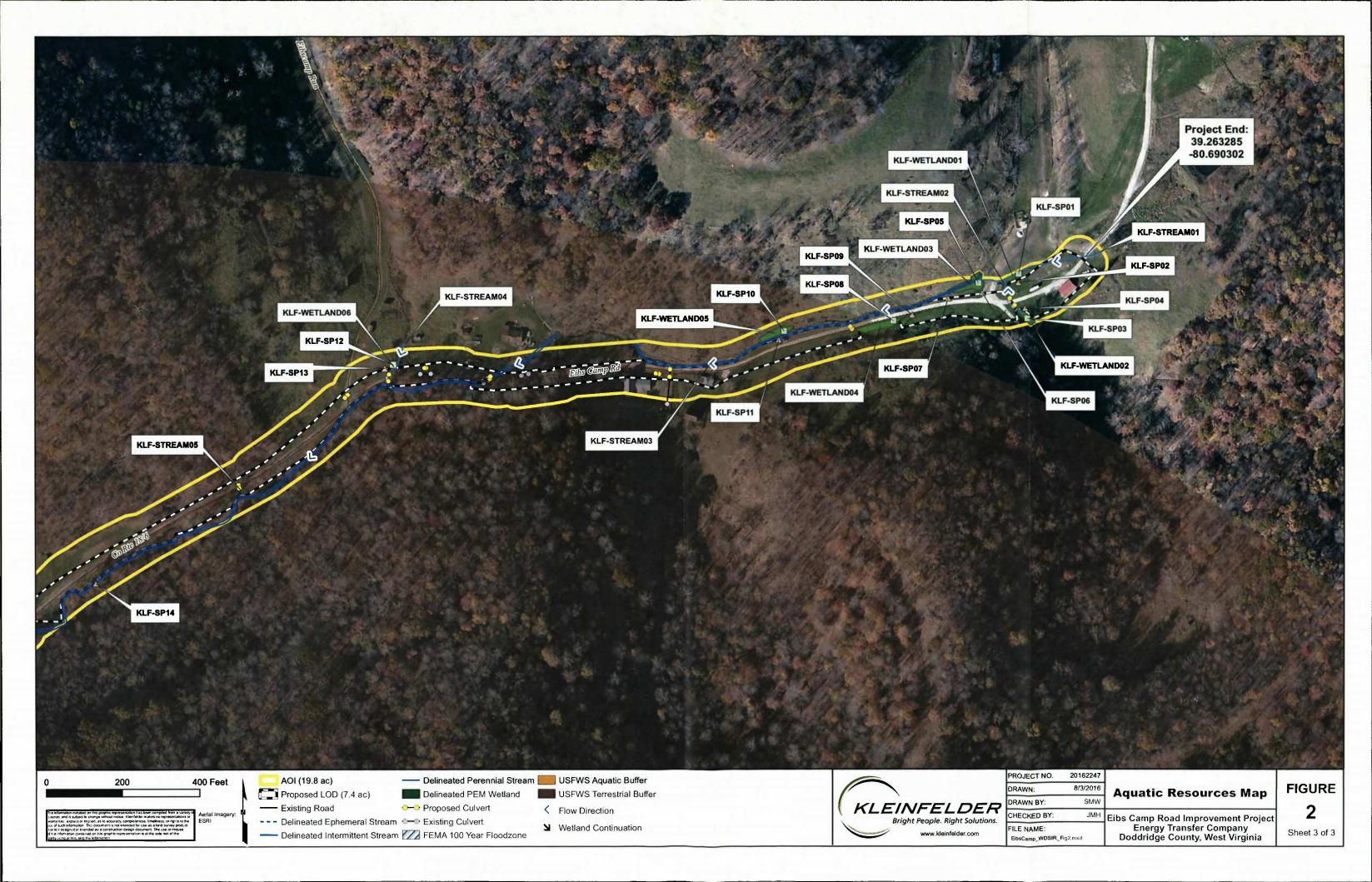
JMH

Smithburg, WV 7.5' USGS Quadranige

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ATTACHMENT A PROPERTY OWNER TABLE

Property Owner Table - Doddridge County Energy Transfer Company - Eibs Camp Road Improvement Project

Property Owner Name	Mailing Address	Parcel ID	Deed Book Reference	Land Book Description				
HOST PROPERTIES - WITHIN FLOODPLAIN								
MARVEN E. TRAVIS & ROBIN E. TRAVIS	67 Eibs Camp Rd New Milton, WV 26411	42290490	DEED BOOK 261 PAGE 52	3.06 ACRES PER DEED				
MARVEN E. TRAVIS & ROBIN E. TRAVIS	67 Eibs Camp Rd New Milton, WV 26411	422904035	DEED BOOK 261 PAGE 52	3.06 ACRES PER DEED				
HAESSLY HARDWOOD LUMBER	Route #1 Box 185, Marietta, OH 45750	422907724	DEED BOOK 250 PAGE 625	1328 ACRES PER DEED				
WILMA C. POLAN	Hc 68 #BX 23, West Union, WV 26456	422904136	DEED BOOK 274 PAGE 14	23.5 ACRES PER DEED				
Property Owner Name	Mailing Address	Parcel ID	Deed Book Reference	Land Book Description				
	HOSTP	ROPERTIES - OUTSIDE F	LOODPLAIN	and the same of				
CAROL S. LOWTHER	629 Ruby St. Belmont, WV 26134	422904141	DEED BOOK 188 PAGE 411	2.35 ACRES PER DEED				
CAROL S. LOWTHER	629 Ruby St. Belmont, WV 26134	422904207	DEED BOOK 188 PAGE 411	14.525 ACRES PER DEED				
BLAND ROBERT C & ARLENE	4101 Wv 18 Rte S, West Union, WV 26456	422904064	DEED BOOK 261 PAGE 55	2.61 ACRES PER DEED				
In care of: WINFORD G BOWEN	217 Big Lake Dr. Andrew, SC 29510	422904286	DEED BOOK 257 PAGE 279	51 ACRES PER DEED				

ATTACHMENT B ENGINEERED DESIGN PLANS

WEST VIRGINIA

ROAD LOCATION MAP

DIRECTIONS TO PROJECT:

DIRECTIONS TO PROJECT:
FROM THE WYDEP NORTH CENTRAL REGIONAL OFFICE IN FARMONT, WV, HEAD WEST ON PLEASANT VALLEY ROAD TOWARD RUSKIN DR. TAKE A RIGHT ONTO KINGMONT ROAD AND FOLLOW THE ROAD FOR APPROXIMATELY 13.6 MILES BEFORE TURNING LETT TO MERGE ONTO 1-79 S. TAKE 1-795 FOR APPROXIMATELY 13.6 MILES BEFORE TAKING EXIT 19 TO MERGE ONTO US-50 W TOWARD CLARKSBURG/BRIDGEPORT. CONTINUE ON US-50 W FOR APPROXIMATELY 26.3 MILES BEFORE TONTO SNOWING ROAD. FOLLOW THIS ROAD FOR APPROXIMATELY 16.8 MILES BEFORE TURNING LETT ONTO SNOWING ROAD. FOLLOW THIS ROAD FOR APPROXIMATELY 16.8 MILES BEFORE TURNING LETT ONTO WING STEAD APPROXIMATELY 16.8 MILES BEFORE TURNING LETT ONTO WING SOME CANDIDITY. WV-18 S FOR APPROXIMATELY 1.2 MILES AND TURN LEFT ONTO EIBS CAMP RUN. CONTINUE ON EIBS CAMP RUN AND KEEP RIGHT AT THE FORK TO CONTINUE ONTO EIBS CAMP ROAD FOR APPROXIMATELY 0.25 MILES TO ARRIVE AT THE PROJECT SITE ON THE LEFT

EXISTING INFORMATION SOURCES

BENCHMARK:
HORIZONTAL - NAD83 WEST VIRGINIA STATE PLANES, NORTH ZONE, US FOOT VERTICAL - NAVD 88 (GEOID03), US SURVEY FEET

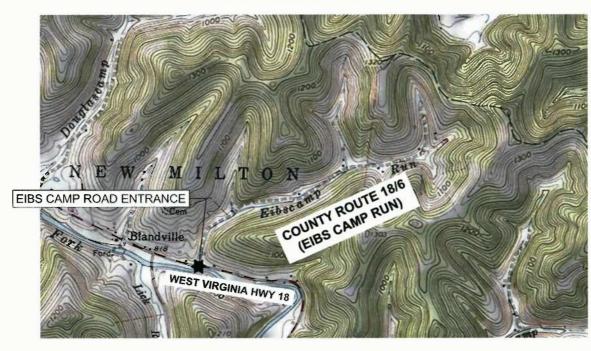
FLOOD INSURANCE RATE MAP (FIRM) NO. 54017C0140C, DATED OCTOBER 4, 2011, DODDRIDGE COUNTY

MISS UTILITY OF WEST 1-800-245-4848 WEST VIRGINIA STATE LAW REQUIRES THAT YOU CALL TWO BUSINESS DAYS BEFORE YOU DIG IN THE STATE OF WEST VIRGINIA

EROSION AND SEDIMENT CONTROL PLANS FOR THE **EIBS CAMP ROAD IMPROVEMENTS**

NEW MILTON DISTRICT DODDRIDGE COUNTY, WEST VIRGINIA

LAT/LONG: 39.256498° N; 80.707736° W



USGS	LOCATION	MAP
0000	LOUATION	IVIC

PROJECT OWNER

ENERGY TRANSFER COMPANY CONTACT: DANNY GRANTHAM 1300 MAIN STREET HOUSTON, TX 77002 713-989-7000

LOCATION SURVEYOR

ENCOMPASS ENERGY SERVICES, LLC CONTACT: TYLER HASTINGS, PLS 1370 WASHINGTON PIKE, SUITE 308 BRIDGEVILLE, PA 15017 412-564-5215

ENVIRONMENTAL/ DELINEATION BOUNDARY

KLEINFELDER EAST, INC. 230 EXECUTIVE DRIVE, SUITE 122 CRANBERRY TOWNSHIP, PA 16066 P: 724-772-7072 F: 724-772-7079

ENGINEER OF RECORD

KLEINFELDER EAST, INC. CONTACT: TROY DANIEL, PE PE 20043 555 MARKET AVE, SUITE 100 CANTON, OH 44702 P: 330-453-2230 EX 804 F: 330-453-2256

TOPO SURVEYOR

ENCOMPASS ENERGY SERVICES, LLC CONTACT: TYLER HASTINGS, PLS 1370 WASHINGTON PIKE, SUITE 308 BRIDGEVILLE, PA 15017 412-564-5215

SHEET INDEX					
PAGE NO. DESCRIPTION					
1	COVER PAGE & LOCATION MAP				
2	EROSION & SEDIMENT CONTROL NOTES				
3	OVERALL KEY MAP (AERIAL)				
4 - 15	EROSION & SEDIMENT CONTROL PLANS				
16 KLF-STREAMOB CROSSING DETAIL					
17	KLF-STREAM07 CROSSING DETAIL				
18	KLF-STREAM06 CROSSING DETAIL				
19	KLF-STREAM04 CROSSING DETAIL				
20 - 21	KLF-STREAM03 CROSSING DETAIL				
22	KLF-WETLAND04 CROSSING DETAIL				
23 - 30 BMP TECHNICAL INSTALLATION DETAILS					
31	OFFSITE SPOIL PILE DETAIL				

TOTAL PROJECT DATA				
NAME	DISTURBANCE AREA			
EIBS CAMP ROAD IMPROVEMENTS	7.41 AC			

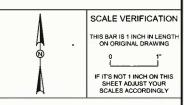
	SITE LOCATION						
C	DESCRIPTION	NAD 83 (WV NORTH)		UTM ZONE 17 (METER)			
	DESCRIPTION	LATITUDE	LONGITUDE	NORTHING	EASTING		
	ACCESS ROAD ENTRANCE	39.256498° N	80.707736° W	4345281.8 m	525216.0 m		

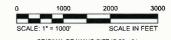
KLEINFELDER



s	igned By: TROY DANIEL	1	2004	3
	REVISION	IS		
REV	DESCRIPTION	DSN	СНК	DATE
KEV	DESCRIPTION	DWN	APP	DATE
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	6.			
	14.			

ISSUE FOR PERMITTING NOT FOR CONSTRUCTION





COVER PAGE & LOCATION MAP

EIBS CAMP ROAD IMPROVEMENTS EW MILTON DISTRICT, DODDRIDGE COUNT WEST VIRGINIA

> **EROSION & SEDIMENT** CONTROL PLANS

ROJECT NO. SSUE DATE 07-29-2016 JRRENT REVISION ESIGNED BY RAWN BY внн HECKED BY BB

PLAN REPRODUCTION WARNING

THE PLANS HAVE BEEN CREATED ON ANSI D (22"x34") SHEETS. FOR REDUCTIONS, REFER TO GRAPHIC SCALE.

THE PLANS HAVE BEEN CREATED FOR FULL COLOR PLOTTING. ANY SE

"WARNING": INFORMATION MAY BE LOST IN COPYING AND/OR GRAY

GENERAL NOTES

- PROJECT OWNER WILL OBTAIN AN ENCROACHMENT PERMIT (FORM MM-109) FROM THE WEST VIRGINIA DEPARTMENT OF
- ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER. IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH PROBLEMS. WORK DONE BY THE CONTRACTOR AFTER THE DISCOVERY OF SUCH DISCREPANCIES, NCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
- WORK ON THIS PROJECT SHALL CONFORM TO THE LATEST EDITIONS OF THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTA PROTECTION (WVDEP) EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE HANDBOOK, IN THE EVENT OF CONFLICT BETWEEN THE DESIGN, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT WILL GOVERN.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR, AT HIS OR HER EXPENSE, OF ALL EXISTING UTILITIES DAMAGED DURING CONSTRUCTION. FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION THE CONTRACTOR SHALL CALL MISS UTILITY AT
- INSTALLATION OF STORM PIPE SHALL BE IN CONFORMANCE WITH THESE DRAWINGS.
- ALL MATERIALS USED FOR FILL OR BACK FILL SHALL BE FREE OF WOOD, ROOTS, ROCKS, BOULDERS OR ANY OTHER NON-COMPACTABLE SOIL TYPE MATERIALS. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY
- MATERIALS USED TO FILL AROUND DRAINAGE STRUCTURES IN UTILITY TRENCHES OR ANY OTHER DEPRESSION REQUIRING FILL OR BACK FILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AS SET FORTH IN ASTM STANDARD D-898. THE MOISTURE CONTENT WILL BE CONTROLLED IN ACCORDANCE WITH THE LIMITS OF THE STANDARD PROCTOR TEST RESULTS. SOME SOILS CANNOT BE COMPACTED TO 95% OF THE STANDARD PROCTOR AT PLUS OR MINUS 4% MOISTURE CONTENT. THE CONTRACTOR SHALL PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACK FILLING, SUBMIT THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CRAFTICATION THAT THE SOIL TESTED IS RESENSATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. THE TESTS SHALL BE CONDUCTED BY A CERTIFICATION THAT THE SOIL TESTED IS REACTORY AND THE CERTIFICATION SMODE BY A LICENSED PROFESSIONAL INCIDENT REPREPERSING THE JEARPACTOR IS CERTIFICATIONS MADE BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE LABORATORY. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THESE TESTS AND THEIR SUBMITTALS.
- FILL SHALL BE PLACED IN LIFTS AT A MAXIMUM UNCOMPACTED DEPTH OF 12" WITH SOIL FREE FROM AGGREGATES EXCEEDING 6".
- ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER. FAILURE TO CONDUCT DENSITY TESTS SHALL BE CAUSE FOR NON-ACCEPTANCE OF THE FACILITY. TESTS SHALL BE CONDUCTED AT THE SOLE COST OF THE CONTRACTOR OR HIS AGENT.
- A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION
- SATISFACTORY MATERIALS FOR USE AS FILL FOR ROAD IMPROVEMENT AREAS INCLUDE MATERIALS CLASSIFIED IN ASTM D-2487 AS GW. GP, GM, GC, SW, SP, SM, SC, ML. AND CL GROUPS. THE MOISTURE CONTENT SHALL BE CONTROLLED WITHIN PLUS OR MINUS 4% OF THE OPTIMUM TO FACILITATE COMPACTION. GENERALLY, UNSATISFACTORY MATERIALS, CLASSIFIED IN ASTM D-2487 AS PT, CH, MH, CJ, OH AND ANY SOIL TOO WETT TO FACILITATE COMPACTION. CH AND MH SOILS MAY BE USED SUBJECT TO APPROVAD. OF THE ENGINEER. SOILS SHALL HAVE A MINIMUM DRY DENSITY OF 92 LBICF PER ASTM D-698 AND SHALL HAVE A PLASTICITY INDEX LESS THAN 17
- CONTRACTOR SHALL DEVELOP A GENERIC GROUNDWATER PROTECTION PLAN (GPP). SUBMITTAL TO WYDEP IS NOT REQUIRED. THE GROUNDWATER PROTECTION PLAN SHALL BE ADHERED TO DURING CONSTRUCTION.
- NO ROCK FILL LIFTS SHALL BE GREATER THAN 36"

EROSION & SEDIMENT CONTROL NARRATIVE

- PROJECT DESCRIPTION: THE PURPOSE OF THIS PROJECT IS TO GRADE AND INSTALL EROSION AND SEDIMENT CONTROL MEASURES. IN PREPARATION FOR THE CONSTRUCTION OF IMPROVED ROAD NEAR NEW MILTON DISTRICT , WEST VIRGINIA, IN DODDRIDGE COUNTY. THE CONSTRUCTION INCLUDES UPGRADING THE EXISTING ROAD.
- ADJACENT PROPERTY: THE SITE IS BORDERED ON THE NORTH BY EXISTING HOUSES. THE EAST, WEST AND SOUTH ARE BORDERED BY
- SOILS: NO SOIL STUDIES OR SUBSURFACE INVESTIGATIONS WERE PERFORMED FOR THIS PROJECT
- OFF SITE AREAS: THERE SHALL BE NO BORROW AREA OUTSIDE OF THE PROPOSED GRADING AND CONSTRUCTION AREA
- CLEARING OF VEGETATION SHOULD BE KEPT TO THE MINIMUM NECESSARY FOR CONSTRUCTION PLUS THE INSTALLATION OF SEDIMEN
- CRITICAL EROSION AREAS MAINTENANCE: ALL 3:1 SLOPES AND STEEPER, DITCHES AND OTHER CONTROLS SHALL BE CONSIDERED CRITICAL EROSION AREAS. THESE AREAS SHALL BE MONITORED & MAINTAINED DALLY AND AFTER EACH RAIN FALL OF 0.5 NICH OR GREATER. THE LOCAL GOVERNING AUTHORITY WILL HAVE THE AUTHORITY TO RECOMMEND THE PLACEMENT OF ADDITIONAL EROSION CONTROL MEASURES IN THESE AREAS IF IT BECOMES EVIDENT DURING CONSTRUCTION THAT THE ONES IN PLACE ARE NOT FUNCTIONING SUFFICIENTLY.
- EROSION AND SEDIMENT CONTROL MEASURES: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND EDIDIANT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE CURRENT WEST VIRGINIA EROSION AND SEDIMENT CONTROL FOR THE CURRENT WEST VIRGINIA EROSION AND SEDIMENT BOSTERO AS TRANSAGEMENT PRACTICE MANUAL THE CONTRACTOR SHALL DISTAIN A COPY OF THIS MANUAL FROM THE WORDER WESTER AND CONSTRUCT ALL DEVICES BASED ON THIS MANUAL OR A HANDBOOK THAT IS COMPARABLE OR EXCEDS THIS SPECIFICATIONS OF THE WEST VIRGINIA MANUAL. THE MINIMUM STANDARDS OF THIS MANUAL SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE. SEE PLANS FOR ALL PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.
- STRUCTURAL PRACTICES:
- DIVERSION DITCHES: WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.
- OUTLET PROTECTION: WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.
 FILTER SOCK/SUPER SILT FENCE: WILL BE CONSTRUCTED AS SHOWN ON THE PLANS.
- VEGETATIVE PRACTICE TOPSOILING: TOPSOIL WILL BE STRIPPED FROM THE SITE AND STOCKPILED AS SHOWN ON THE PLANS. UPON VEGE LATIVE PHACIN CELL FORSIGNS, TOPSOIL WILL BE STRIPPED FROM THE STREAM STEAM STATEMENT AS SHOWN ON THE PHANS. DEVON THE PROJECT, TOPSOIL WILL BE PLACED ON ALL DISTURBED AND STATEMENT OF THE PROJECT, TOPSOIL WILL BE THE STREAM STATEMENT OF THE PROJECT STREAM STATEMENT OF THE STATEMENT OF THE
- MANAGEMENT STRATEGIES; CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS WILL BEGIN AND END AS SOON AS POSSIBLE. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES. AFTER ACHIEVING ADEQUATE STABILIZATION THE TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED AND ANY AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED.
- PERMANENT STABILIZATION: ALL AREAS LEFT UNCOVERED BY EITHER BUILDINGS OR PAVEMENT SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING AND WITHIN 7 DAYS. AT NO TIME SHALL LAND LAY DORMANT FOR LONGER THAN 21 DAYS.
- MAINTENANCE AND OTHER CONSIDERATIONS AND GROUND WATER PROTECTION: ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH RAINFALL OF 0.5 INCH OR MORE. THEY WILL BE INSPECTED FOR UNDERMINING, DETERIORATION, EROSION AND SECESS DEPOSITED MATERIAL. ALL DEFICIENCIES WILL BE INSPECTED FOR UNDERMINING PROCEDURES MILL BE CORRECTED IMMEDIATELY SECESS MATERIAL WILL BE SPREAD ON THE SITE IN A MANNER WHERE IT IS NOT LIKELY OF BRODE IN THE FUTURE. CLEANING PROCEDURES WILL BE COMPLETED AT REGULAR INTERVALS AND AT LEAST WHEN SEDIMENT REACHES 33% OF CAPACITY, OR AS SHOWN ON APPLICABLE DETAILS RECORDS OF CLEANING AND CORRECTIONS WILL BE MAINTAINED BY THE CONTRACTOR. THE "SENERIC GROUNDWATER PROTECTION PLAN FOR CONSTRUCTION SITES" (GPP) WILL BE USED AND AVAILABLE ON SITE AT ALL TIMES. AN AREA WILL BE PROTECTION PLAN FOR CONSTRUCTION SITES" (GPP) WILL BE USED AND AVAILABLE ON SITE AT ALL TIMES. AN AREA WILL BE PROTECTION PLAN FOR CONSTRUCTION SITES" (GPP) WILL BE USED ON THE SITE. PORTABLE SANITARY FACILITIES WILL BE LANGUAGE. FOR EMPLOYEES, IF CONCRETE IS USED. EXCESS CONCRETE WILL BE USED ON THE SITE. PORTABLE SANITARY FACILITIES WILL BE AVAILABLE FOR EMPLOYEES, IF CONCRETE IS USED. EXCESS CONCRETE WILL BE USED ON THE SITE OF A PROPERLY AND NOT SALVOWED TO REMAIN ON THIS SITE. MACHINERY WILL NOT BE ALLOWED IN LIVE STREAMS. FLUIDS SUCH AS DIESEL FUEL, GAS, OIL OR ANTIFREEZE WILL BE KEPT IN PROPER CONTAINERS AND ANY SPILLAGE WILL BE CLEANED AND TAKEN OFF SITE TO A PROPER FACILITY, SOUTO OF A PROPER FACILITY. SOUTO OF A PROPER FACILITY, SOUTO OF A PROPER FACILITY, SOUTO OF A PROPER FACILITY. SOUTO OF A PROPER FACILITY, SOUTO OF A PROPER FACILITY. SOU

GENERAL EROSION & SEDIMENT CONTROL NOTES

- THE CONTRACTOR SHALL ARRANGE FOR A PRE-CONSTRUCTION CONFERENCE WITH THE APPROPRIATE EROSION AND SEDIMENT CONTROL INSPECTOR 48 HOURS PRIOR TO BEGINNING WORK
- 2. ALL EROSION CONTROL DEVICES AS SHOWN OR AS REQUIRED, ARE TO BE CONSTRUCTED TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE WEST VIRGINIA EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL AND ARE TO BE IN PLACE PRIOR TO ALL CONSTRUCTION.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- ALL DRAIN INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED, FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING
- PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 21 DAYS, PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
- DURING CONSTRUCTION OF THE PROJECT. SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS IMPOUNDMENTS, DIKES AND DIVERSIONS
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- IO SEDIMENT TRACKING ON THE ROADWAY IS ALLOWED. IN THE EVENT THAT SEDIMENT IS INADVERTENTLY TRACKED ONTO THE ROAD HE ROAD SHALL BE CLEANED THOROUGHLY BY THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING IR PICKUP SWEEPING AND SHALL BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA. STREET WASHING OF SEDIMENTS OTHE STORM DRAIN SYSTEM IS NOT ALLOWED. IF STREET WASH WASTEWATER CAN BE CONTROLLED FROM ENTERING THE STORM IRAINAGE SYSTEM, THEN IT SHALL BE PUMPED BACK ONTO THE SITE, CONTAINED AND DISPOSED OF PROPERLY.
- ALL DISTURBED AREAS NOT PAVED OR BUILT UPON SHALL BE HYDRO-SEEDED AND FERTILIZED. PERFORM PERMANENT TOP SOILING, SEEDING AND FERTILIZING AS SOON AFTER FINISH GRADING AS POSSIBLE. SEEDING SHALL COMPLY WITH THE FOLLOWING:
- FERTILIZER 500 LBS, PER ACRE OF 10-20-20 FERTILIZER OR EQUIVALENT POUNDAGE OF DIFFERENT ANALYSIS. WORK INTO SOIL
- LIME (PERMANENT SEEDING) AGRICULTURAL LIME SPREAD AT RATE OF 4 TONS PER ACRE. WORK INTO SOIL PRIOR TO SEEDING.
- MULCH OR EROSION CONTROL BLANKET (ECB) WOOD FIBER OR CHOPPED STRAW AT RATE OF 2 TONS PER ACRE. HYDRO-MULCH AT RATE OF 30 BALES PER ACRE. ECB SHALL BE PER PLANS
- SEED 45 LBS. PER ACRE TALL FESCUE AND 20 LBS. PER ACRE PERENNIAL RYE GRASS. TO BE SEEDED WITH HYDRO-SEEDER

SEQUENCE OF BMP INSTALLATION AND REMOVAL

CONSTRUCTION MUST BE IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. THIS SEQUENCE IS DESIGNED TO MINIMIZE SOIL EROSION AND SEDIMENTATION. THE CONTRACTOR MAY DEVIATE SLIGHTLY FROM THE STAGING OF PERMANENT SITE IMPROVEMENTS, BUT NO DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE ALLOWED.

THE STAGING OF EARTHMOVING ACTIVITIES FOR THIS PROJECT IS A GENERAL DESCRIPTION OF THE WORK REQUIRED. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH COMPANY STANDARDS, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUILATIONS AND ALL OTHER APPLICABLE FEDERAL, STATE OR LOCAL REQUIREMENTS.

THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN INCLUDING THE SOIL EROSION CONTROL DRAWINGS SHALL BE AVAILABLE

ALL BMPs SHALL BE INSPECTED AFTER EACH MEASURABLE RAINFALL RUNOFF EVENT. ANY NECESSARY REPAIRS MUST BE MADE IMMEDIATELY TO ENSURE EFFECTIVE AND EFFICIENT OPERATION

- A PRE-CONSTRUCTION CONFERENCE WILL BE HELD ON SITE WITH CONTRACTOR TO REVIEW THE CONSTRUCTION DRAWINGS AND
- 2. STAKE/FLAG DISTURBED WORK AREA CLEARLY IDENTIFYING WETLAND AND STREAM FDGES AND BUFFERS. INSTALL SIGNS TO DESIGNATE THE AREA AND ORANGE SAFETY FENCE TO IDENTIFY IMPORTANT PROJECT ATTRIBUTES SUCH AS APPROVED ACCESS ROADS, NO REFUELING ZONES, WETLANDISTREAM BOUNDS, ETC.
- 3. CONSTRUCT THE CONSTRUCTION ENTRANCE.
- 4. CONSTRUCT ALL PROPOSED SEDIMENT CONTROL DEVICES AS SOON AS CLEARING AND GRUBBING OPERATIONS ALLOW.
- 5. PRIOR TO GRADING OR OTHER EARTH DISTURBANCE ON THE PARCEL, PERMANENT DOWN SLOPE BMPs ARE TO BE INSTALLED.
- 6. CLEAR AND GRUB, REMOVE TOPSOIL AND PLACE AS SHOWN ON THE PLANS, TOPSOIL STOCKPILE TO BE SEEDED AND MULCHED, E&S 8MPs SHALL BE CONSTRUCTED AROUND TOPSOIL STOCKPILES AS SHOWN.
- GRADING OPERATIONS AS REQUIRED, CUT SLOPES AND ALL SLOPES SHALL BE TOPSOILED AS NEEDED, DITCH LINES SHALL BE CLEANED, ALL DITCHES WILL HAVE AT LEAST GRASS LINING PROTECTION OR AS SPECIFIED ON DETAIL SHEETS
- 8. THE ROAD IMPROVEMENT SHALL BE CONSTRUCTED AS INDICATED ON PLANS. THE ACCESS ROAD SHALL RECEIVE A STONE SURFACE.
- CULVERT INLET AND OUTLET PROTECTION SHALL BE CONSTRUCTED IMMEDIATELY UPON PLACEMENT OF INLETS AND CULVERTS. INSTALLATION OF MATTING AND/OR RIP RAP TO OCCUR ONCE DITCHES ARE CONSTRUCTED
- 10. SIDE SLOPE STABILIZATION MATTING AND STABILIZATION SHALL OCCUR AS SOON AS POSSIBLE.
- 11. AT THE END OF EACH WORK DAY, WHERE THE PARCEL HAS BEEN GRADED, INCLUDING ANY STRIPPING, STUMPING, LEVELING, 2:1 ON SIDE SLOPES, ETC. BMPs ARE TO BE INSTALLED. IN NO CASE IS THE CONTRACTOR TO LEAVE THE JOB SITE AT THE END OF THE WORK DAY WITHOUT TEMPORARY OR PERMANENT BMPS BEING INSTALLED. THE CONTRACTOR IS NOT REQUIRED TO MAINTAIN WATERBARS DURING THE WORK DAY UNLESS THE ENVIRONMENTAL INSPECTOR DETERMINES THAT THERE IS A RISK OF A RAIN EVENT THAT
- 12. WHEN FINAL GRADE IS ACHIEVED, TOPSOIL TO BE PLACED ON ALL DISTURBED AREAS NOT LINED, SEED ALL DISTURBED AREAS AS WREN THAN GRAD IS AUTHORISED. OF SOLEN BE PERCED AND ALL RISINGED ARROS AND THE SELECT ALL SAMPLE IS TAKEN AND TESTED TO DETERMINE RECOMMENDED RATES. IF NO SOILS SAMPLE IS TAKEN FOLLOWING RATES SHOULD BE APPLIED AS A MINIMUM: LIME AT A RATE OF 4 TONS PER ACRE. FERTILIZE AT A RATE OF 500 LBS. OF 10-20-20 PER ACRE. SEED WITH 45 LBS. PER ACRE OF PERCHANDAL RYE GRASS.
- 13. LIME, FERTILIZER, AND SEED WILL BE APPLIED. HYDRO-MULCH PRODUCTS SHALL BE MIXED AND INSTALLED IN ACCORDAN-MANUFACTURER'S SPECIFICATIONS, OR EROSION CONTROL BLANKET SHALL BE INSTALLED PER PLANS & SPECIFICATIONS
- 14. FINAL SEEDING MUST OCCUR WITHIN 7 DAYS OF FINAL GRADING
- 15. WHEN SITE IS STABILIZED, ALL EROSION AND SEDIMENT CONTROL MEASURES CAN BE REMOVED AND REPAIR/STABILIZE THOSE AREAS
- 16. FINAL SITE INSPECTION, A NOTICE OF TERMINATION SHOULD BE FILED WITH DEP UPON FINAL STABILIZATION

GENERAL CONSTRUCTION NOTES

- THE ROAD IMPROVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND THE SCOPE OF WORK AND SHALL CONFORM GENERALLY WITH THE GRADES, BERMS, AND DIMENSIONS SHOWN.
- THE CONSTRUCTION DOCUMENTS SHOW THE EXISTING AND PROPOSED GRADES AND BERMS, ETC. THAT ALL CUT AND FILL ESTIMATES ARE BASED UPON THE ENGINEER'S ESTIMATES OF THE QUANTITIES ARE ONLY ESTIMATES AND MAY CHANGE BASED ON ACTUAL FIELD
- 3. THE GRADES, BERMS, DEPTHS, AND DIMENSIONS MAY CHANGE BASED ON ACTUAL FIELD CONDITIONS. THE ENGINEER RESERVES THE RIGHT TO CHANGE GRADES, BERMS, DEPTHS AND DIMENSIONS AS NECESSARY TO MEET FIELD CONDITIONS.
- THE CONTRACTOR SHALL PROVIDE THE ENGINEER ALL REASONABLE FACILITIES AND PROVIDE INFORMATION AND SAMPLES AS REQUIRED BY THE ENGINEER FOR PROPER MONITORING AND TESTING OF MATERIAL WORKMANSHIP.
- THE CONTRACTOR SHALL HAVE ON SITE AT ALL TIMES WHEN CONSTRUCTION IS IN PROGRESS A COMPETENT SUPERINTENDENT THOROUGHLY FAMILIAR WITH THE CONSTRUCTION OF EARTH BERMS AND EMBANKMENTS, THE COMPACTION OF SQILS AND PLACEMENTS OF LINERS.
- THE CONTRACTOR SHALL INSTALL FILTER SOCK AND SUPER SILT FENCE PRIOR TO CLEARING AND GRUBBING AS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH WYDEP BEST MANAGEMENT PRACTICES MANUAL CHAPTER 3. SURFACE WATER SHALL BE DIVERTED AWAY FROM ALL EXCAVATIONS AND THE FACE OF ALL FILLS TO PREVENT FLOODING AND SOFTENING OF THE SUBGRADE OR COMPACTED MATERIALS.
- CLEARING AND GRUBBING SHALL REMOVE ALL BRUSH, TREES, ROOTS, STUMPS, FENCES, SIGNS OR ANY OTHER MATERIAL THAT IS NOT TO BE REUSED FOR THE CONSTRUCTION. SOME STUMPS MAY REMAIN AT THE APPROVAL OF THE ENGINEER, NO CLEARING DEBRIS SHALL BE BURIED ON-SITE. FOR CLEARING WITHIN PERMITTED LOD, STUMPS AND ROOTS LARGER. NO CLEARING DEBRIS SHALL BE COMPLETELY GRUBBED AND PROPERLY DISPOSED OF OFF-SITE. ALL TIMBER, TREETOPS, BRANCHES, STUMPS LESS THAN 2 INCHES IN DIAMETER BE CHIPPED, GROUND, ANDIOR MULCHED AND USED AS SITE BMPS WITH REMAINDER BEIND PROPERLY DISPOSED OF OFF-SITE. CLEARING TO BE COMPLETE ONLY AS NEED WITHIN THE LOD TO CONSTRUCT THE FACILITY AS DEPICTED.
- 8. TOP SOIL SHALL BE STRIPPED AND STOCKPILED WITH APPROPRIATE STABILIZATION TO PREVENT EROSION. THE TOP SOIL SHALL BE
- 9. PRIOR TO PLACING ANY FILL, THE EXPOSED SUBGRADE SHALL BE COMPACTED AND PROOF ROLLED TO PRODUCE A STABLE AND
- 10. RIPRAP USED AS OUTLET PROTECTION MUST BE HARD, ANGULAR AND OF A QUALITY RESISTANT TO WEATHERING AND DISINTEGRATION RIPRAP SHOULD BE GROUTED ON STEEP OR LENGTHY FILL SLOPES WITH A MINIMUM THICKNESS TWO TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN SIX INCHES.
- ALL FILL SHALL BE PLACED IN LOOSE LIFTS OF UP TO 12" AND SHALL BE COMPACTED TO AT LEAST 95% OF THE LABORATORY MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST METHOD (ASTM D 698). THE MOISTURE CONTENT WILL BE CONTROLLED IN ACCORDANCE WITH THE LIMITS OF THE STANDARD PROCTOR TEST RESULTS. SOME SOILS CANNOT BE COMPACTED TO 95% OF THE STANDARD PROCTOR AT PILUS OR MINUS 4% MOISTURE CONTENT OF CONTRACTOR IN RESPONSIBLE FOR THE ORIGINAL SOIL TEST AND PROVIDING A COPY OF THE RESULTS WITH MOISTURE-DESITY CURVE TO THE SIGNEET. THE CONTRACTOR SHALL DO MINUPLACE DENSITY TESTS EVERY THIRD LIFT OF SOIL. FIELD DENSITY TESTS EVERY THIRD LIFT OF SOIL. FIELD DENSITY SETS FOR COMPACTION SHALL BE PERFORMED IN ACCORDANCE. WITH ASTMID 2922 (NUCLEAR METHOD), RECORDS SHALL BE MAINTAINED OF TEST LOCATION AND RESULTS AND PROVIDED TO THE ENGINEER ON REQUEST, AREAS THAT FAIL FOR COMPACTION SHALL BE REMOVED, RE-COMPACTED AND RETESTED FOR COMPLIANCE N LIEU OF STANDARD PROCTOR TESTING. THE CONTRACTOR MAY PROOF-ROLL THE SOIL EVERY 24" OF SOIL LIFT WITH A LOADED 15 TON TANDEM DUMP TRUCK, SOIL THAT DEFLECTS UNDER THE REAR WHEELS GREATER THAN 1/2" SHALL BE REMOVED, RE-COMPACTED AND RETESTED. COMPACTION OF SOIL SHALL BE DONE WITH A 5 TON SMOOTH, SHEEPS FOOT, OR VIBRATORY ROLLER
- 12. ON-SITE FILL SHALL BE USED TO THE MAXIMUM EXTENT POSSIBLE ANY IMPORTED FILL SHALL BE CERTIFIED BY THE CONTRACTOR TO BE CLEAR OF ALL HAZARDOUS SUBSTANCES OR MATERIALS, IF MATERIAL IS ENCOUNTERED THAT CANNOT BE RIPPED BY A CAT DO WITH A SINGLE TOOTH RIPPER, THEN THE CONTRACTOR SHALL CONTACT THE ENGINEER WHO WILL VISIT THE SITE AND DETERMINE IF THE MATERIAL MAY BE USED AS IS OR MUST BE REMOVED BY OTHER MEANS IF UNSUITABLE SOILS IN THE SUBGRADE ARE FOUND THEY SHALL BE REMOVED AND REPLACED WITH APPROPRIATE FILL AT THE CONTRACTOR'S EXPENSE AND THE ENGINEER'S DIRECTION
- 13. IF SPRINGS OR SEEPS ARE ENCOUNTERED, SUBSURFACE DRAINAGE FEATURES SHALL BE INSTALLED PRIOR TO FILL PLACEMENT CONTACT ENGINEER FOR EVALUATION AND RECOMMENDATION OF CORRECTIVE MEASURES.
- 14. THE FILL TOE FOR ALL EMBANKMENTS SHALL BE BENCHED OR KEYED INTO THE NATURAL SOIL, ALL FILL TOES SHALL BE SUPPORTED BY COMPETENT BEDROCK OR SOIL MATERIAL
- 15. FILL PLACED AGAINST EXISTING SLOPES SHALL BE BENCHED INTO THE EXISTING MATERIAL DURING ALL PLACEMENT TO REDUCE THE POTENTIAL FOR DEVELOPMENT OF A SMOOTH INTERFACE BETWEEN THE FILL AND EXISTING SLOPE.
- 16. ANY SOFT AREAS SHALL BE OVER-EXCAVATED TO A FIRM MATERIAL AND BACKFILLED WITH A WELL COMPACTED STRUCTURAL FILL. 17. FILL REQUIRED TO OBTAIN DESIGN GRADES SHALL BE PLACED AS CONTROLLED, COMPACTED, ALL THE FILL SHALL BE FREE OF TRASH
- WOOD, TOPSOIL, ORGANICS, COAL, COAL MINE REFUSE, FROZEN MATERIAL AND PIECES OF ROCK GREATER THAN 6" IN ANY DIMENSION
- 18. DURING PLACEMENT OF MATERIAL, MOISTEN OR AERATE EACH LAYER OF FILL, AS NECESSARY, TO OBTAIN THE REQUIRED COMPACTION. IN 11 BEIN APPROVED BY PRIOR PROOF-ROLLING, FREE WATER SHALL BE PREVENTED FROM APPRAINE ON THE SURFACE DURING OR SUBSECUENT TO COMPACTION.
- 19. SOIL MATERIAL WHICH IS REMOVED BECAUSE IT IS TOO WET TO PERMIT PROPER COMPACTION MAY BE SPREAD AND ALLOWED TO DRY. ORYING CAN BE FACILITATED BY DISCING OR HARROWING UNTIL THE MOISTURE CONTENT IS REDUCED TO AN ACCEPTABLE LEVEL. WHEN THE SOIL IS TOO DRY, WATER MAY BE UNIFORMLY APPLIED TO THE LAYER TO BE COMPACTED.
- 20. THE FILL OUTSLOPES SHALL BE OVERBUILT AND TRIMMED BACK TO DESIGN CONFIGURATIONS TO VERIFY PROPER COMPACTION.
- 21. GRANULAR MATERIALS, SUCH AS AASHTO NO. 57 STONE SHALL BE COMPACTED TO 85% OF ITS RELATIVE DENSITY, AS DETERMINED BY ASTM D 4253 AND D 4254 TEST METHODS.
- 22. PHOTOGRAPHIC DOCUMENTATION SHALL BE TAKEN BY THE CONTRACTOR AND PROVIDED TO THE ENGINEER OF THE FOLLOWING

 - SITE AFTER CLEARING AND GRUBBING;
 THE SITE AFTER TOPSOIL REMOVAL;
 TOE KEY AND INSPECTION TRENCH CONSTRUCTION;
 DAILY PHOTOS OF CUT AND FILL OPERATIONS;
 PROOF-ROLLING TESTS.
- 23. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COMPLETE BINDER THAT INCLUDES ALL PHOTO DOCUMENTATION, ALL COMPACTION TEST REPORTS, RESULTS AND MAPS, AND A REPORT OF ALL CUT AND FILL VOLUMES IN CUBIC YARDS.



230 Executive Drive, Suite 122 Cranberry Township, PA 16066 Phone: 724-772-7072



Signed By: TROY DANIEL # 20043

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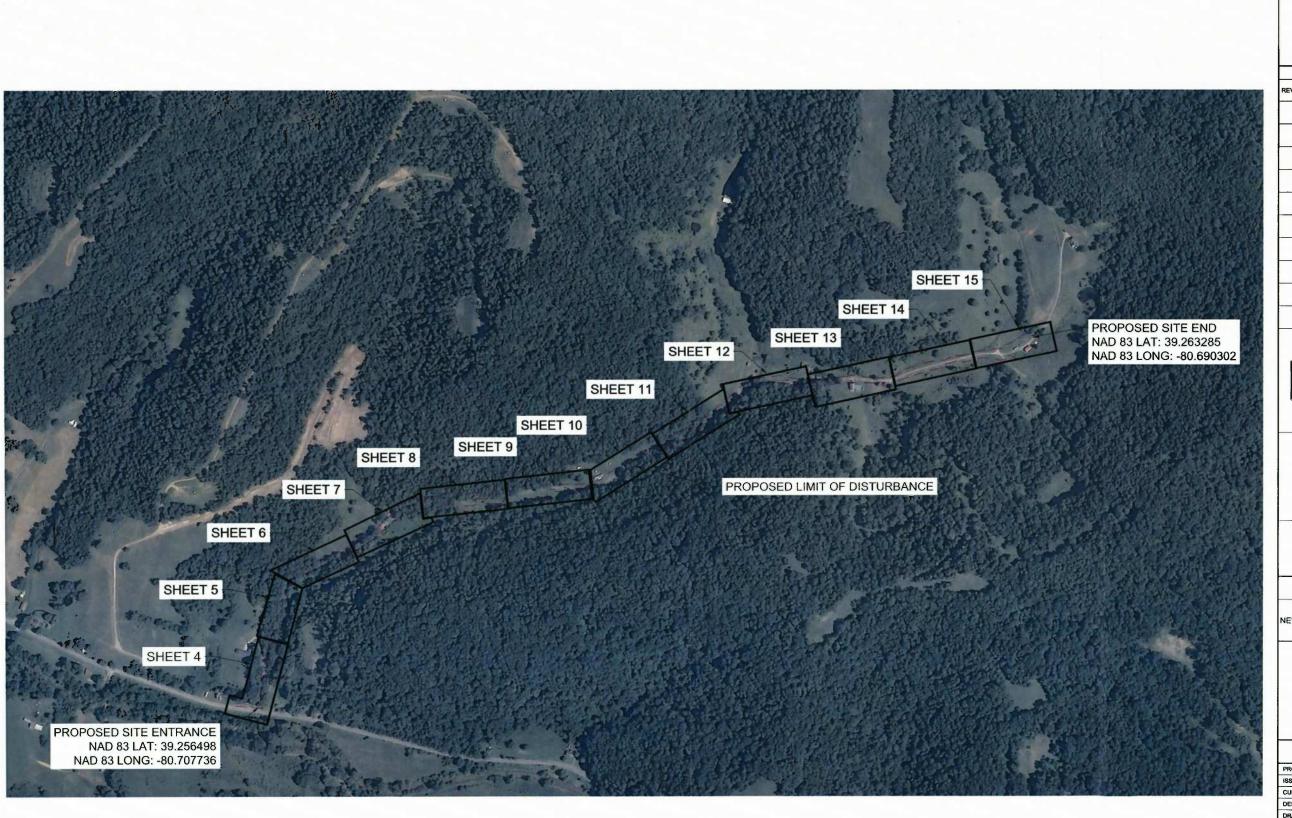
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EROSION & SEDIMENT CONTROL NOTES

EIBS CAMP ROAD IMPROVEMENTS IEW MILTON DISTRICT, DODDRIDGE COUNT WEST VIRGINIA

> **EROSION & SEDIMENT** CONTROL PLANS

PROJECT NO. 20162247 SSUE DATE 07-29-2016 URRENT REVISIO DESIGNED BY BHH DRAWN BY внн HECKED B BB TD SHEET PROVED BY





230 Executive Drive, Suite 122 Cranberry Township, PA 16066 Phone: 724-772-772



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OVERALL KEY MAP (AERIAL)

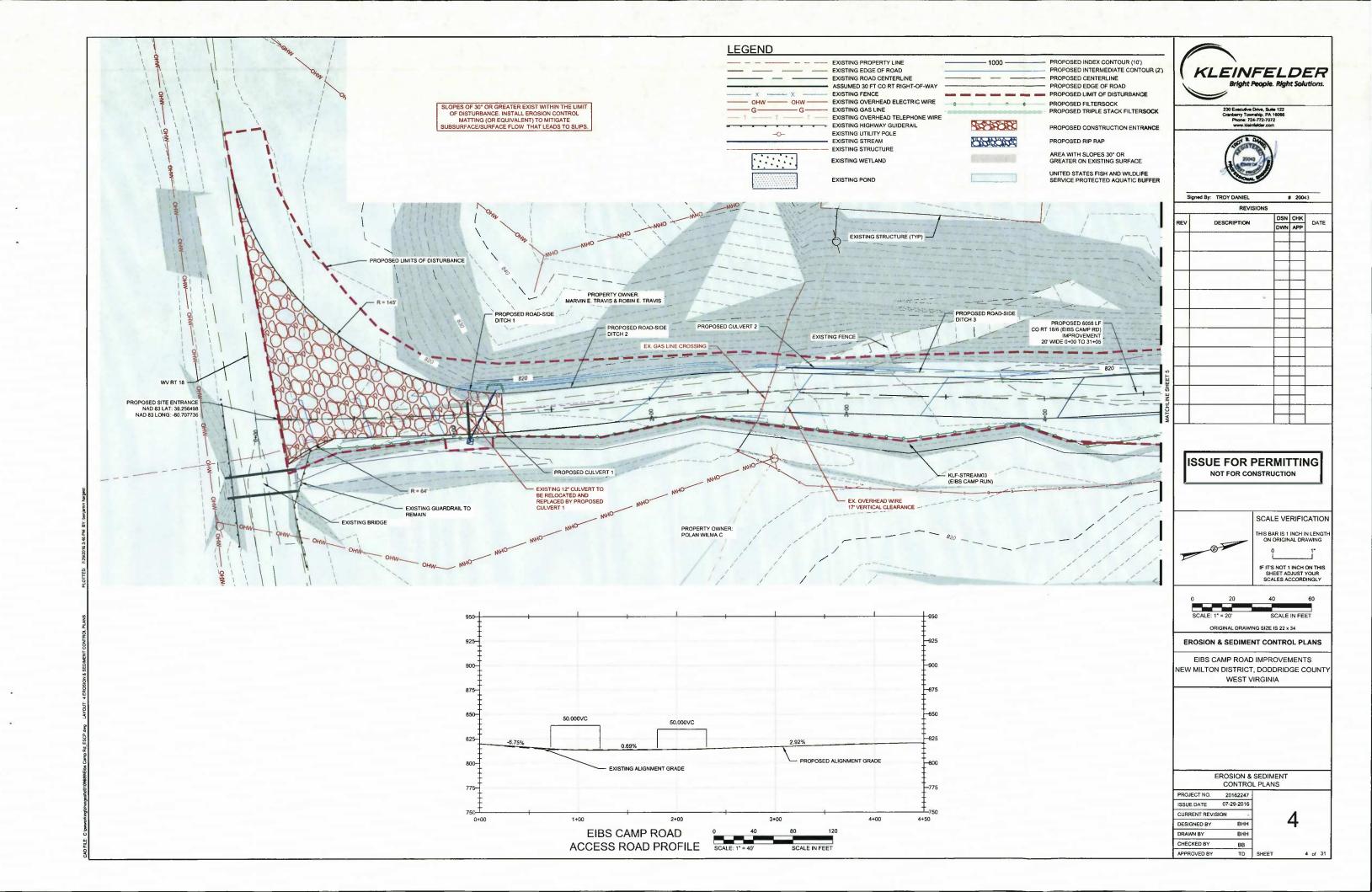
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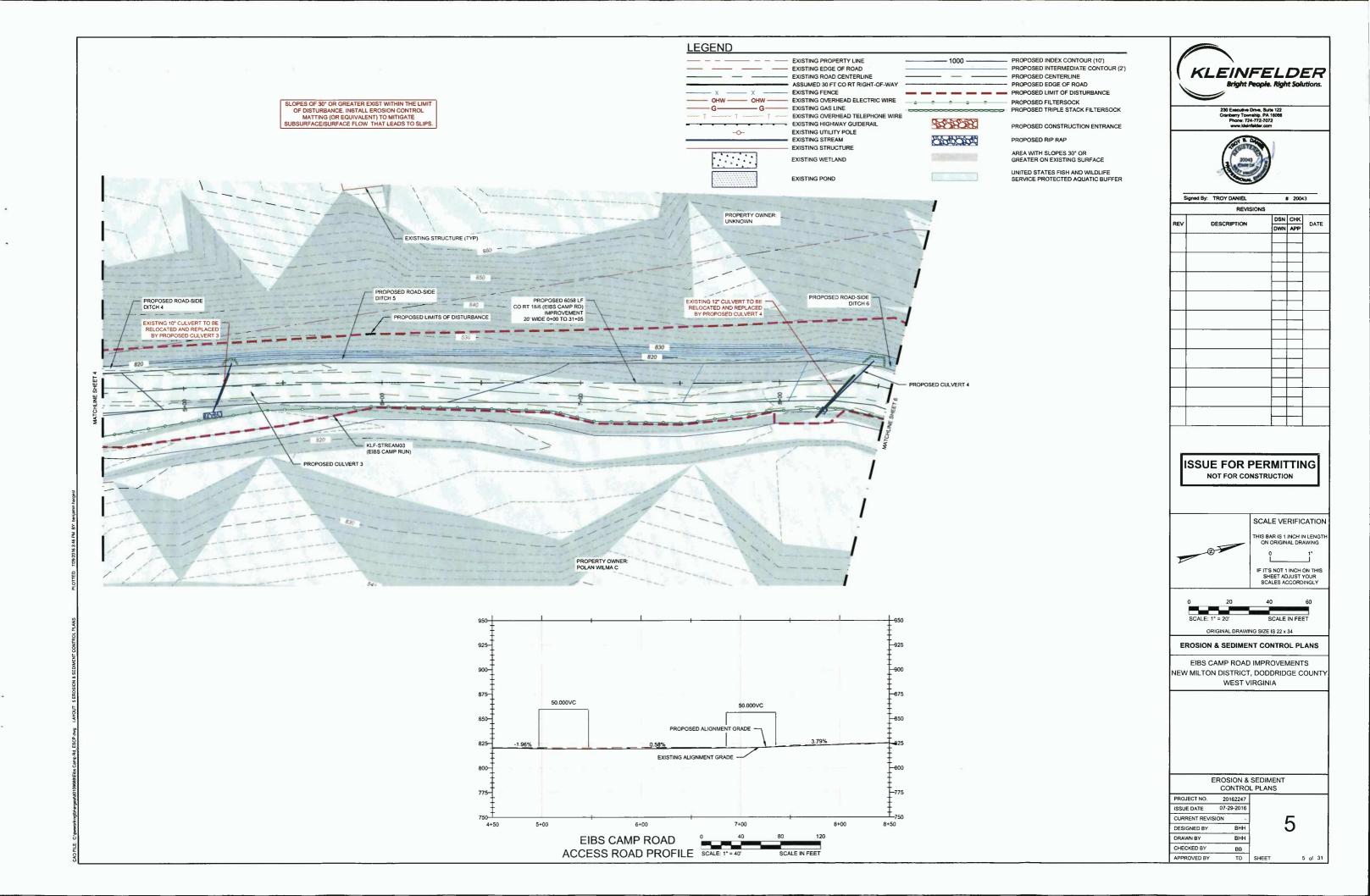
> EROSION & SEDIMENT CONTROL PLANS

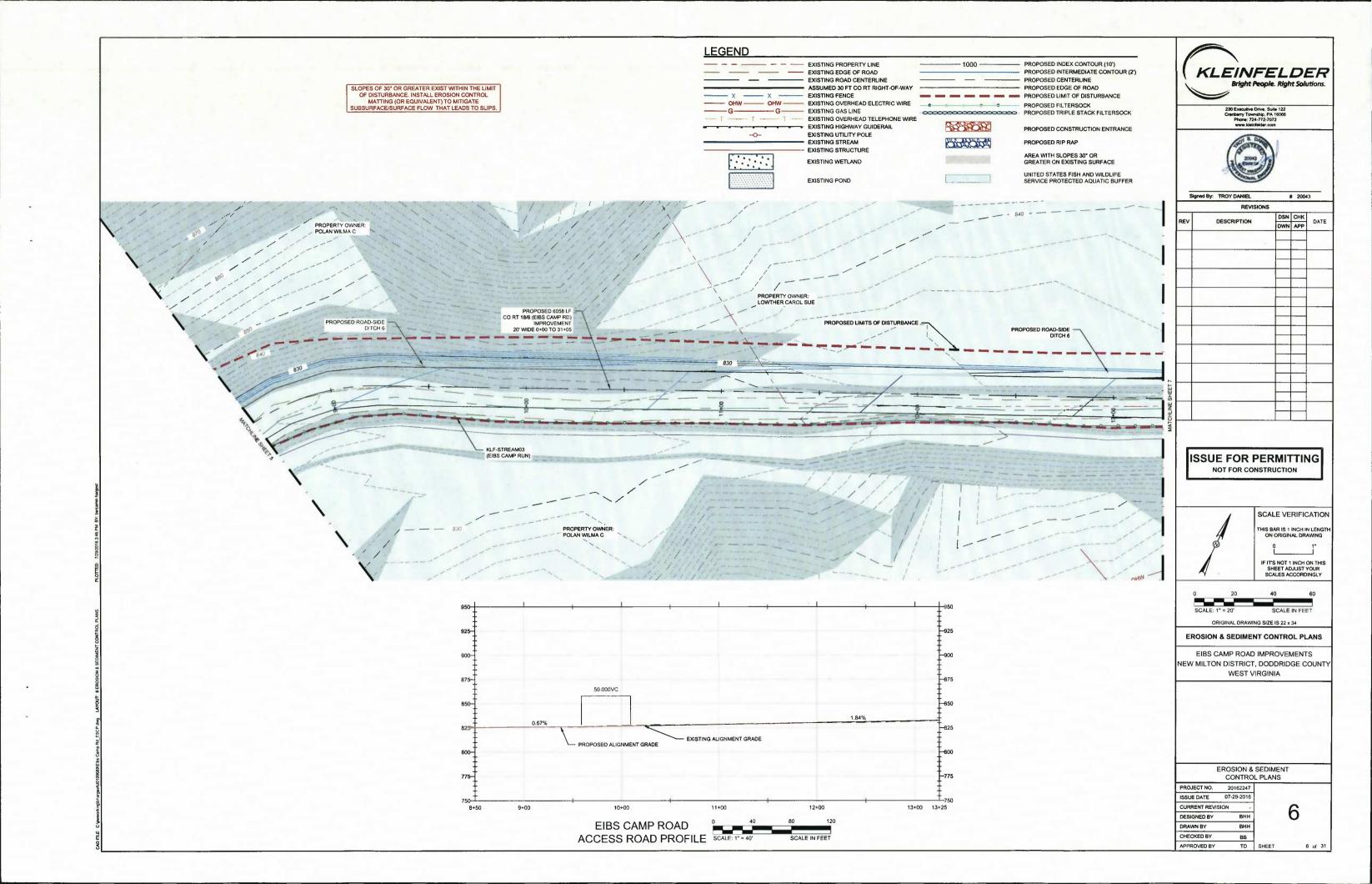
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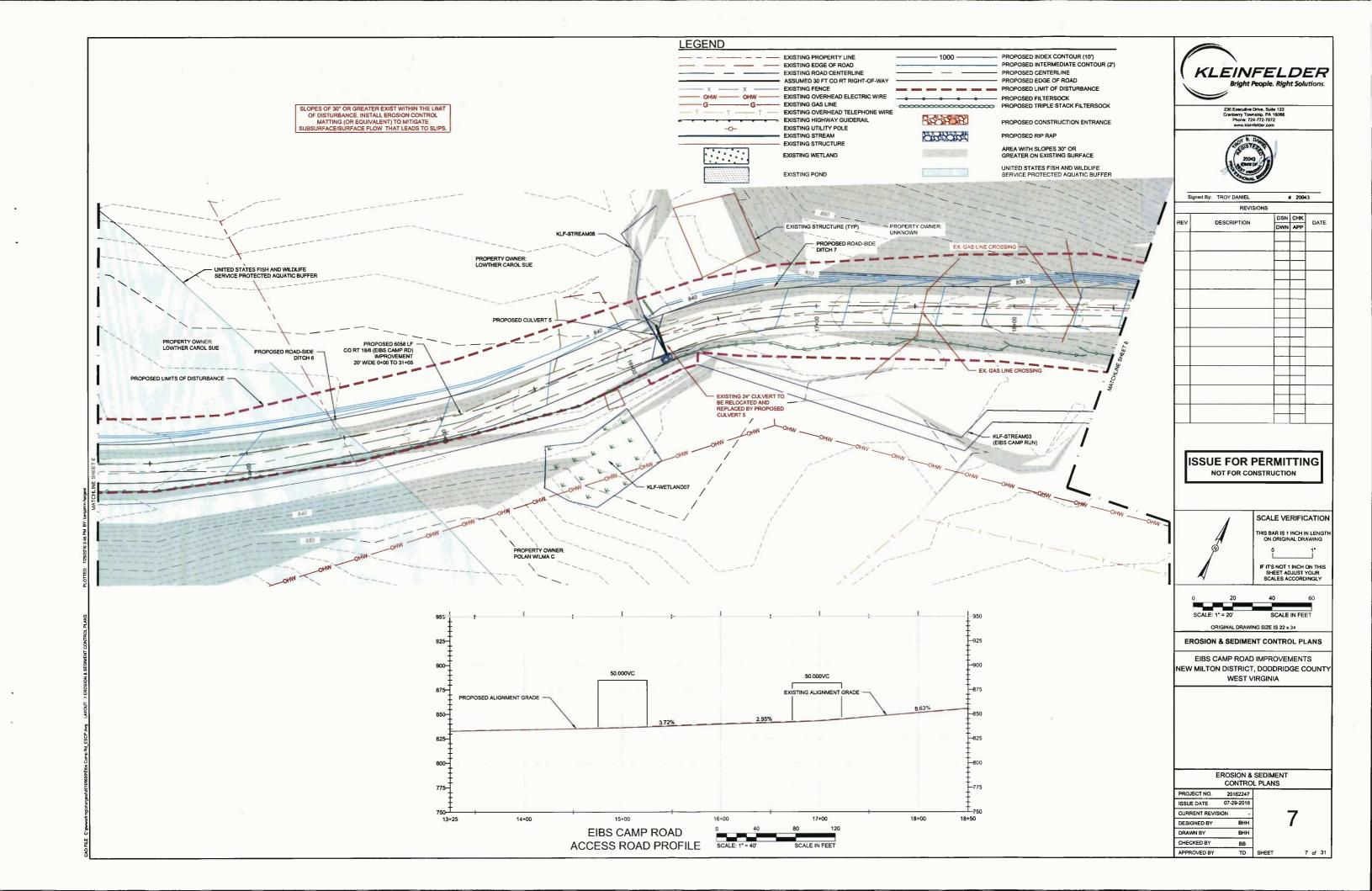
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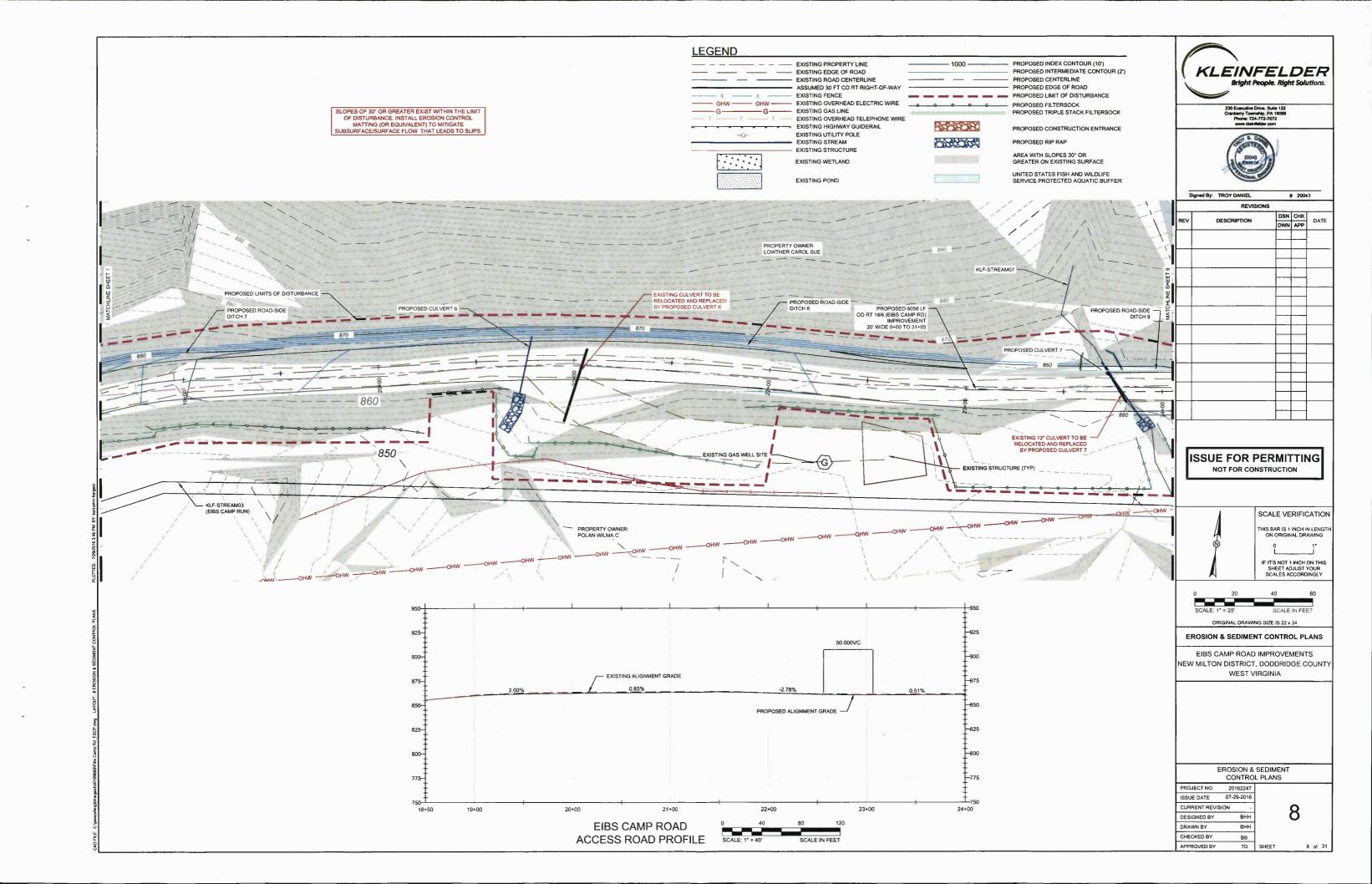
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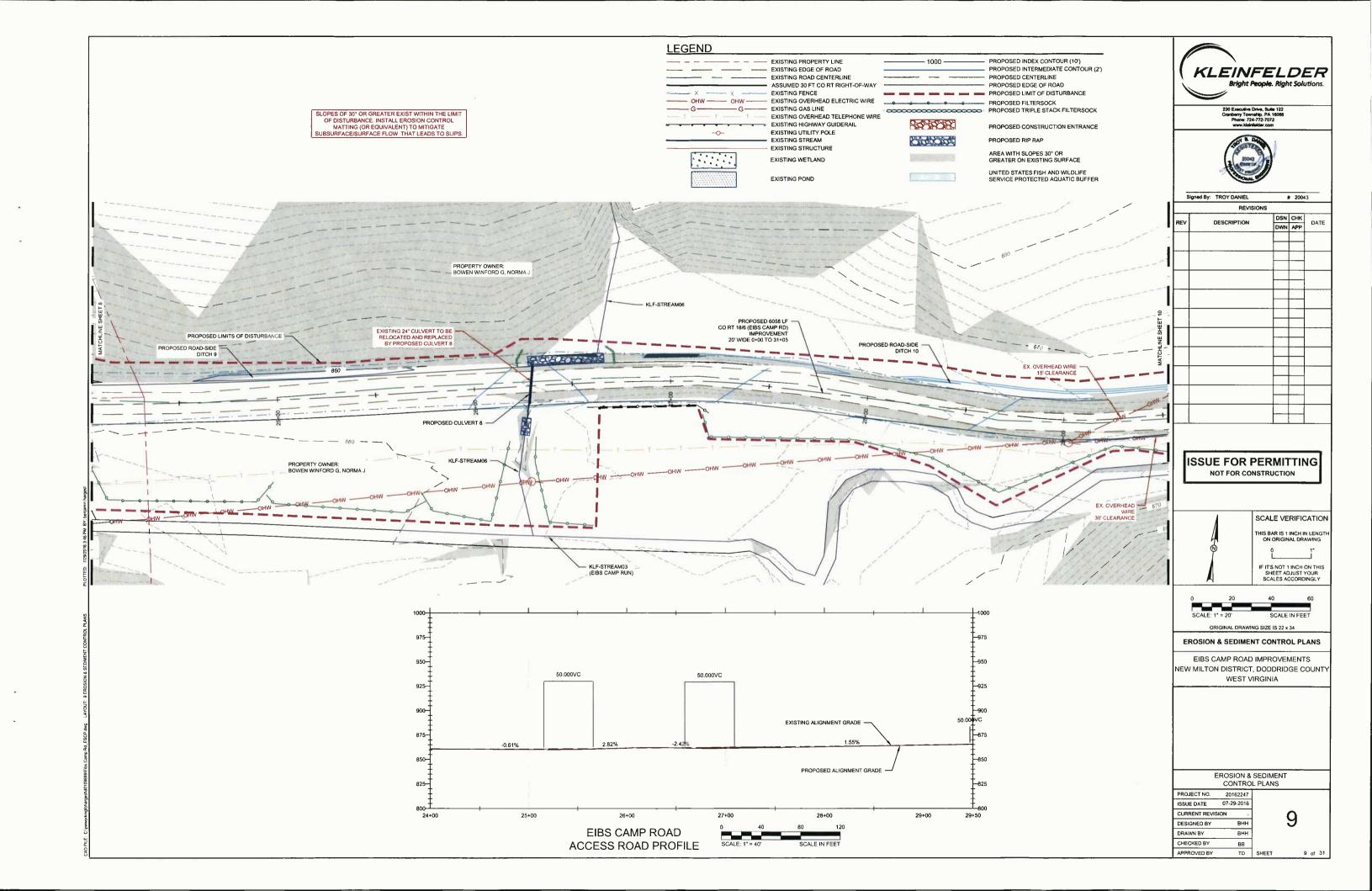


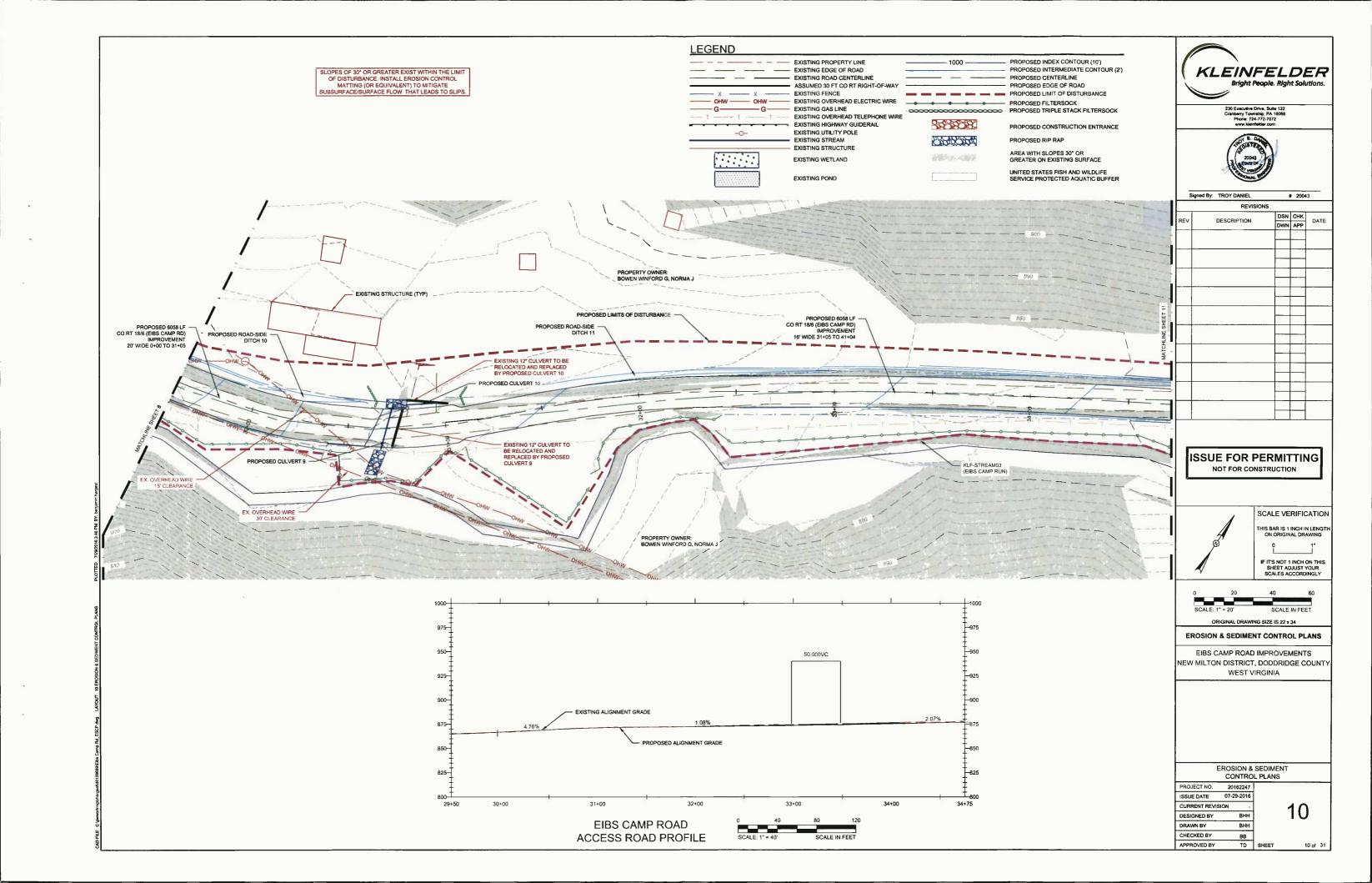


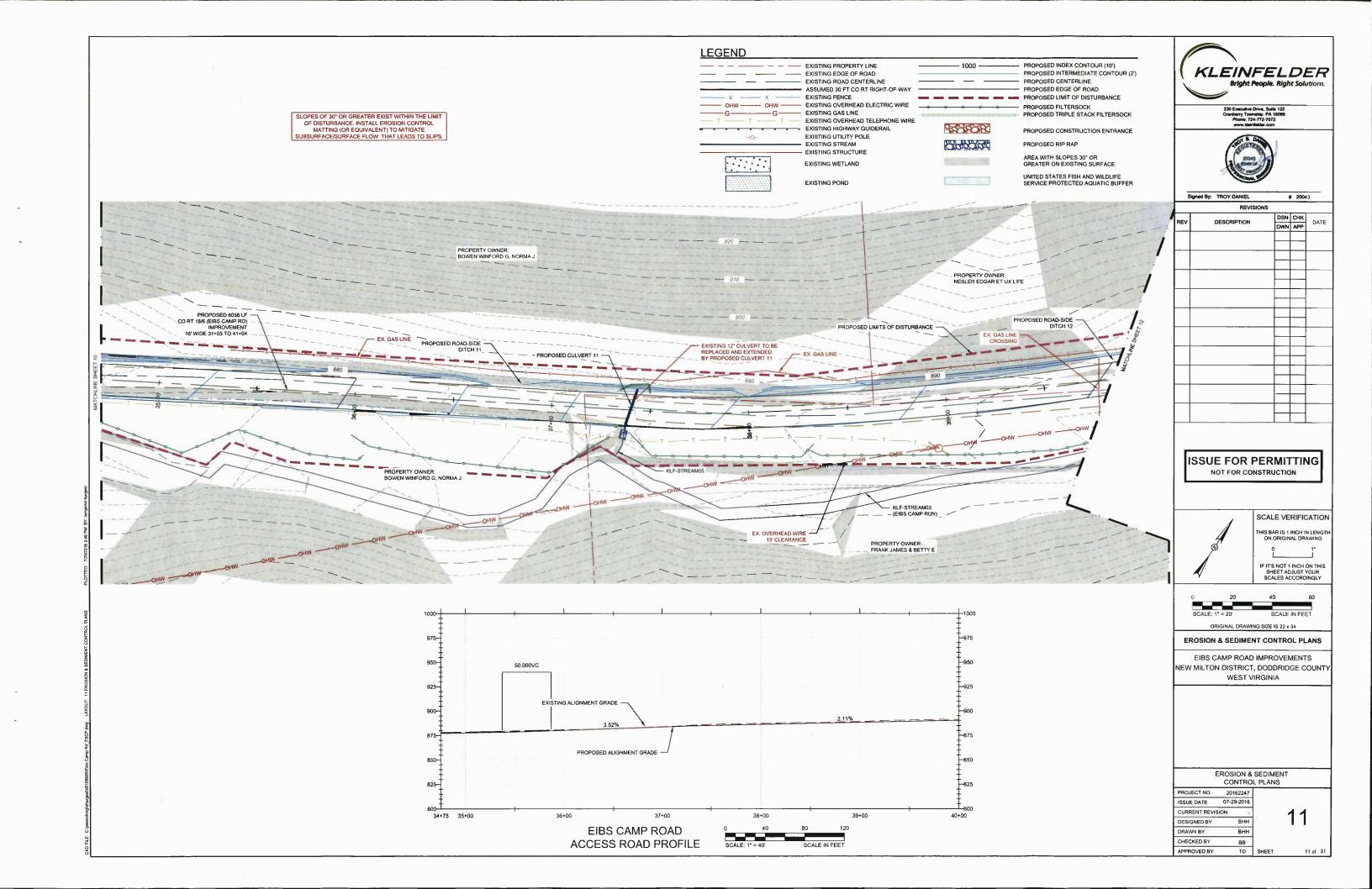


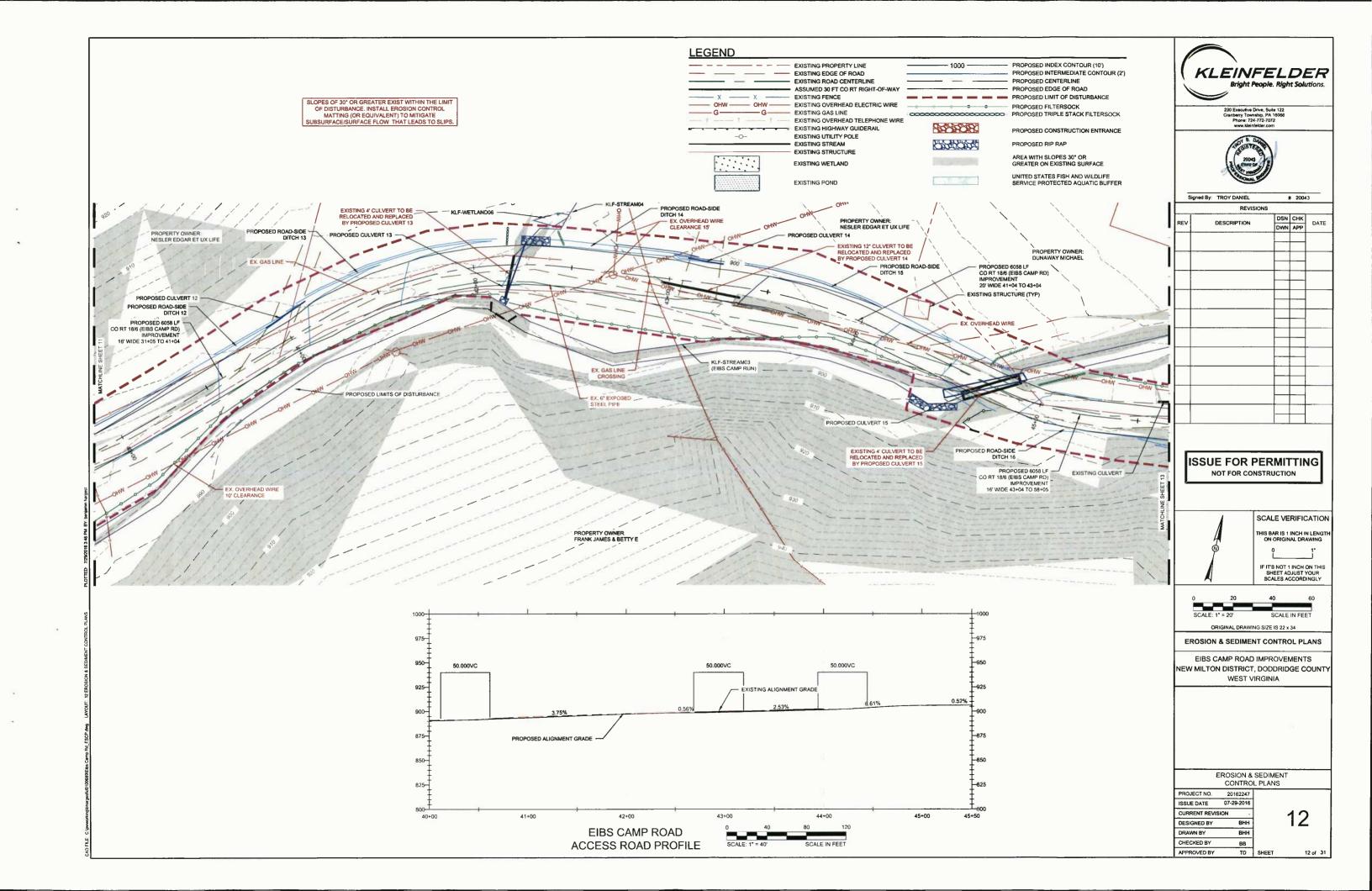


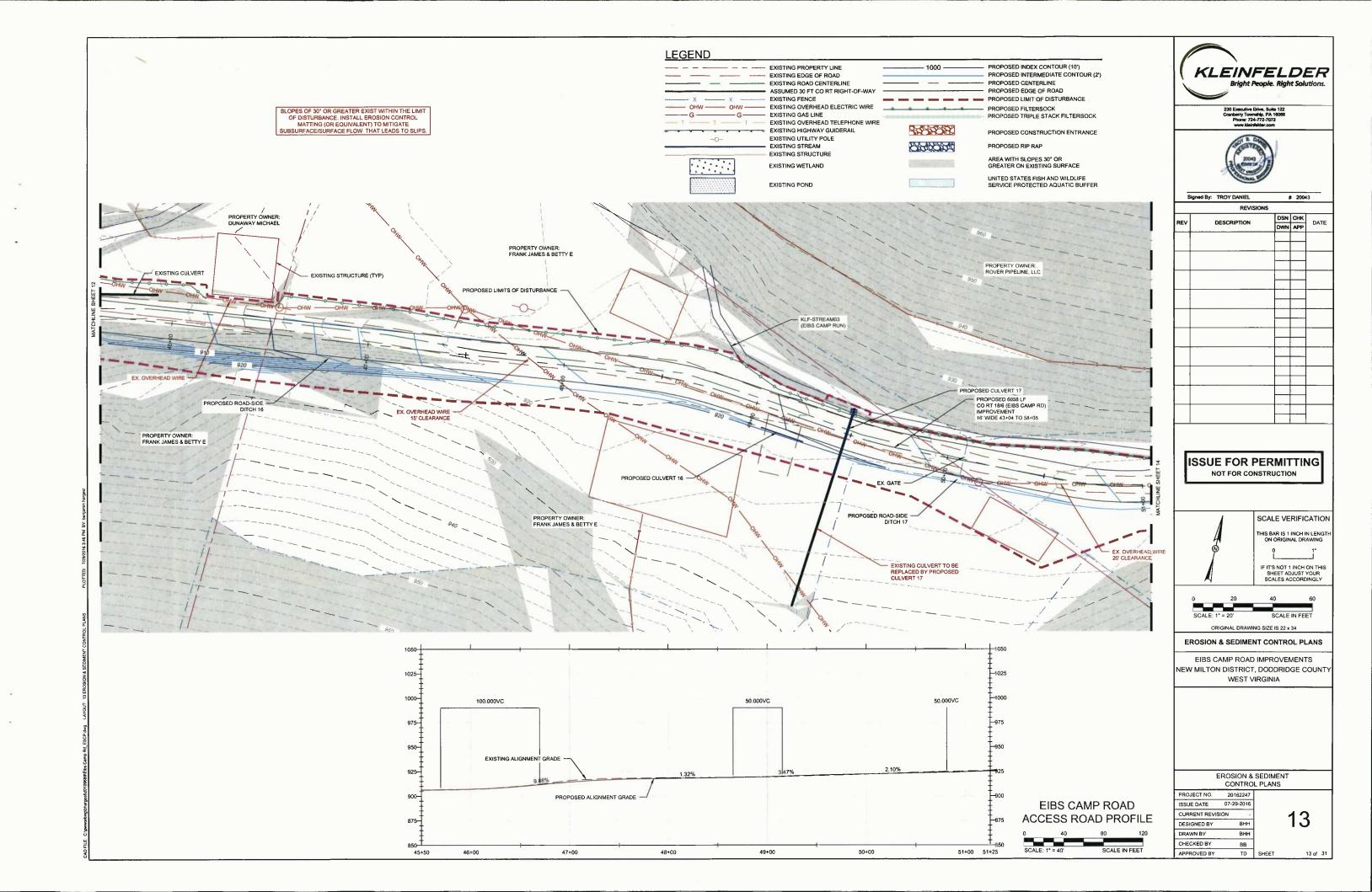


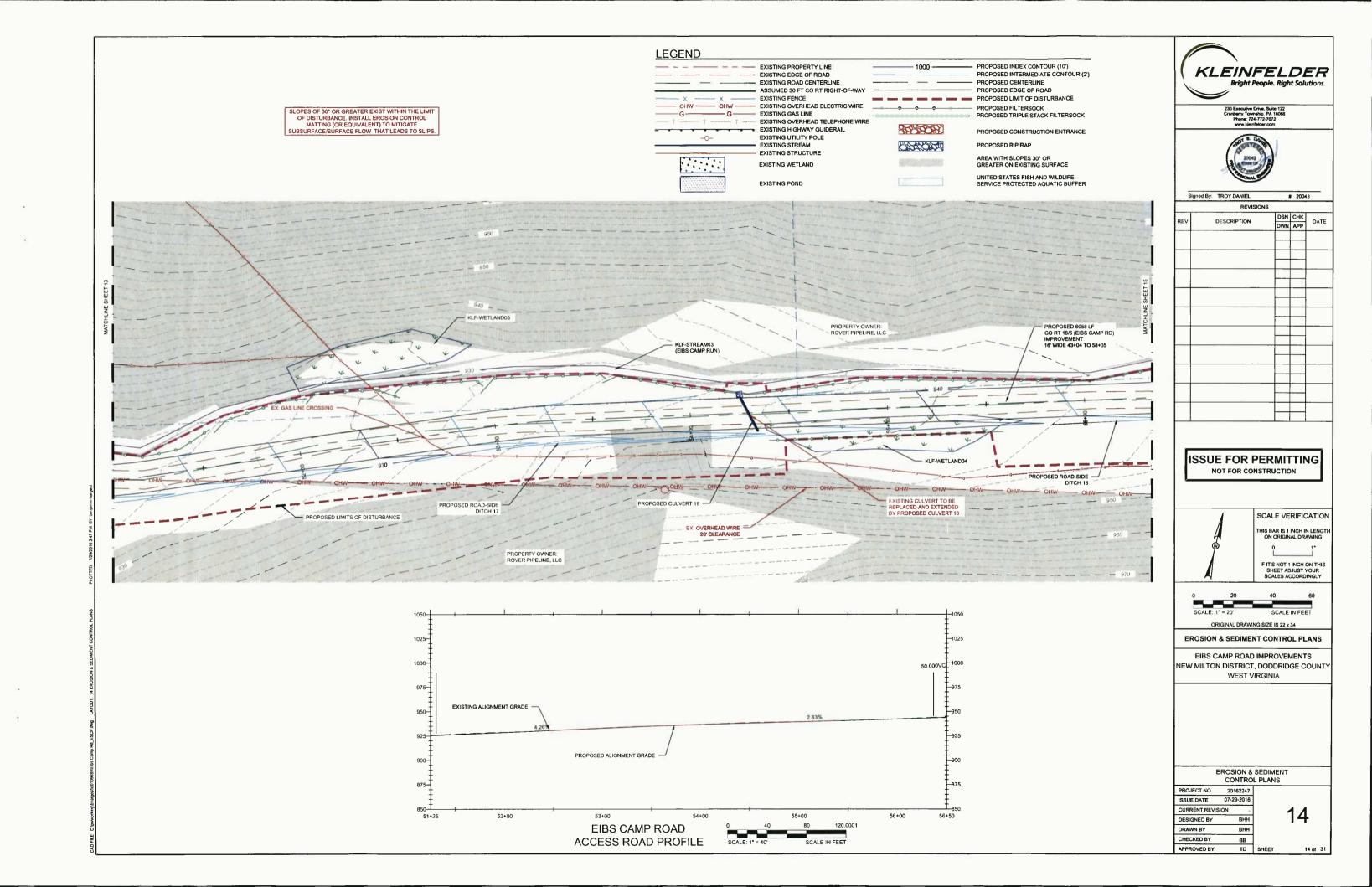


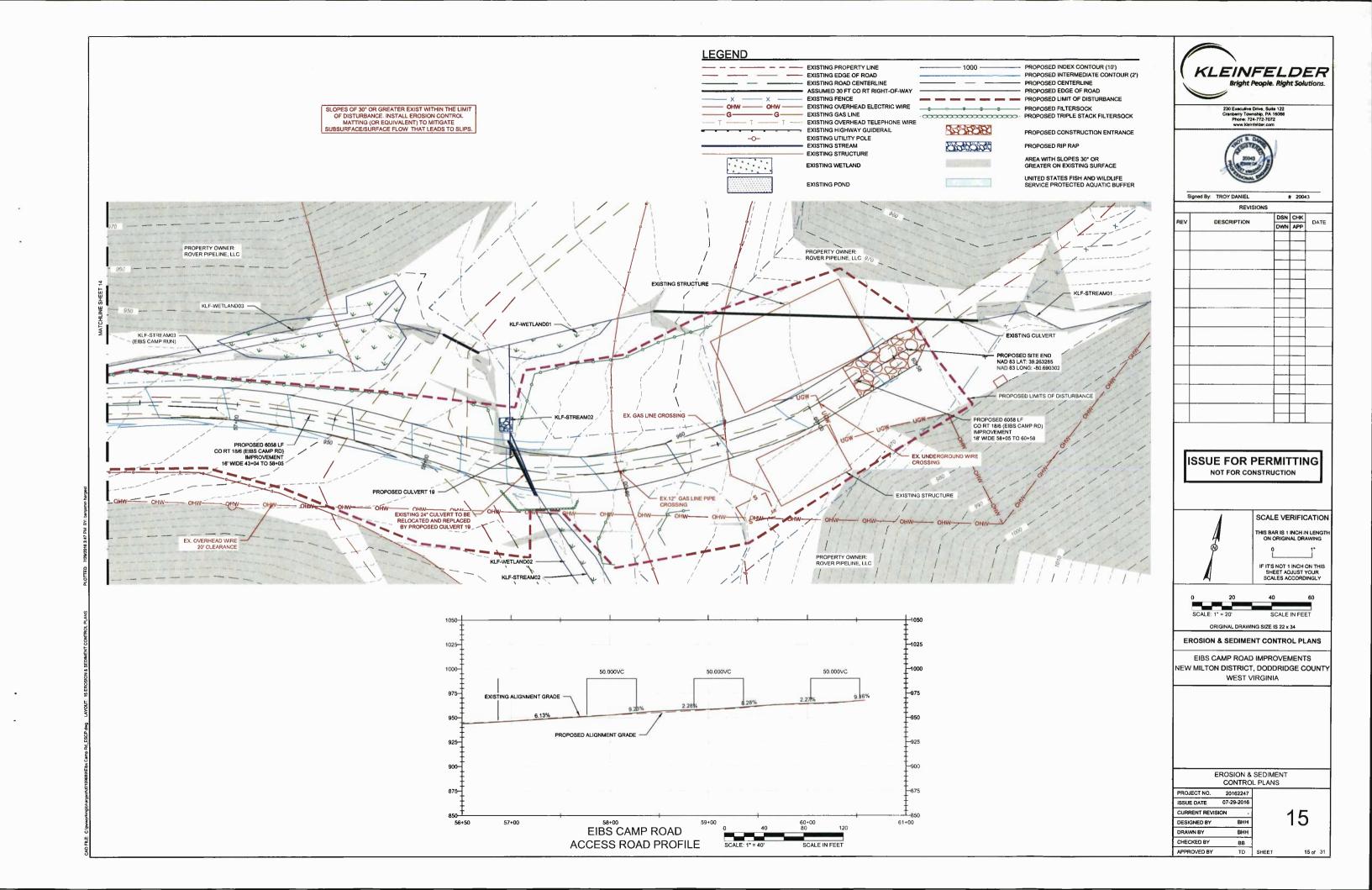


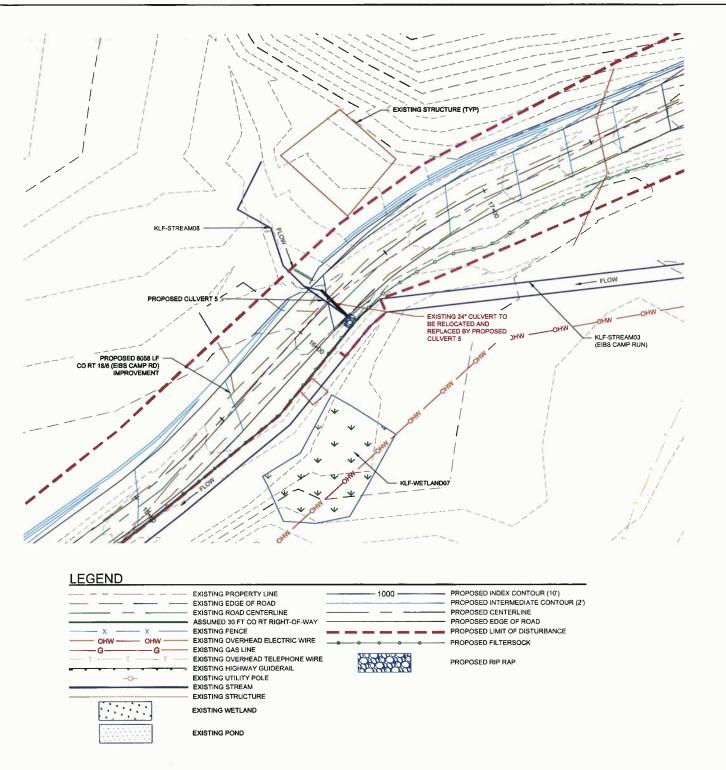


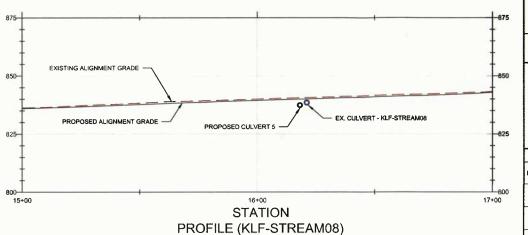












VERTICAL SCALE: 1" = 20'

HORIZONTAL SCALE: 1" = 20'

KLF-STREAM08
16+21

EXISTING ALIGNMENT GRADE
850
840
840
830

PROPOSED ALIGNMENT GRADE -

STATION
CROSS SECTION
VERTICAL SCALE: 1" = 20'
HORIZONTAL SCALE: 1" = 20'

PROPOSED CULVERT 5



230 Executive Drive, Suite 12 Cranberry Township, PA 1600 Phone: 724-772-7072



Signed By: TROY DANIEL. # 20043

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V DESCRIPTION DSN CHK DWN APP

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SCALE VERIFICATION

THIS BAR IS 1 INCH IN LENGTH
ON ORIGINAL DRAWING

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SCALES ACCORDINGLY



ORIGINAL DRAWING SIZE IS 22 x 34

KLF-STREAM08 CROSSING DETAIL

EIBS CAMP ROAD IMPROVEMENTS NEW MILTON DISTRICT, DODDRIDGE COUNTY WEST VIRGINIA

EROSION & SEDIMENT CONTROL PLANS

 PROJECT NO.
 20162247

 ISSUE DATE
 07-29-2016

 CURRENT REVISION

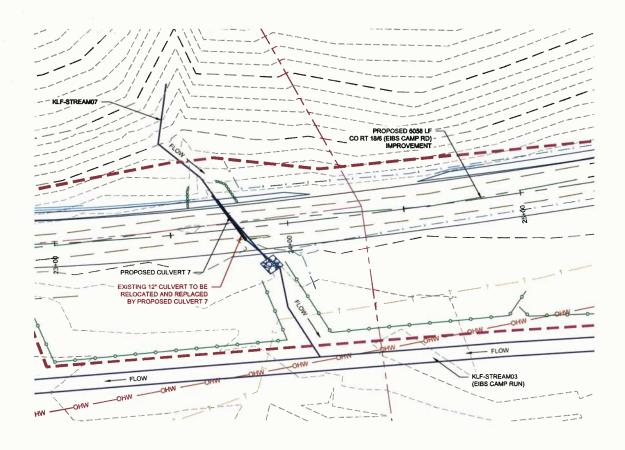
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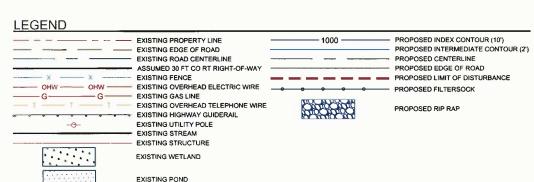
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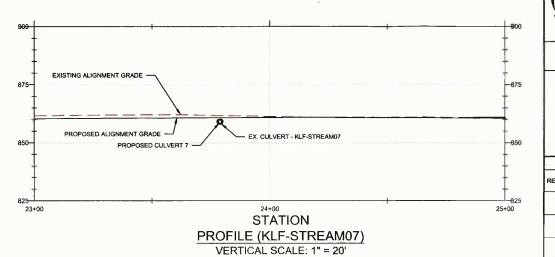
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16 of 31

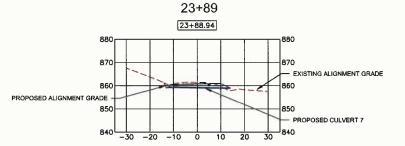






KLF-STREAM07

HORIZONTAL SCALE: 1" = 20'



STATION **CROSS SECTION** VERTICAL SCALE: 1" = 20' HORIZONTAL SCALE: 1" = 20'

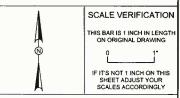




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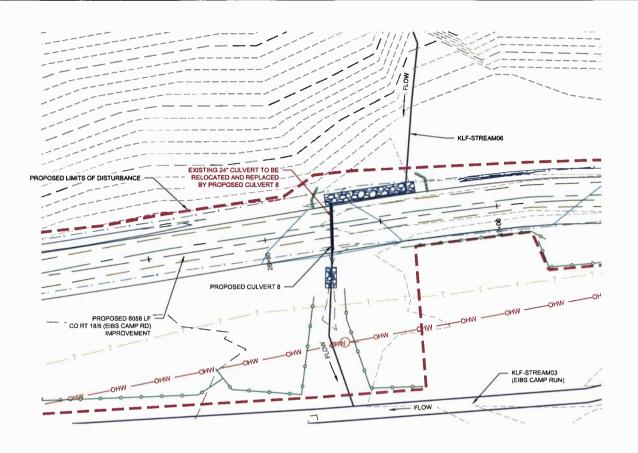
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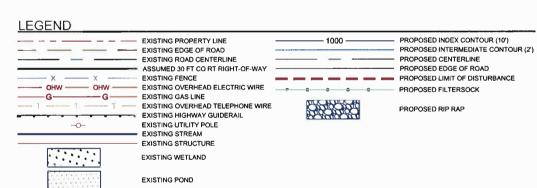
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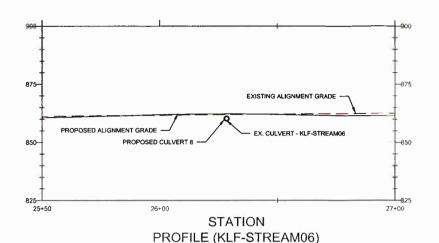
EROSION & SEDIMENT CONTROL PLANS

ISSUE DATE 07-29-2016 CURRENT REVISION DESIGNED BY DRAWN BY ВНН CHECKED BY BB APPROVED BY

PROJECT NO. 20162247







VERTICAL SCALE: 1" = 20' HORIZONTAL SCALE: 1" = 20'

EXISTING ALIGNMENT GRADE

850

PROPOSED CULVERT 8

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STATION
CROSS SECTION
VERTICAL SCALE: 1" = 20'
HORIZONTAL SCALE: 1" = 20'



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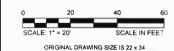
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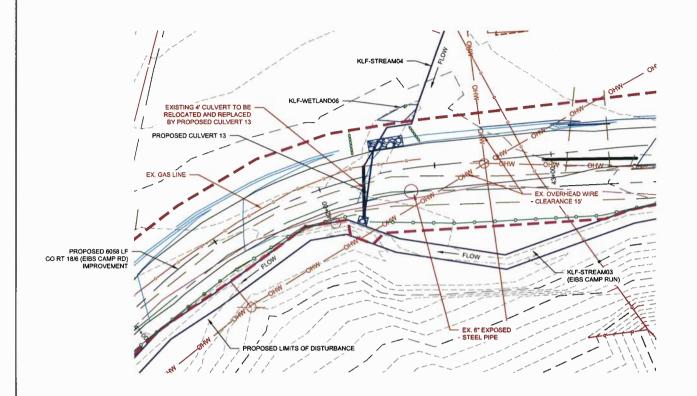
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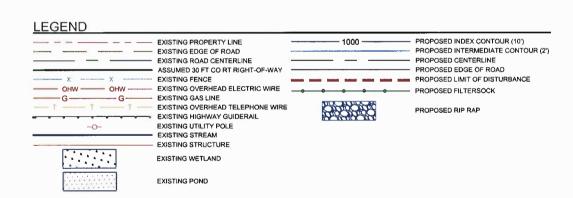
EIBS CAMP ROAD IMPROVEMENTS
NEW MILTON DISTRICT, DODDRIDGE COUNTY
WEST VIRGINIA

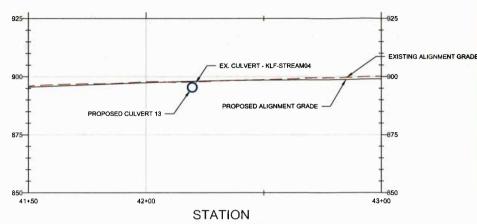
EROSION & SEDIMENT CONTROL PLANS

PROJECT NO. 20162247
ISSUE DATE 07-29-2016
CURRENT REVISION
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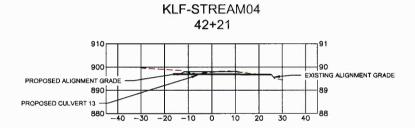
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PROFILE (KLF-STREAM04) VERTICAL SCALE: 1" = 20' HORIZONTAL SCALE: 1" = 20'



STATION CROSS SECTION VERTICAL SCALE: 1" = 20' HORIZONTAL SCALE: 1" = 20'

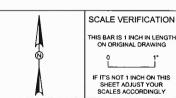


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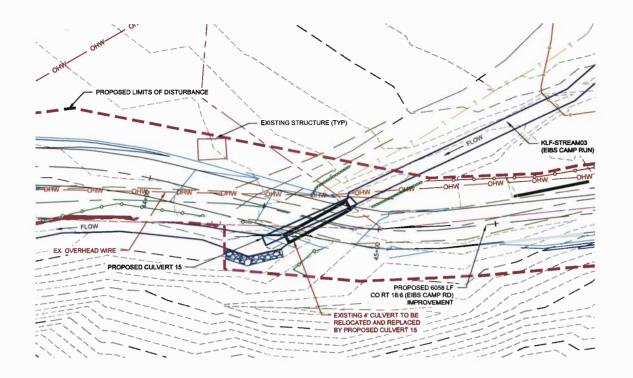
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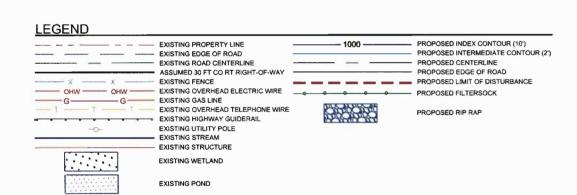
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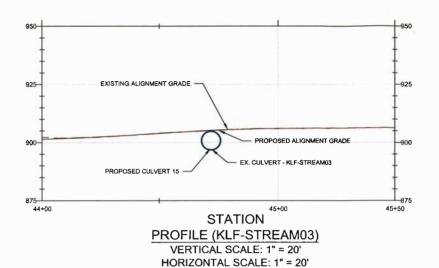
EROSION & SEDIMENT CONTROL PLANS

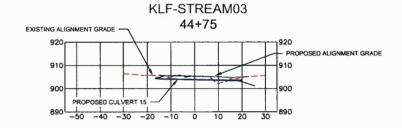
PROJECT NO. 20162247 ISSUE DATE 07-29-2016 CURRENT REVISION DESIGNED BY DRAWN BY CHECKED BY

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HORIZONTAL SCALE: 1" = 20'



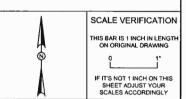
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EIBS CAMP ROAD IMPROVEMENTS
NEW MILTON DISTRICT, DODDRIDGE COUNTY
WEST VIRGINIA

KLF-STREAM03 CROSSING DETAIL

EROSION & SEDIMENT CONTROL PLANS

PROJECT NO. 20162247

ISSUE DATE 07-29-2016

CURRENT REVISION DESIGNED BY BHH

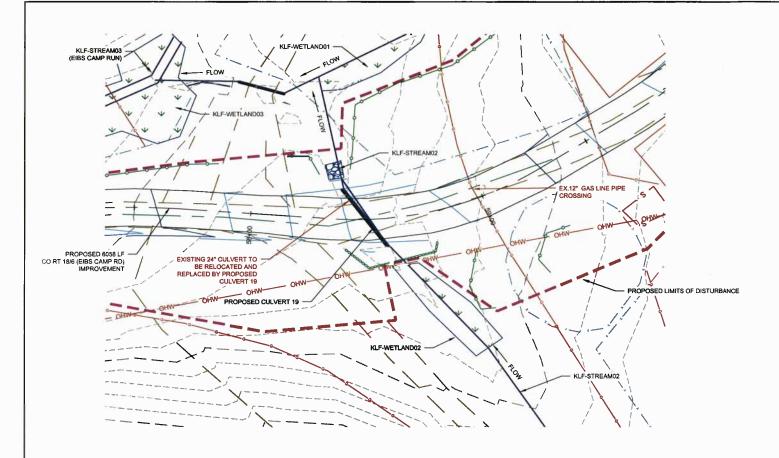
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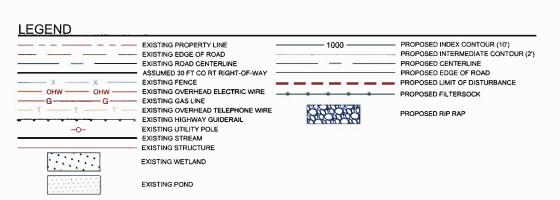
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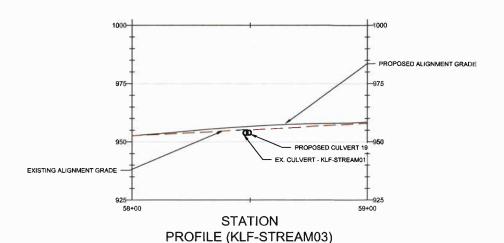
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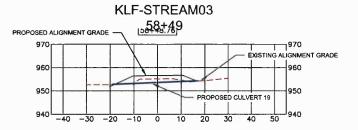






VERTICAL SCALE: 1" = 20'

HORIZONTAL SCALE: 1" = 20'



STATION
CROSS SECTION
VERTICAL SCALE: 1" = 20'
HORIZONTAL SCALE: 1" = 20'

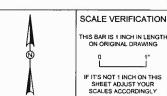


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KLF-STREAM03 CROSSING DETAIL

EIBS CAMP ROAD IMPROVEMENTS
NEW MILTON DISTRICT, DODDRIDGE COUNTY
WEST VIRGINIA

EROSION & SEDIMENT CONTROL PLANS

 PROJECT NO.
 20162247

 ISSUE DATE
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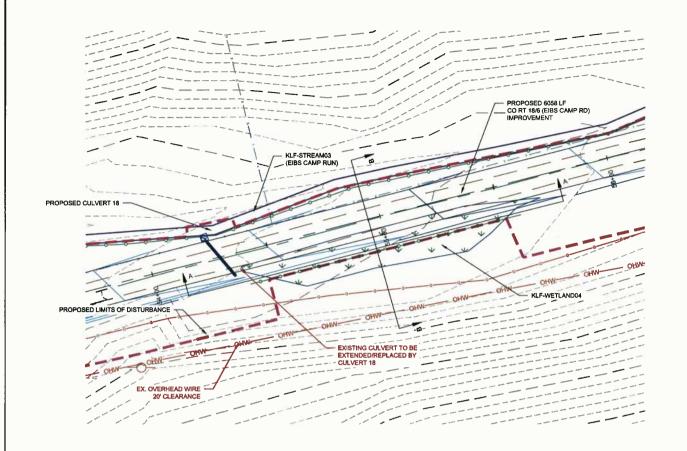
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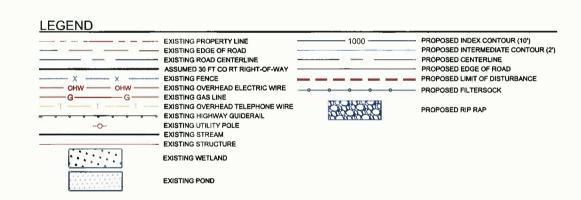
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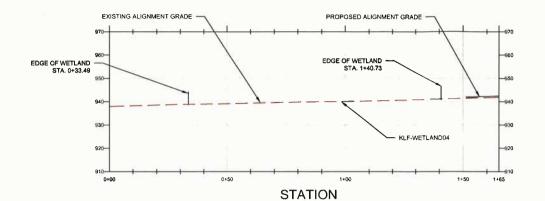
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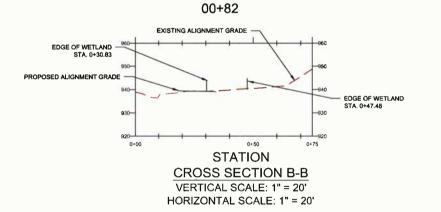




KLF-WETLAND04

PROFILE A-A (KLF-WETLAND04) VERTICAL SCALE: 1" = 20'

HORIZONTAL SCALE: 1" = 20'





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ORIGINAL DRAWING SIZE IS 22 x 34

KLF-WETLAND04 CROSSING DETAIL

EIBS CAMP ROAD IMPROVEMENTS IEW MILTON DISTRICT, DODDRIDGE COUNTY WEST VIRGINIA

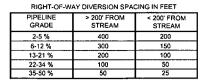
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PROJECT NO. 20162247 ISSUE DATE 07-29-2016 CURRENT REVISION DESIGNED BY DRAWN BY

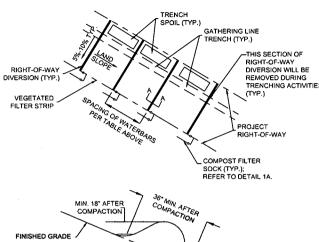
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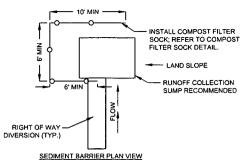
* IT IS DIFFICULT TO INSTALL DIVERSIONS ON SLOPES STEEPER THAN 35% THE DIVISION OF WATER AND WASTE MANAGEMENT WILL ALLOW GREATE DISTANCES BETWEEN DIVERSIONS ON EXTREME SLOPES



NOTE: SUMPS TO BE USED DURING CONSTRUCTION (TEMPORARY)



SECTION A-A



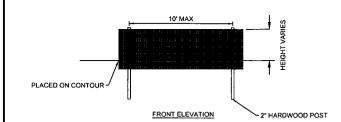
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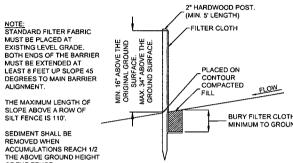
- 1. RIGHT-OF-WAY DIVERSIONS SHOULD BE INSTALLED ACROSS THE ENTIRE RIGHT-OF-WAY ON ALL SLOPES GREATER THAN 5%.
- 2. RIGHT-OF-WAY DIVERSIONS SHALL BE PLACED AT 5% TO 10% SLOPE DOWNHILL. THEY SHALL BE SPACED AT THE INCREMENTS AS SHOWN IN DETAIL 1, AND IN ACCORDANCE WITH WYDEP E&S
- 3. RIGHT-OF-WAY DIVERSIONS SHOULD BE CONSTRUCTED TO DISCHARGE TO A WELL-VEGETATED AREA. RIGHT-OF-WAY WELL-VEGETATED AREA. MIGHT-UF-WAY
 DIVERSIONS SHOULD NOT DISCHARGE INTO AN
 OPEN TRENCH. RIGHT-OF-WAY DIVERSIONS
 SHOULD BE ORIENTED SO THAT THE DISCHARGE
 DOES NOT FLOW BACK INTO THE RIGHT-OF-WAY. 12" COMPOST FILTER SOCK SHOULD BE LOCATED BELOW THE DISCHARGE END OF THE
- 4. BSRF CAN BE SUBSTITUTED IN PLACE OF CFS WITH APPROVAL FROM PROJECT OWNER
- 5. SUMPS TO BE USED DURING CONSTRUCTION

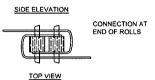
RIGHT OF WAY DIVERSION OUTLET (WATERBAR)

MAINTENANCE:

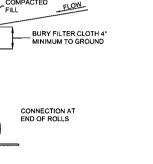
- 1. RIGHT-OF-WAY DIVERSIONS SHALL BE INSPECTED WEEKLY (DAILY ON ACTIVE ROADS) AND AFTER EACH RUNOFF EVENT. DAMAGED OR ERODED RIGHT-OF-WAY DIVERSIONS SHALL BE RESTORED TO ORIGINAL DIMENSIONS WITHIN 24 HOURS OF
- 2. MAINTENANCE OF RIGHT-OF-WAY DIVERSIONS SHALL BE PROVIDED UNTIL RIGHT-OF-WAY HAS ACHIEVED PERMANENT STABILIZATION.
- 3. RIGHT-OF-WAY DIVERSIONS ON RETIRED RIGHT-OF-WAYS SHALL BE LEFT IN PLACE
 AFTER PERMANENT STABILIZATION HAS BEEN ACHIEVED.











OF THE FENCE.



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REVISIONS

Signed By: TROY DANIEL

DESCRIPTION

Bright People, Right Solutions

20043

DATE

SCALE VERIFICATION HIS BAR IS 1 INCH IN LENGT

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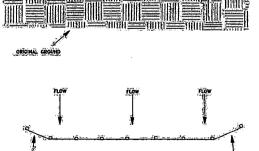
BMP TECHNICAL INSTALLATION DETAILS

EIBS CAMP ROAD IMPROVEMENTS IEW MILTON DISTRICT, DODDRIDGE COUNTY WEST VIRGINIA

6' METAL T-POSTS OR 2"x2"x SILT FENCE PLAN VIEW GEO-TEXTILE CROSS SECTION A-A

ISOMETRIC

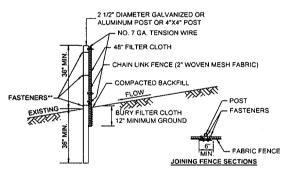
STRAW BALE DEWATERING



TURN END OF ROW SCIENTLY UPHILL

	Maximum Slope Length (ft) Above Fence				
Slope - Percent	Standard (18" High) Silt Fence	Reinforced (30" High) Silt Fence	Super Silt Fence		
2 (or less)	150	500	1000		
5	100	250	550		
10	50	150	325		
15	35	100	215		
20	25	70	175		
25	20	55	135		
30	15	45	100		
35	15	40	85		
40	15	35	75		
45	10	30	60		
50	10	25	50		

2A SILT FENCE PLACEMENT



- * POSTS SPACED @ 10' MAX. USE 2 1/2" DIA. GALVANIZED OR ALUMINUM POSTS OR 4" \times 4" POST.
- " CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POST WITH WIRE TIES OR STAPLES. GEOTEXTILE FABRIC SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND

NO. 7 GA. TENSION WIRE INSTALLED HORIZONTALLY AT TOP AND BOTTOM OF CHAIN-LINK FENCE.

FILTER FABRIC FENCE SHOULD BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE.

THE LENGTH OF SLOPE ABOVE THE FENCE SHALL NOT EXCEED 400 FEET IN STEEP TERRAIN. IN FLATTER AREAS THE LENGTH CAN BE EXTENDED WITH THE APPROVAL OF THE ENGINEER.

NO SECTION OF SILT FENCE SHOULD EXCEED A GRADE OF 5% FOR MORE THAN A DISTANCE OF 20 FEET. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE.

3 SUPER SILT FENCE

STRAW BALES SHOULD BE PLACED ON THEIR SIDES WITH THE TWINE

2. STRAW BALES SHOULD BE STACKED TWO HIGH WITH GEO-TEXTILE

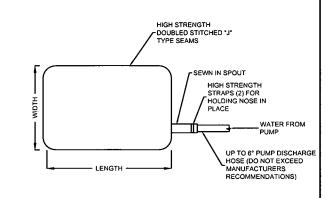
3. SEAMS OF GEOTEXTILE FABRIC SHOULD BE SEWN TOGETHER.

- 4 6 FOOT METAL T-POSTS ARE RECOMMENDED, DRIVEN THROUGH BOTH STRAW BALES, IF METAL T-POSTS ARE RECOMMENDED, DRIVEN TRICOGN BOTH STRAW BALES, IF METAL T-POSTS ARE NOT AVAILABLE, WOODEN STAKES SHOULD BE A MINIMUM OF 2"X2"X 4". STAKES SHOULD BE DRIVEN AROUND THE PERIMETER OF THE STRAW BALES AS STRUCTURAL SUPPORT AS WELL AS THROUGH THE BALES TO HELP PIN THE GEO-TEXTILE FABRIC IN PLACE.
- DEWATERING STRUCTURES DIMENSIONS SHOULD BE DESIGNED TO ACCOMMODATE THE SIZE OF THE WATER PUMP BEING UTILIZED.
- 6. DEWATERING STRUCTURE DIMENSIONS MAY NEED TO BE ADJUSTED TO SUIT THE VARIOUS SIZES OF FILTER BAGS, THOUGH SQUARE FOOTAGE SPECIFICATIONS SHOULD STILL BE MAINTAINED. THE STRUCTURE SHOULD COMPLETELY ENCOMPASS THE BAG BEING UTILIZED.
- WHEN PUMPING LARGE AMOUNTS OF WATER FOR AN EXTENDED PERIOD OF TIME, (LARGE BELL HOLES, ETC.) INTERVAL PUMPING MAY BE NECESSARY TO AVOID OVERPOWERING THE DEWATERING STRUCTURE.
- USE OF MULTIPLE DEWATERING STRUCTURES MAY BE NECESSARY UNDER SPECIAL CIRCUMSTANCES.
- FOR STREAM CROSSINGS, WHEN PUMPING OUT THE TRENCH WITH A 2 INCH TRASH PUMP AT 1/3 THROTTLE. A STANDARD 10' BY 10' DEWATERING STRUCTURE WITH A COMPAPABLE FILTER BAG SHOULD BE ADEQUATE. FIELD ADJUSTMENTS WILL BE MADE IF FLOW IS OVERPOWERING THE
- ADDITIONAL EROSION CONTROLS MAY BE UTILIZED DOWNSLOPE OF DEWATERING STRUCTURES WHERE NEEDED.
- 11. DEWATERING STRUCTURE WILL BE PLACED TO MAXIMIZE AVAILABLE VEGETATIVE STRIP

4A STRAW BALE DEWATERING

EROSION & SEDIMENT CONTROL PLANS 20162247

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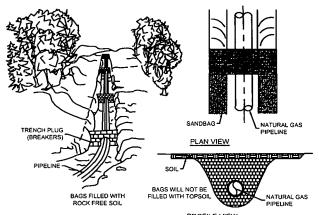


SIDE VIEW

NOTES:

- UTILIZE VEGETATED STRIP WHERE APPLICABLE.
 MAXIMIZE DISTANCE BETWEEN LOCATION OF FILTER BAG AND AQUATIC FEATURE.
 FILTER BAG MUST BE PLACED ON FLAT SURFACE.





PROFILE VIEW

TRENCH BREAKER (PLUG) SPACING (FEET)

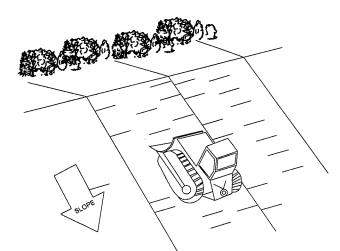
ALIGNMENT SLOPE %*	SPACING L (FT)	PLUG MATERIAL
< 5 %	1,000	" EARTH FILLED SACKS
5-15 %	500	" EARTH FILLED SACKS
15-25 %	300	" EARTH FILLED SACKS
25-35 %	200	" EARTH FILLED SACKS
35-100 %	100	" EARTH FILLED SACKS
>100 %	50	"" USE CEMENT FILLED BAGS (WETTED) OR MORTARED STONE

*TRENCH BREAKERS (PLUGS) ARE REQUIRED AT ALL STREAM, RIVER, OR WATER-BODY CROSSINGS REGARDLESS OF TRENCH SLOPE.

"TOP SOIL MAY NOT BE USED TO FILL SACKS. TRENCH BREAKERS (PLUGS) WITH CEMENT FILLED SACKS SHALL BE INSTALLED AND ALLOWED TO CURE WITHOUT ANY SURFACE WATER COMING INTO CONTACT WITH THEM. CONTRACTOR SHALL VERIFY CEMENT HAS CURED AND HARDENED PRIOR TO REMOVING ANY BIMPS AROUND THE TRENCH BREAKER (PLUG) AREA.

"TRENCH BREAKERS WITH CEMENT FILLED SACKS SHALL BE INSTALLED AND ALLOWED TO CURE WITHOUT ANY SURFACE WATER COMING INTO CONTACT WITH THEM. CONTRACTOR SHALL VERIFY CEMENT HAS CURED AND HARDENED PRIOR TO REMOVING ANY BIMPS AROUND THE TRENCH BREAKER AREA.





TRACKING SLOPE IS DONE BY RUNNING TRACKED MACHINERY UP AND DOWN THE SLOPE, LEAVING TREAD MARKS PARALLEL TO THE CONTOUR, (NOTE: IF A BULLDOZER IS USED, THE BLADE SHOULD BE UP). CARE SHOULD BE EXERCISED ON SOILS HAVING A HIGH CLAY CONTENT TO AVOID OVER-COMPACTION.

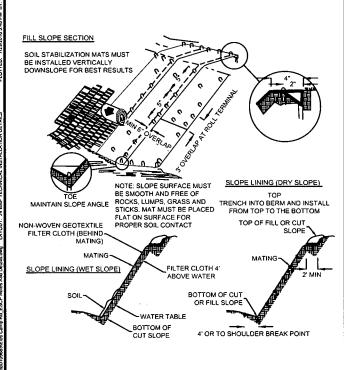




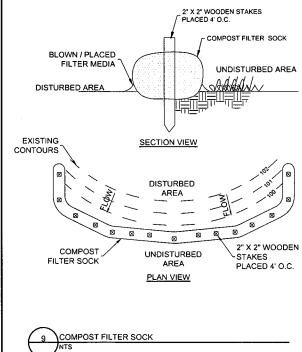
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ROLLED EROSION CONTROL PRODUCTS



CONDITIONS WHERE PRACTICE APPLIES:

- INSTALL ON DISTURBED AREAS THAT REQUIRE IMMEDIATE EROSION PROTECTION.
- 2. USE ON SLOPES REQUIRING STABILIZATION UNTIL PERMANENT VEGETATION CAN BE ESTABLISHED.
- CAN BE USED ALONG THE PERIMETER OF A PROJECT, AS A CHECK DAM IN UNLINED DITCHES AND AROUND TEMPORARY STOCKPILES
- 4. SOCK CAN BE STAKED TO THE GROUND USING WILLOW CUTTINGS FOR ADDED REVEGETATION
- EROSION CAN OCCUR BENEATH AND BETWEEN SOCK IF NOT PROPERLY ENTRENCHED, ALLOWING WATER TO PASS BELOW AND BETWEEN SOCKS. IT IS THEREFORE VERY IMPORTANT TO INSTALL SOCKS CORRECTLY.
- 6. THEY CAN REPLACE SEDIMENT FENCE ON STEEP SLOPES.
- 7. ROLLS ARE A SHORT-TERM SOLUTION TO HELP ESTABLISH NATIVE VEGETATION
- 8. ROLLS STORE MOISTURE FOR VEGETATION PLANTED IMMEDIATELY UPSLOPE.
- PLASTIC NETTING WILL EVENTUALLY PHOTO-DEGRADE, ELIMINATING THE NEED FOR RETRIEVAL OF MATERIALS AFTER THE FIBER OR STRAW HAS BROKEN DOWN.

CONSTRUCTION SPECIFICATIONS:

- . IT IS CRITICAL THAT SOCK IS INSTALLED PERPENDICULAR TO THE FLOW DIRECTION
- NARROW TRENCHES SHOULD BE DUG ACROSS THE SLOPE, ON CONTOUR, TO A DEPTH OF 3 TO 5 INCHES ON CLAY SOILS AND SOILS WITH GRADUAL SLOPES, OH COSES SOILS, STEEP SLOPES, AND DURING HIGH RAINFALL EVENTS, THE TRENCHES SHOULD BE DUG TO A DEPTH OF 5 TO 7 INCHES, OR ½ TO 2/3 OF THE THICKNESS OF
- 3. START CONSTRUCTION OF TRENCHES AND INSTALLING SOCK FROM THE BASE OF START CONSTRUCTION OF TRENCHES AND INSTALLING SOCK FROM THE BASE OF THE SLOPE AND WORK UPHILL. EXCAVATED MATERIAL SHOULD BE SPREAD EVENLY ALONG THE UPHILL SLOPE AND COMPACTED USING HAND TAMPING OR OTHER METHOD. CONSTRUCT TRENCHES AT CONTOUR INTERVALS OF 3 TO 36 FEAT APART DEPENDING ON THE STEEPHESS OF THE SLOPE, SOIL TYPE, AND RANIFEAL THE STEEPER THE SLOPE THE CLOSER TOGETHER THE TRENCHES SHOULD BE
- 4. INSTALL THE SOCK SNUGLY INTO THE TRENCHES AND ABUT TIGHTLY END TO END.
- 5. INSTALL STAKES AT EACH END OF THE SOCK, AND AT 4-FOOT CENTERS ALONG THE ENTIRE LENGTH OF THE SOCK.
- 6. IF REQUIRED, INSTALL PILOT HOLES FOR THE STAKES USING A STRAIGHT BAR TO DRIVE HOLES THROUGH THE SOCK AND INTO THE SOIL.
- AT A MINIMUM, WOODEN STAKES SHOULD BE APPROXIMATELY 2 X 2 X 24 INCHES. WILLOW CUTTINGS OR 3/8-INCH REBAR CAN ALSO BE USED FOR STAKES.
- STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE SOCK, LEAVING 2 TO 3 INCHES OF THE STAKE PROTRUDING ABOVE THE SOCK.

10 COMPOST FILTER SOCK

MAINTENANCE:

- 1. INSPECT SOCK AT LEAST ONCE A WEEK AND AFTER EACH RAIN EVENT GREATER THAN 0.5 INCH.
- 2. REPAIR OR REPLACE SPLIT, TORN, RAVELING, OR SLUMPING SOCK.
- REMOVE SEDIMENT ACCUMULATIONS WHEN EXCEEDING ½ THE HEIGHT BETWEEN THE TOP OF THE SOCK AND THE GROUND SURFACE.
- 4. REPAIR ANY RILLS OR GULLIES PROMPTLY.
- 5. RESEED OR REPLANT VEGETATION IF NECESSARY UNTIL THE SLOPE IS STABILIZED

1		Maximum Slope Leogil	Above Sediment Control	in Feet (meters)*	
Stape Percent	8 in (200 mm) Sediment control	12 in (300 mm) Sediment control	18 in (450 mms) Sediment control	24 in (600mm) Sediment control	32 in (800mm) Sediment control
	6.5 in (160 mm)**	9.5 in (240 mm) **	14.5 in (360 mm) **	19 in (430 mm) **	25 in (950 mm) **
2 (or less)	600 (180)	750 (225)	1000 (300)	1300 (400)	1650 (500)
5	400 (120)	500 (150)	550 (165)	650 (200)	750 (225)
10	200 (50)	250 (75)	300 (90)	400 (120)	500 (150)
15	140 (40)	170 (50)	200 (60)	325 (100)	450 (140)
20	100 (30)	125 (38)	140 (42)	25D (BO)	- 400 (120)
క	80 (24)	100 (30)	110 (33)	200 (60)	275 (85)
20	60 (18)	75 (73)	90 (27)	(130 (40)	200 (50)
25	60 (18)	75 (73)	80 (24)	115 (35)	150 (45)
40 ,	60(18)	75 (22)	80 (24)	.100 (30)	125 (38)
45	40 (12)	50 (15)	60(12)	SD (24)	(30) (30)
50	40(12)	50 (15)	55(17)	65 (20)	75 (23)

Based on a failure point of 36 in (0.9 m) super eit fence (who reinharced) at 1000 ft (1000 m) of stape, exatershed width equivalent it studiment control dovice, 1 in 24 hr 125 mar(24 hr) rain event. • Elective beight is Sederimet control frair installation and with constant head from runoff as determined by Obio State University

COMPOST FILTER SOCK

ISSUE FOR PERMITTING NOT FOR CONSTRUCTION

> SCALE VERIFICATION HIS BAR IS 1 INCH IN LENGT

> > IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

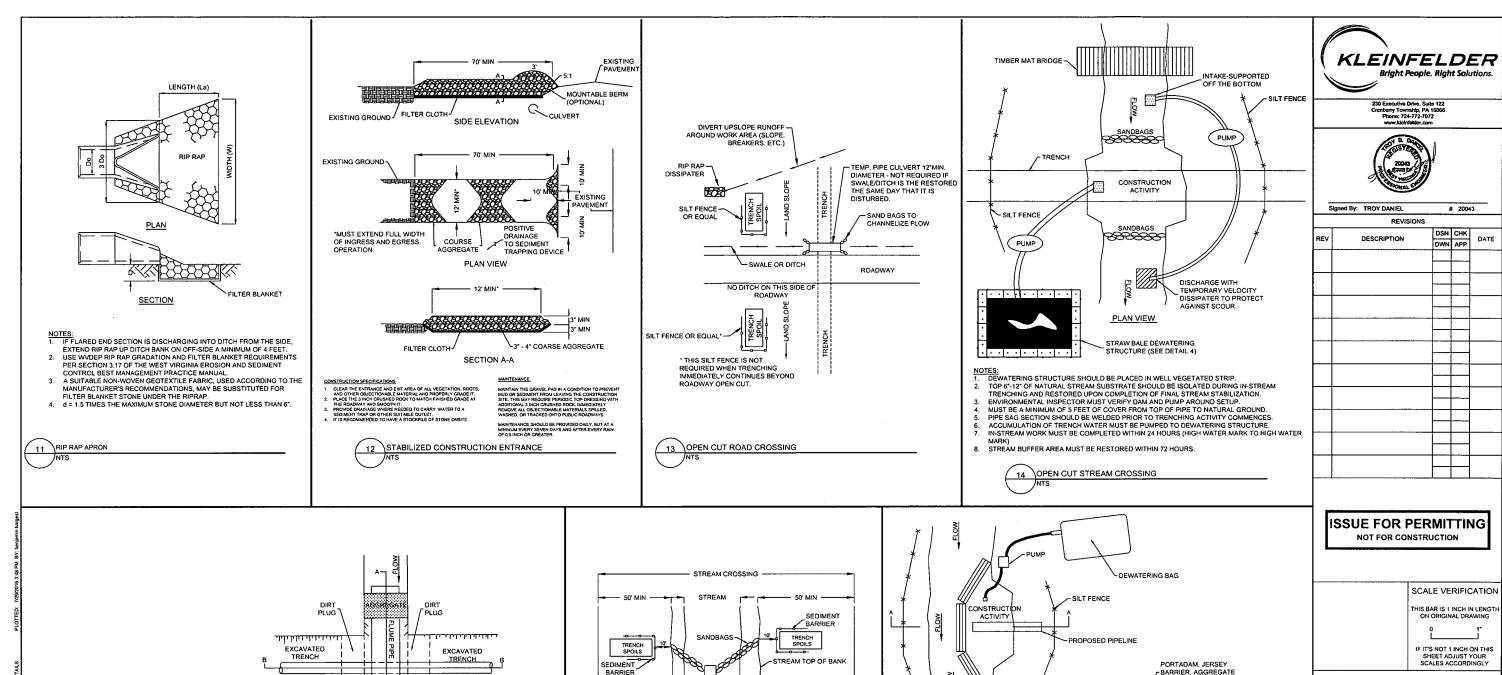
ORIGINAL DRAWING SIZE IS 22 x 34

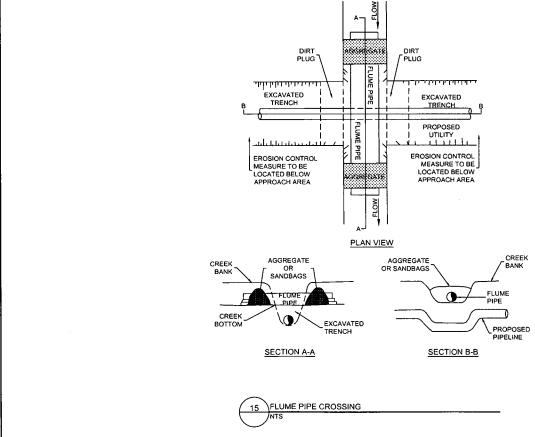
BMP TECHNICAL INSTALLATION DETAILS

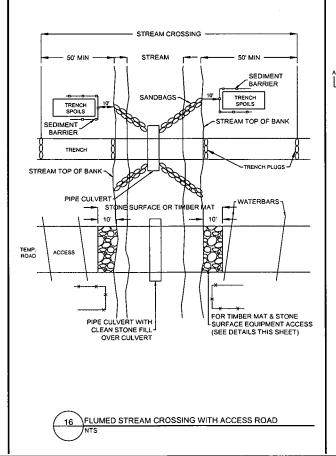
EIBS CAMP ROAD IMPROVEMENTS NEW MILTON DISTRICT, DODDRIDGE COUNTY WEST VIRGINIA

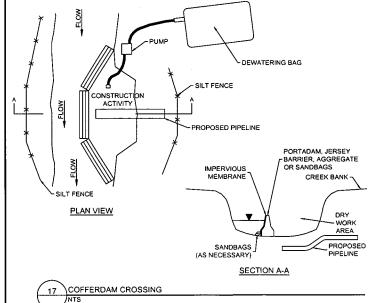
> **EROSION & SEDIMENT** CONTROL PLANS

PROJECT NO. 201622 ISSUE DATE 07-29-201 CURRENT REVISION DESIGNED BY внн DRAWN BY CHECKED BY APPROVED BY









ORIGINAL DRAWING SIZE IS 22 x 34

BMP TECHNICAL INSTALLATION DETAILS

EIBS CAMP ROAD IMPROVEMENTS NEW MILTON DISTRICT, DODDRIDGE COUNT WEST VIRGINIA

EROSION & SEDIMENT CONTROL PLANS

вв

PROJECT NO. 20162247 ISSUE DATE 07-29-2016 CURRENT REVISION DESIGNED BY ВНН RAWN BY внн

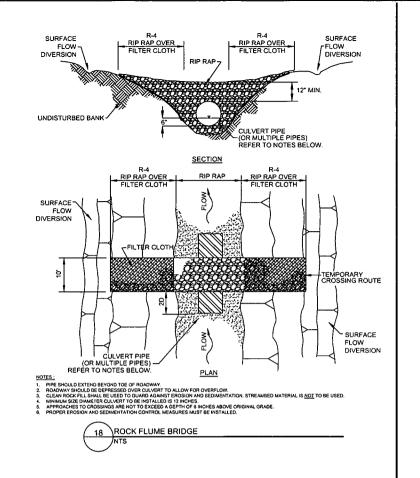
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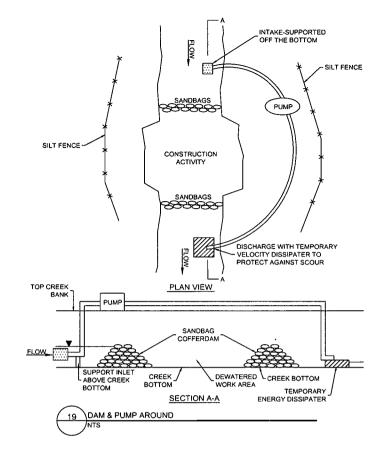
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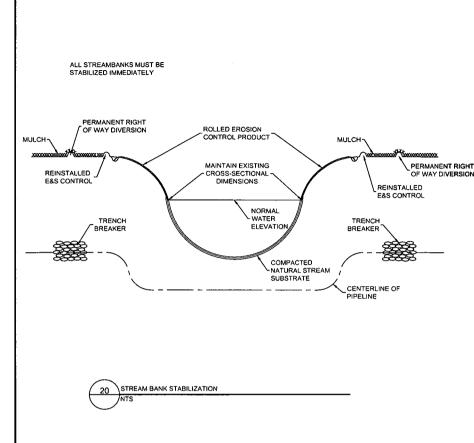
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TD SHEET

25 of 31





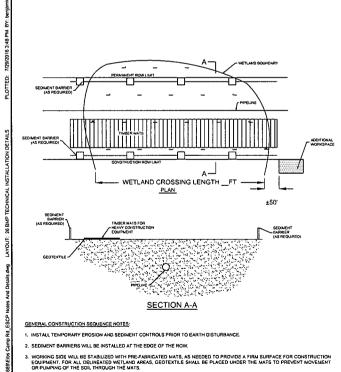




230 Executive Drive, Suite 122 Cranbarry Township, PA 16066 Phone: 724-772-7072

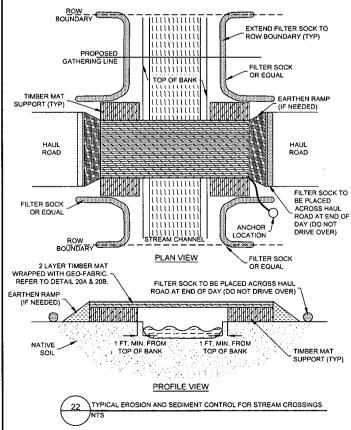


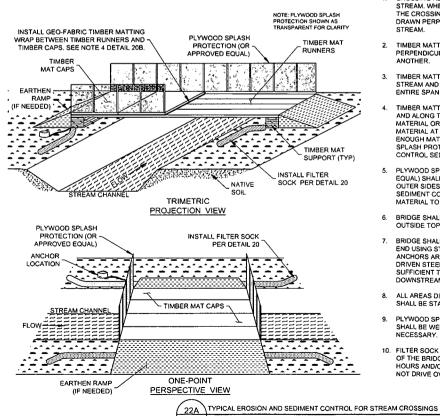
Signed By: TROY DANIEL # 20043 REVISIONS DESCRIPTION DATE



I. WETLAND MATERIAL WILL BE STRIPPED, SEGREGATED, AND RESTORED UPON COMPLETION OF THE CROSSING

TYPICAL EROSION AND SEDIMENT CONTROL FOR WETLAND CROSSINGS





- CONSTRUCTION SPECIFICATIONS AND GENERAL SPECIFICATIONS CROSSING ALIGNMENT SHALL BE AT RIGHT ANGLE TO THE STREAM. WHERE THE APPROACH CONDITIONS DICTATE, THE CROSSING MAY VARY 15 DEGREES FROM THE LINE DRAWN PERPENDICULAR TO THE CENTERLINE OF THE
 - 2. TIMBER MATTING RUNNERS SHALL BE PLACED PERPENDICULAR TO STREAM AND ADJACENT TO ONE
 - TIMBER MATTING CAPS SHALL BE PLACED PARALLEL TO STREAM AND ADJACENT TO ONE ANOTHER FOR THE ENTIRE SPAN OF THE BRIDGE.
 - TIMBER MATTING CAPS SHALL BE WRAPPED UNDERNEATH AND ALONG THE SIDES OF TIMBER MAT WITH GEO-FABRIC MATERIAL OR APPROVED EQUAL, EXTEND GEO-FABRIC MATERIAL AT MINIMUM 5 FEET ON EITHER SIDE TO ALLOW ENOUGH MATERIAL TO WRAP UP AND TIE INTO PLYWOOD SPLASH PROTECTION FENCING (OR APPROVED EQUAL) T ROVED EQUAL) TO CONTROL SEDIMENT FROM ENTERING STREAM.
 - 5. PLYWOOD SPLASH PROTECTION FENCING (OR APPROVED EQUAL) SHALL BE SECURELY ATTACHED ALONG THE OUTER SIDES OF TIMBER MATTING TO CONTROL SEDIMENT COLLECTION AND ALLOW GEO-FABRIC MATERIAL TO BE STAPLED TO OUTSIDE OF PLYWOOD
 - 6. BRIDGE SHALL BE CONSTRUCTED MINIMUM 1 FOOT OUTSIDE TOP OF BANK.
 - 7. BRIDGE SHALL BE SECURELY ANCHORED AT ONLY ONE END USING STEEL CABLE OR CHAIN. ACCEPTABLE ANCHORS ARE LARGE TREES, LARGE BOULDERS, OR DRIVEN STEEL ANCHORS. ANCHORING SHALL BE SUFFICIENT TO PREVENT THE BRIDGE FROM FLOATING
 - ALL AREAS DISTURBED DURING BRIDGE INSTALLATION SHALL BE STABILIZED IMMEDIATELY.
 - PLYWOOD SPLASH PROTECTION (OR APPROVED EQUAL) SHALL BE WELL MAINTAINED, CLEARING SEDIMENT WHEN
 - 10. FILTER SOCK SHALL BE PLACED ALONG BOTH ENTRANCES OF THE BRIDGE WHEN NOT IN USE FOR MORE THAN 24 HOURS AND/OR PRIOR TO PRECIPITATION EVENTS. DO NOT DRIVE OVER FILTER SOCK.

ISSUE FOR PERMITTING NOT FOR CONSTRUCTION

> SCALE VERIFICATION HIS BAR IS 1 INCH IN LENGT

> > IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

ON ORIGINAL DRAWING

ORIGINAL DRAWING SIZE IS 22 x 34

BMP TECHNICAL INSTALLATION DETAILS

EIBS CAMP ROAD IMPROVEMENTS IEW MILTON DISTRICT, DODDRIDGE COUNT WEST VIRGINIA

> **EROSION & SEDIMENT** CONTROL PLANS

PROJECT NO. 2016224 ISSUE DATE 07-29-2016 CURRENT REVISION внн DRAWN BY CHECKED BY APPROVED BY

Named Variety of Forage Perennial Ryegrass	20%
Named Variety of Forage Tall Fescue (not Fawn)	20%
Climax Timothy	15%
Orchardgrass	10%
Birdsfoot Trefoil	10%
Medium Red Clover	5%
Ladino Clover	5%
Kentucky Bluegrass VNS	5%
Alsike Clover	5%
Alfaifa	5%
* All seed mixes require double inoculation	
Default Wildlife Mix (150 - 175 LBS per Acre)	
Medium Red Clover	20%
Buckwheat	10%
Oats (Spring & Summer) or Wheat (Fall & Winter)	10%
Ladino White Clover	20%
Birdsfoot Trefoil	10%
Alfafa	10%
Named Variety of Forage Perennial Ryegrass	10%
Annual Ryegrass	10%
* All seed mixes require double inoculation	
* All seed mixes require double inoculation General Contractor Mix (200 - 250 LBS per Acre)	
	50%
General Contractor Mix (200 - 250 LBS per Acre)	_
General Contractor Mix (200 - 250 LBS per Acre) Named Variety of Forage Tall Fescue (not Fawn)	50%
General Contractor Mix (200 - 250 LBS per Acre) Named Variety of Forage Tall Fescue (not Fawn) Named Variety of Forage Perennial Ryegrass	50% 20%
General Contractor Mix (200 - 250 LBS per Acre) Named Variety of Forage Tall Fescue (not Fawn) Named Variety of Forage Perennial Ryegrass Annual Ryegrass	50% 20% 15%

Lime Pelletized 1.5 tons per acre

Fertilizer 10/20/20 200 lbs per acre

Straw Mulching 2 tons per acre

25 LIME, FERTILIZER, AND MULCH CHARTS

TYPES OF	ROAD	CROSS-SECTIONS
		:
	44	2/
	CROWNED	O FILL SECTION
	FOR LOW	F GROUND USE
	4x	. 44
	FOR LOW GI	UNDIPUKE SECTION ROUND USE WHERE
	FILL IS UNIX	AVAILABLE
	4-6X	in the second second
21		!
		MODERATE SLOPE
	AND STABLE	SOILS
	4-6X	. j
21		21
<i></i>	FOR USE ON	H DITCH SECTION STEEP SLOPE AND
,,,	AREAS WITH	Poor soils
THE CHOICE OF CROSS-SECT		
OH DRABHAGE HEEDS, SOIL S AND EXPECTED TRAFFIC VOLL		1
	4X	48
21		211
/ / / /		NO DITCHED SECTION VOLUME ROADS ON
11.00	STEEP SLOPE	
FROM: US FOREST SERVICE AND	MICHIGAN ONE	

26 TYPES OF ROAD CROSS-SECTIONS



230 Executive Drive, Suite 122 Cramberry Township, PA 16066 Phone: 724-772-7072 www.kleinfelder.com



Signed	By: TROY DANIEL		2004	3
	REVISION			
REV	DESCRIPTION	DSN DWN	CHK APP	DATE
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		\vdash		
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ISSUE FOR PERMITTING
NOT FOR CONSTRUCTION

SCALE VERIFICATION THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING

IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

ORIGINAL DRAWING SIZE IS 22 x 34

BMP TECHNICAL INSTALLATION DETAILS

EIBS CAMP ROAD IMPROVEMENTS NEW MILTON DISTRICT, DODDRIDGE COUNTY WEST VIRGINIA

EROSION & SEDIMENT CONTROL PLANS

PROJECT NO.	20162247	
ISSUE DATE	07-29-2016	
CURRENT REVIS	ION -	
DESIGNED BY	внн	
DRAWN BY	внн	
CHECKED BY	88	
APPROVED BY	TD	SHEET

	EIBS CAMP ROAD STORM DRAINAGE COMPUTATIONS										
ACCESS ROAD CROSS-DRAINS		Q TOTAL FLOW	SLOPE (ft/ft)	SIZE (in)	LENGTH	UPPER INVERT (ft)	LOWER INVERT (ft)	PIPE MATERIA			
PIPE	STATION	(cfs)	(1011)		(,		mercial (iii)	MAIERIA			
P1	01+15	0.26	0.0033	12"	30.00	810.90	810.80	HDPE			
P2	00+00	0.35	0.0045	12"	44.00	814.00	813.80	HDPE			
P3	05+20	0.26	0.0031	10"	32.00	817.00	816.90	HDPE			
P4	08+37	0.26	0.0071	12"	42.00	822.80	822.50	HDPE			
P5	16+18	0.26	0.0063	24"	32.00	837.00	836.80	HDPE			
P6	20+75	0.26	0.0156	12"	32.00	859.75	859.25	HDPE			
P7	23+80	0.26	0.0074	12*	34.00	858.00	857.75	HDPE			
P8	26+29	0.26	0.0044	24"	45.00	858.70	858.50	HDPE			
P9	30+70	0.26	0.0147	12"	34.00	868.50	868.00	HDPE			
P10	00+00	0.26	0.0313	12"	16.00	869.00	868.50	HDPE			
P11	37+40	0.26	0.0083	12*	24.00	884.70	884.50	HDPE			
P12	00+00	0.26	0.0083	12*	24.00	892.00	891.80	HDPE			
P13	42+22	0.26	0.0066	48"	38.00	892.50	892.25	HDPE			
P14	00+00	0.26	0.0056	12"	18.00	897.80	897.70	HOPE			
P15	44+72	0.26	0.0060	48*	50.00	900.00	899.70	HDPE			
P16	00+00	0.26	0.0182	12"	22.00	918.30	917.90	HDPE			
P17	49+48	0.26	0.0966	18*	88.00	927.00	918.50	HDPE			
P18	54+34	0.26	0.0167	12*	30.00	935.00	934.50	HDPE			
P19	58+51	0.26	0.0147	24"	34.00	954.00	953.50	HDPE			

PERMANENT SEEDING CHART

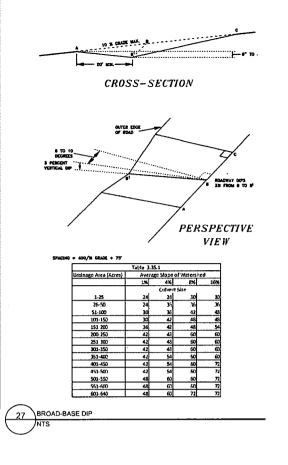
	EIBS CAMP ROAD RO	DAD-SIDE DI	TCH & CHAN	NEL DESIGN	AND LINING		
ROAD-SIDE DITCH / CHANNEL NAME	CHANNEL SECTION	BOTTOM WIDTH (ft)	LEFT SIDE SLOPE, Z:1 (ft)	RIGHT SIDE SLOPE, Z:1 (ft)	CHANNEL DEPTH (ft)	TEMPORARY LINER	PERMANENT LINER
ROAD-SIDE DITCH 1	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 2	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 3	TRIANGULAR		2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 4	TRIANGULAR		2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 5	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 6	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 7	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 8	TRIANGULAR		2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 9	TRIANGULAR		2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 10	TRIANGULAR		2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 11	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 12	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 13	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 14	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 15	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 16	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 17	TRIANGULAR	-	2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING
ROAD-SIDE DITCH 18	TRIANGULAR		2	2	1	RIP RAP OR MATTING	RIP RAP OR MATTING

1005			IBS CAMP R	OAD STORM DRAINAGE	COMPUTATIO	NS		
	SS ROAD DRAINS	Q TOTAL FLOW	SLOPE	SIZE (in)	LENGTH	UPPER	LOWER	PIPI
PIPE	STATION	(cfs)	(ft/ft)		(ft)	INVERT (ft)	INVERT (ft)	MATER
P1	01+15	0.26	0.0033	12"	30.00	810.90	810.80	HDP
P2	00+00	0.35	0.0045	12"	44.00	814.00	813.80	HDP
P3	05+20	0.26	0.0031	10"	32.00	817.00	816.90	HDP
P4	08+37	0.26	0.0071	12*	42.00	822.80	822.50	HDP
P5	16+18	0.26	0.0063	24"	32.00	837.00	836.80	HDP
P6	20+75	0.26	0.0156	12"	32.00	859.75	859.25	HDP
P7	23+80	0.26	0.0074	12*	34.00	858.00	857.75	HDP
P8	26+29	0.26	0.0044	24"	45.00	858.70	858.50	HDP
P9	30+70	0.26	0.0147	12*	34.00	868.50	868.00	HDP
P10	00+00	0.26	0.0313	12"	16.00	869.00	868.50	HDP
P11	37+40	0.26	0.0083	12"	24.00	884.70	884.50	HDP
P12	00+00	0.26	0.0083	12*	24.00	892.00	891.80	HDP
P13	42+22	0.26	0.0066	48"	38.00	892.50	892.25	HDP
P14	00+00	0.26	0.0056	12"	18.00	897.80	897.70	HDP
P15	44+72	0.26	0.0060	48"	50.00	900.00	899.70	HDP
P16	00+00	0.26	0.0182	12"	22.00	918.30	917.90	HDP
						,		-

March 15 - September 15 Annual Rye 250 - 350 lbs per acre

September 15 - March 15 Annual Winter Wheat 100 - 125 lbs per acre

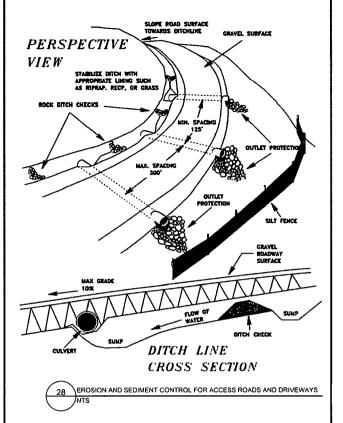
23 TEMPORARY SEEDING CHART

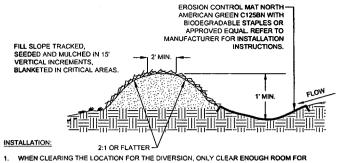


SYMBOL

RCD

NOTES:
DITCH CHECKS WILL BE CONSTRUCTED IN CHANNELS TO MINIMIZE EROSION. THE CONSTRUCTION OF THE DITCH CHECK WILL FOLLOW THE GUIDELINES ABOVE. DITCH CHECKS WILL BE CONSTRUCTED SO THAT THE ELEVATION OF THE TOP OF THE DOWNSTREAM DITCH CHECK IS EQUAL TO THE ELEVATION OF THE BASE OF THE DITCH CHECK ABOVE. THIS CREATES AS SITUATION WHERE THE CHANNEL HAS NO CHANNELIZED FLOW PER SAY. THE WATER FLOWING DOWN THE DITCH WILL CASCADE FROM THE POOL CREATED BY ONE DITCH CHECK INTO THE POOL CREATED BY THE DOWNSTREAM DITCH CHECK THIS DISSIPATES ENERGY AND SLOWS THE WATER FLOW REDUCING EROSION AND ALLOWING ANY SEDIMENT IN THE DRAINAGE TO FALL OUT.





WHEN CLEARING THE LOCATION FOR THE DIVERSION, ONLY CLEAR ENOUGH ROOM FOR CONSTRUCTION AND MAINTENANCE EQUIPMENT ACCESS, DO NOT CLEAR ANY ADDITIONAL AREA UNTIL ALL EROSION CONTROL DEVICES ARE IN PLACE

UNTIL ALL EROSION CONTROL DEVICES ARE IN PLACE
REMOVE ALL STUMPS, ROOTS, AND OTHER DEBRIS AND DISPOSE OF THEM PROPERLY.
INSTALL DIVERSION AND COMPACT AS SHOWN IN DETAIL INSURE POSITIVE DRAINAGE DURING
CONSTRUCTION OF BERM.
SCARIFY, SEED, MULCH AND TACK DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF BERM
INSTALL EROSION CONTROL MAT NORTH AMERICAN GREEN C125N PER MANUFACTURER'S RECOMMENDATIONS AND KEY INTO SIDES OF CHANNEL TO PREVENT WATER FROM UNDERMINING

- TEMPORARY BERMS SHALL BE PLACED, MAINTAINED, AND ADJUSTED CONTINUOUSLY UNTIL 90% VEGETATIVE GROWTH IS ESTABLISHED ON THE EXTERIOR SLOPES WITH PERMANENT STORM DRAINAGE FACILITIES FUNCTIONING.
 BERMS SHALL OUTLET TO SLOPE PIPES, CHANNELS, OR OTHER APPROVED MEANS OF CONVEYING RUNOFF TO A SEDIMENT TRAP, SEDIMENT BASIN, OR COLLECTOR CHANNEL.
 CHANNEL BEHIND BERM SHALL HAVE POSITIVE GRADE TO OUTLET AND AN APPROPRIATE PROTECTIVE LINNING.
 BERM SHALL BE ADEQUATELY COMPACTED TO PREVENT FAILURE.
 AN ACCEPTABLE ALTERNATIVE TO TOP-OF-SLOPE BERM IS TO CONTINUOUSLY GRADE THE TOP OF

- FILL TO DIRECT RUNOFF AWAY FROM THE FILLSLOPE TO A COLLECTOR CHANNEL, SEDIMENT TRAP, OR SEDIMENT BASIN.

INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS. REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

6"-8" RIP-RAP TYPIC





SPACING DEPENDS OF THE SOIL TYPE AND

Culvert

TYPICAL CULVERT & CULVER INLET/OUTLET PROTECTION

TYPICAL CULVERT & CULVERT INLET/OUTLET PROTECTION DETAIL

INLET AND OUTLET PROTECTION IS ESSENTIALLY GRAVELS AND/OR RIP RAP PLACED AT BOTH THE INLET AND OUTLET SIDES OF CULVERTS. THE GRAVELS WILL HELP TO SLOW

THE FLOW OF WATER, AND DISSIPATE ENERGY. THIS WILL IN TURN DECREASE THE CHANCES OF EROSION AND ALSO ALLOW ANY SEDIMENT IN THE WATER TO SETTLE OUT.

O Executivo Drive, Suite 122 embarry Township, PA 16066 Phone: 724-772-7072 www.kleinfelder.com



Signed By: TROY DANIEL # 20043 REVISIONS DESCRIPTION DATE

ISSUE FOR PERMITTING NOT FOR CONSTRUCTION

SCALE VERIFICATION

HIS BAR IS 1 INCH IN LENGT

IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

ORIGINAL DRAWING SIZE IS 22 x 34

BMP TECHNICAL INSTALLATION DETAILS

EIBS CAMP ROAD IMPROVEMENTS NEW MILTON DISTRICT, DODDRIDGE COUNTY WEST VIRGINIA

EROSION & SEDIMENT CONTROL PLANS

PROJECT NO. 20162247 ISSUE DATE 07-29-2016 CURRENT REVISION DESIGNED BY DRAWN BY Внн CHECKED BY

APPROVED BY

TD SHEET

ROAD DITCH BOTTOM DIM. 4 SEED AND MULCH ROAD DITCH EXISTING SLOPE

NOTE: TO BE PLACED AT THE ENDS OF DITCHES CALLING FOR LEVEL SPREADERS LEVEL SPREADERS WILL BE CUT INTO THE CONTOUR OF THE EXISTING SLOPE.

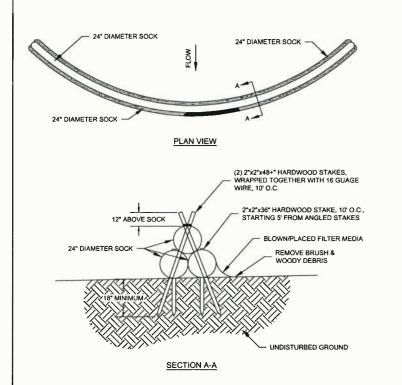
LEVEL SPREADER TO BE CONSTRUCTED IN AREAS WHERE A CULVERT OR CHANNEL MUST EMPTY ONTO GROUND WITH NO ASSOCIATES CHANNELIZED FLOW. THE PURPOSE OF THE LEVEL SPREADER IS TO DISSIPATE ENERGY AND SPREAD THE FLOW OUT OVER A SIGNIFICANT AREA. THIS WILL TAKE A CHANNELIZED FLOW AND ESSENTIALLY CONVERT IT BACK TO A SHEET FLOW OVER THE GROUND SURFACE. THE SHEET FLOW WILL HAVE LESS CHANCE FOR EROSION CONSIDERING THE LOWER VELOCITIES AND FLOW VOLUMES IN ANY PARTICULAR AREA. THEY MAY BE CONSTRUCTED MUCH LIKE A SUMP WHERE THE CHANNEL OR CULVERT EMPTIES INTO THE SUMP AND THEN OVERTOPS THE BERMED AREA, BUT THEY MAY OFTEN CONTAIN GRAVEL IN THE



SUMPED AREA. THEY WILL ALLOWS BE CONSTRUCTED ALONG THE GROUND CONTOUR.

PLAN VIEW

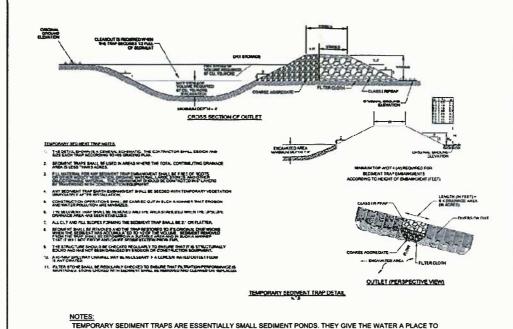
LEVEL SPREADER DETAIL



TRIPLE STACK FILTER SOCK SEDIMENT TRAP

THIS CONTROL CONSISTS OF TYPICAL SILT FENCE, SUPER SILT FENCE, OR FILTER SOXX. THIS CONTROL WILL BE INSTALLED AS DESCRIBED IN THE PREVIOUS SECTIONS. THIS CONTROL WILL TYPICALLY BE USED WHEN WETLANDS OR STREAMS ARE LOCATED WITHIN 100 FEET OF THE DISTURBED AREA.

SUPPLEMENTAL 404 CWA BMP CONTROLS



TEMPORARY SEDIMENT TRAP

POOL AND SLOW DOWN THIS REDUCES THE CHANCES OF ADDITIONAL EROSION WHILE ALLOWING ANY SEDIMENT

IN THE WATER TO SETTLE OUT. THE OUTLET IS DESIGNED OUT OF GRAVELS OF DIFFERENT DIMENSIONS WHICH

ON MOST LOCATIONS PROJECT OWNER WILL ALSO CONSTRUCT EROSION AND SEDIMENT (E&S) CONTROLS ABOVE AND BEYOND THE EAS CONTROLS LISTED ON THE PLAN SHEETS. THESE CONTROLS WILL BE CATEGORIZED AS PHASE I, PHASE II, AND PHASE III CONTROLS. THESE CONTROLS WILL BE INSTALLED TO BOTH PROVIDE EXTRA E&S PROTECTION, AND TO ELIMINATE THE CHANCES OF MATERIALS SUCH AS SOIL OR GRAVEL BEING PLACED IN A STREAM OR WETLAND. THE SITE PLANS AND DELINEATIONS ARE REVIEWED AND THESE CONTROLS ARE SPECIFIED IN PROJECT OWNER CONSTRUCTION RELEASE WHICH IS SENT OUT JUST PRIOR TO CONSTRUCTION BEGINNING. THE PHASE I, II, AND III CONTROLS WILL BE CONSTRUCTED AS



PHASE I:
THIS IS ESSENTIALLY ORANGE SAFETY FENCE LIKE SHOWN ABOVE. THIS MEASURE IS PUT IN PLACE TO LET CONTRACTORS KNOW THAT NO WORK IS TAKE PLACE BEYOND THIS POINT. THIS CONTROL IS TYPICALLY UTILIZED WHEN THERE IS A WETLAND OR STREAM LOCATED IN THE AREA BUT NOT WITHIN APPROXIMATELY 100 FEET OF THE DISTURBANCE.





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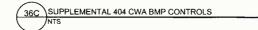
PROJECT NO. 20162247 SSUE DATE 07-29-2016 CURRENT REVISION DESIGNED BY DRAWN BY CHECKED BY APPROVED BY

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PHASE III:
THIS CONTROL CONSISTS OF METAL Q-DECKING WHICH IS STOOD ON ITS EDGE AND SECURED TO METAL

POSTS. THIS CONTROL IS USE TO PREVENT SOILS OR GRAVELS FROM ENTERING STREAMS OR WETLANDS DURING CONSTRUCTION. THE DECKING CAN BE BURIED OR USED IN CONJUNCTION WITH OTHER E&S METHODS. THIS CONTROL IS USED IN AREAS WHERE STREAMS OR WETLANDS ARE WITHIN APPROXIMATELY SO FEET OF THE DISTURBED AREA. IF THE METAL DECKING IS BURIED NO OTHER E&S CONTROLS ARE REQUIRED, BUT IF THE DECKING IS PLACED ON TOP OF THE GROUND SURFACE AND ADDITIONAL E&S CONTROL SUCH AS SILT FENCE OR SILT SOXX WILL BE USED TO PROTECT THE GAPS BETWEEN THE BOTTOM OF THE DECKING AND THE UNEVEN GROUND SURFACE.

*NOTE THAT THE DISTANCES MENTIONED IN THE PHASE I, II, AND III CONTROLS ARE A





GUIDELINE NOT A RULE FOR THE DECISION OF WHEN AND WHERE TO USE THESE

DEFINITIONS

DEFINITIONS:

RIP RAP - LOOSE STONE USED TO FORM A FOUNDATION FOR A BREAKWATER OR OTHER STRUCTURE. THIS STONE IS TYPICALLY 3 INCHES OR GREATER IN DIAMETER FILTER CLOTH - TYPICALLY TYPAR OR ANOTHER SUCH MATERIAL (USUALLY WOVEN)

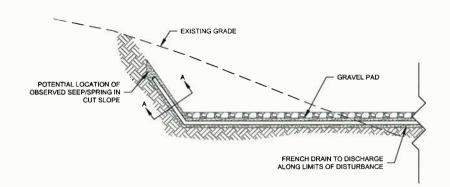
AGGREGATE - TERM USED TO IDENTIFY ANY TYPE SOLID DENSE MATERIAL USED DURING

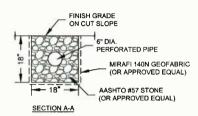
CLASS 1 RIP RAP - TYPICAL RIP RAP WITH STONES OF A DIAMETER BETWEEN 8 AND

WHICH IS DESIGNED TO ALLOW WATER TO FLOW BUT RETAIN SEDIMENT.

CONSTRUCTION TYPICALLY GRAVELS, SANDS, AND STONES.

EMBANKMENT - A WALL OR BANK OF EARTH OR STONE.

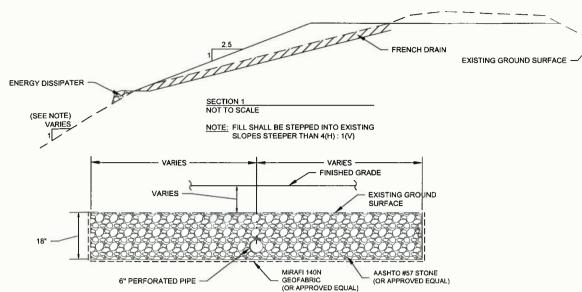




NOTE:

IF EVIDENCE OF A SEEP/SPRING IN A CUT SLOPE IS OBSERVED, THE CONTRACTOR SHOULD INSTALL A FRENCH DRAIN PER DETAIL 36 ABOVE.





NOTES:

- 1. WHERE SPRINGS OR SEEPS ARE ENCOUNTERED DURING CONSTRUCTION, DRAINABLE FILL AND PERFORATED PIPES (FRENCH DRAINS) SHOULD BE INSTALLED TO PROVIDE A DRAINAGE PATH FOR SEEPAGE FROM THE EXISTING SLOPE.
- 2. THE FRENCH DRAIN SHOULD CONSIST OF A 6 INCH DIAMETER PERFORATED PIPE SURROUNDED BY DRAINABLE FILL, INSTALLED IN AN 18 INCH DEEP TRENCH ALONG THE EXISTING DRAINAGE FEATURE OR SEEP. PRIOR TO DRAINABLE FILL PLACEMENT, THE TRENCH SHOULD BE LINED WITH A LAYER OF GEOFABRIC SUCH AS MIRAFI 140N, OR APPROVED EQUAL, WITH SUFFICIENT OVERLAP TO PROVIDE AN ENVELOP AROUND THE PIPE TRENCH TO PREVENT THE MIGRATION OF FINES INTO THE FRENCH DRAIN.
- 3. THE FRENCH DRAIN SHOULD DAYLIGHT BEYOND THE TOE OR SIDE OF THE SLOPE AND EXTEND UP TO THE CREST OF THE SLOPE TO FACILITATE DRAINAGE THROUGH THE FILL SECTION. THE AS-BUILT WIDTH OF THE FRENCH DRAIN SHOULD BE A FUNCTION OF THE WIDTH OF THE SPRING, SEEP OR DRAINAGE FEATURE OBSERVED DURING CONSTRUCTION.
- 4.THE FRENCH DRAIN SHOULD BE CONSTRUCTED TO SPAN THE ENTIRE WIDTH OF THE OBSERVED SPRING OR SEEP.





NOTES:

A BONDED FIBER MATRIX (BMF) IS AN EFFECTIVE METHOD OF STABILIZING STEEP SLOPES WHEN USED PROPERLY. BMFs MAKE USE OF A CROSS-LINKED HYDROCOLLOID TACKIFIER TO BOND THERMALLY PROCESSED WOOD FIBERS. APPLICATION RATES VARY ACCORDING TO SITE CONDITIONS, FOR SLOPES UP TO 3H-1V THE BFM HOULD BE APPLIED AT A RATE OF 3,000 LB/ACRE. STEEPER SLOPES MAT NEED AS MUCH AS 4,000 LB/ACRE.

BFMs SHOULD ONLY BE USED WHEN NO RAIN IS FORECASTED FOR AT LEAST 48 HOURS FOLLOWING THE APPLICATION. THIS IS TO ALLOW THE TACKIFIER SUFFICIENT TIME TO CURE PROPERLY. ONCE PROPERLY APPLIED, A BFM IS TYPICALLY 90% EFFECTIVE IN PREVENTING ACCELERATED EROSION. BFMS SHOULD NOT BE APPLIED BETWEEN SEPTEMBER 30 AND APRIL 1.

A POLYMER STABILIZED FIBER MATRIX (PSFM) CAN ALSO BE AN EFFECTIVE METHOD OF STABILIZING STEEP SLOPES WHEN USED PROPERTY. PSFMs MAKE USE OF A LINEAR SOIL STABILIZING TACKIFIER THAT WORKS DIRECTLY ON SOIL TO MAINTAIN SOIL STRUCTURE, MAINTAIN PORE SPACE CAPACITY AND FLOCCULATE DISLOGGED SEDIMENT THAT WILL SIGNIFICANTLY REDUCE RUNOFF TURBIDITY. PROPERLY APPLIED, A PSFM MAY BE AS MUCH AS 99% EFFECTIVE.

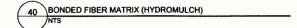
Typical Polymer Stabilized Fiber Matrix Application Rates									
faximum Rainfail of ≤ 20"									
SLOPE	6:1	5:1	4:1	3:1	2:1	1.5:1	1:1		
ioil Stabilizer gals/acre)	4	5	6	7	8	9	10		
iber ib/acre)	1.500	1,500	1.500	1.800	2.000	2.500	3.000		

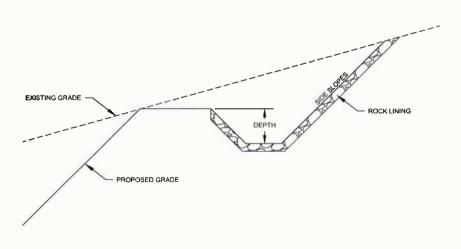
Maximum Rainfall of > 20" and for Site Winterization									
SLOPE	≤5:1	4:1	≥3:1						
Soil Stabilizer (gals/acre)	6	8	10						
Fiber (lb/acre)	2,000	2,500	3,000						

NOTES:

UNLIKE ROLLED BLANKETS, THERE IS NO NEED TO SMOOTH THE SLOPE PRIOR TO UNLIKE ROLLED BLANKETS, THERE IS NO NEED TO SMOOTH THE SLUPE PRIOR TO APPLICATION OF HYDRAULICALLY APPLIED BLANKETS. IN FACT SOME ROUGHENING OF THE SURFACE, EITHER NATURAL OR MECHANICALLY INDUCED, IS PREFERABLE. HOWEVER, LARGE ROCKS, THOSE S 9 INCHES, AND EXISTING RILLS SHOULD BE REMOVED PRIOR TO APPLICATION. TRACKING OR GROOVING OF SLOPES SHOULD BE CONSIDERED TO SLOW WATER FLOWS DURING A STORK EVENT. SLOPE INTERRUPTION DEVICES SUCH AS STAR STEP GRADING OR BENCHING SHOULD BE APPLIED PRIOR TO THE APPLICATION. MIXING AND ARE ARE CATTOR TO STATE SHOULD BE CALL OF THE APPLICATION. AND APPLICATION RATES SHOULD FOLLOW MANUFACTURER'S RECOMMENDATIONS.

HYDRAULICALLY APPLIED BLANKETS ARE TYPICALLY APPLIED IN TWO STAGES. UNLESS SPECIFICALLY RECOMMENDED TO BE APPLIED IN ONE APPLICATION BY THE MANUFACTURER, THE SEED MIXTURE AND SOIL AMENDMENTS SHOULD BE APPLIED FIRST. IF THE SEED IS APPLIED AT THE SAME TIME AS THE HYDRAULICALLY APPLIED BLANKET, THE BONDED FIBERS MAY KEEP THE SEED FROM MAKING SUFFICIENT CONTACT WITH THE SOIL TO GERMINATE. AFTER THE SEED MIXTURE IS APPLIED, THE BFM, FGM, OR PSFM SHOULD BE SPRAYED OVER THE AREA AT THE REQUIRED APPLICATION RATE. (SEE ABOVE TABLES)





NOTE:

DRAINAGE CHANNEL DIMENSIONS AND LINING WILL BE DETERMINED BY ENGINEER AS APPLICABLE.

TYPICAL ROCK LINED CHANNEL



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SHEET ADJUST YOUR SCALES ACCORDINGLY

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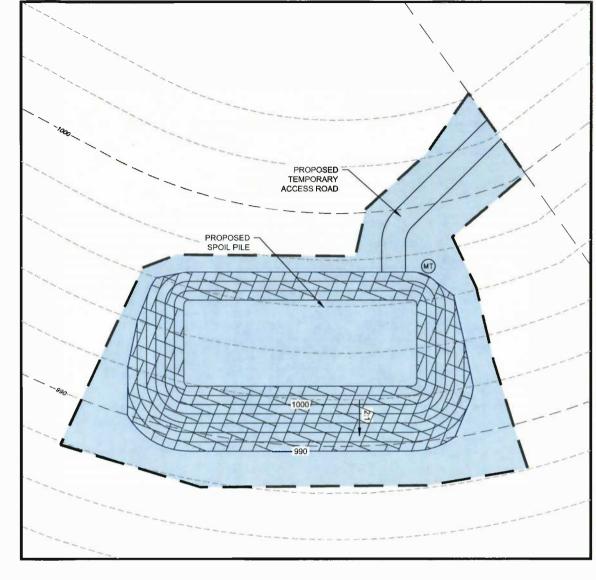
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TYPICAL OFFSITE SPOIL PILE **EROSION & SEDIMENT CONTROL DETAIL** NOT TO SCALE PROPOSED TEMPORARY ACCESS ROAD PROPOSED SPOIL PILE PROPOSED LOD -- PROPOSED SUPER SILT FENCE

TYPICAL OFFSITE SPOIL PILE POST CONSTRUCTION BMP DETAIL

NOT TO SCALE



EXISTING INTERMEDIATE CONTOUR (2')

PROPOSED LIMIT OF DISTURBANCE

PROPOSED MAJOR CONTOUR (10')

PROPOSED MINOR CONTOUR (2')

PROPOSED BROAD BASED DIP - PROPOSED SUPER SILT FENCE

EROSION CONTROL BLANKET

LIMIT OF CONSTRUCTION AND DISTURBANCE

PROPOSED STORM DRAINAGE PIPE

PROPOSED TRIPLE STACKED FILTER SOCK

PROPOSED ROCK CONSTRUCTION ENTRANCE





Signed By: TROY DANIEL # 20043

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OFFSITE SPOIL PILE DETAIL

EIBS CAMP ROAD IMPROVEMENTS NEW MILTON DISTRICT, DODDRIDGE COUNTY WEST VIRGINIA

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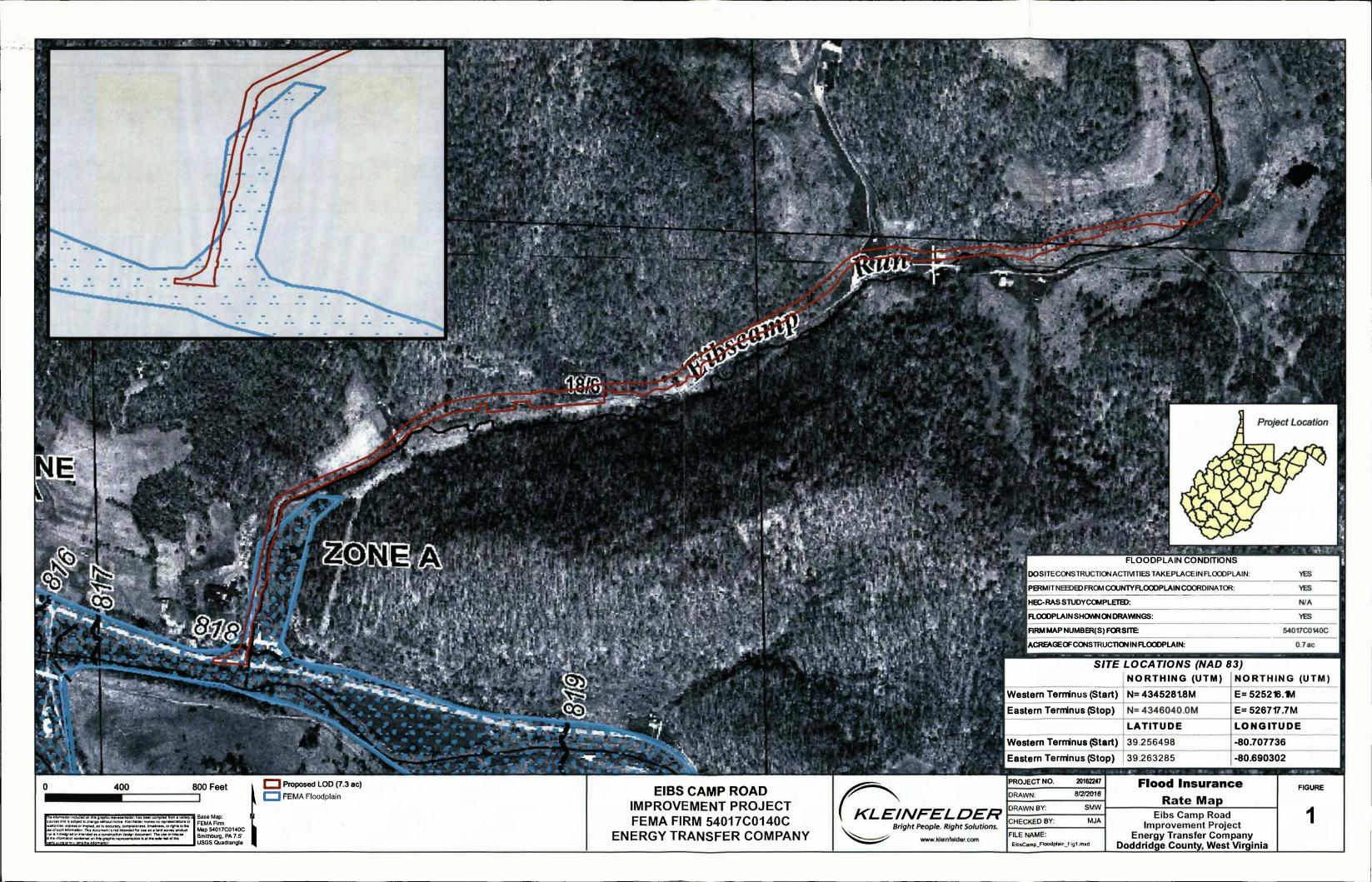
SPOIL PILE SHALL NOT EXCEED 50 VERTICAL FEET

• FILL SLOPES OF 2:1

TYPICAL OFF SITE SPOIL PILE PROFILE PROPOSED SPOIL PILE EXISTING GROUND

LEGEND

ATTACHMENT C FLOOD INSURANCE RATE MAP



ATTACHMENT D REQUIRED PERMITS AND STATUS

Attachment D Eibs Camp Road Improvement Project Required Permits and Status

Agency	Type of Approval	Identification Number	Date Applied	Date Approved
USFWS	Section 7	N/A	7/22/2016	Pending
WVDNR	Section 7	N/A	7/22/2016	Pending
WVDNR - OLS	Right of Entry Agreement	TBD	Pending	Pending
Doddridge County Floodplain Coordinator	Floodplain Approval	TBD	Pending	Pending
WVDEP	General Water Pollution Control Permit	WVR310728	7/29/2016	Pending
ACOE	Nationwide 14 Permit	TBD	Pending	Pending
WVSHPO	Section 106	TBD	Submitted	Pending
WVDOH	Driveway Permit	TBD	Pending	Pending

ATTACHMENT E WEST VIRGINIA FLOOD TOOL MAP

Meathouse Fork Crossing



User Notes:

Eibs Camp Road Improvement Project WV Flood Tool

Flood Hazard Zone



Flood Point of Interest

The online 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. To obtain more detailed information in areas where Base Flood Elevations have been determined, users are encouraged to consult the latest Flood Profile data contained in the official flood insurance study. These studies are available online at www.msc.fema.gov. WV Flood Tool (http://www.MapWV.gov/flood) is supported by FEMA, WV NFIP Office, and WV GIS Technical Center.

Map created on August 3, 2016

Flood Hazard Area:

Flood Hazard Area: Location is WITHIN the FEMA 100-year floodplain.

FEMA Issued Flood Map: 54017C0140C

Little Musringum-Middle Island (5030201) Watershed (HUC8):

Elevation: About 812 ft

Location (long, lat): (80.707754 W,39.256393 N)

Location (UTM 17N): (525215, 4345269)

Doddridge

CRS Information: N/A

Parcel Number:

Contacts: