RFQ DEP16068 EXPRESSION OF INTEREST TO PROVIDE PROFESSIONAL ENGINEERING SERVICES FOR LAKE LYNN COMPLEX

SUBMITTED TO: WVDEP – OFFICE OF AML & R

SUBMITTED BY:
CIVIL TECH ENGINEERING INC.
300A PRESTIGE DRIVE
HURRICANE, WV 25526

Phone: 304-757-8094 Fax: 304-757-8095 civiltech1@frontier.com

> 01/24/13 10:08:19 AM West Virginia Purchasing Division

DATE SUBMITTED: JANUARY 24, 2013

PHOTO: SUNRISE SANITATION MINE DRAIN

CIVIL TECH ENGINEERING, INC.

300A Prestige Drive Hurricane, West Virginia 25526 Phone: 304-757-8094 Fax: 304-757-8095 civiltech1@frontier.com

January 24, 2013

Department of Administration
Purchasing Division
2019 Washington Street East
P.O. Box 50130
Charleston, West Virginia 25305-0130

Subject:

Expression of Interest for RFQ - DEP16068

Lake Lynn Complex Design Monongalia County, West Virginia Civil Tech Proposal No. P12525

To Whom it May Concern:

CIVIL TECH ENGINEERING INC. is pleased to present this EOI for the subject RFQ. This EOI has been prepared to illustrate our recent and pertinent experience with AML and civil design projects. Important and pertinent AML experience is summarized below:

45 years of combined experience with AML projects.
15 recent AML projects since 2008.
Constructed AML projects: Thomas Sunrise Sanitation Mine Drainage and Blowout
Projects, Prospect Valley Highwall No. 4, Cambria Portals, Zebb's Creek HW#2,
Winifrede (McFann) Portals, Birds Creek Portals, and Nellis (Smith) Drainage Project.
AML design projects complete and ready for construction: Douglas WL Extension, Stowe
Refuse Piles, Ridenour Complex, and Braeholm Portals.
Witcher Creek Portals and Refuse is in the final design and permitting phase.
Hawkinberry Hollow Portals project is under construction.
Conceptual engineering was completed and preliminary engineering started for the
Pines Country Club (Ponds) Subsidence Project. (Project Cancelled due to cost).

We believe our past and recent experience makes our company uniquely qualified for <u>AML design projects</u>. We look forward to meeting with the selection committee to discuss the project and our qualifications.

Very truly yours,

CIVIL TECH ENGINEERING INC.

My Z)

Mark E. Pennington MS, PE Principal Engineer

CIVIL TECH ENGINEERING, INC. 300A Prestige Drive Hurricane, West Virginia 25526 Phone: 304-757-8094 Fax: 304-757-8095 civiltech1@frontier.com

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State of West Virginia Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

Solicitation [

NUMBER

PAGE

DEP16068

ADDRESS CORRESPONDENCE TO ATTENTION OF:

FRANK WHITTAKER 804-558-2316

VENDOR

RFQ COPY
TYPE NAME/ADDRESS HERE
Civil Tech Engineering Inc.

300A Prestige Drive

Hurricane, WV 25526

ENVIRONMENTAL PROTECTION
DEPARTMENT OF
OFFICE OF AML&R
601 57TH STREET SE
CHARLESTON, WV
25304 304-926-0499

DATE PRINTED 12/19/2012 BID OPENING DATE: 01/24/2013 BID OPENING TIME CAT. LINE QUANTITY UOP ITEM NUMBER UNIT PRICE AMOUNT 0001 JB 906-29 1 JAKE LYNN COMPLEX DESIGN EXPRESSION OF INTEREST THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE LAKE LYNN COMPLEX PROJECT IN MONONGALIA COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS. THIS IS THE END OF REO DEP16068 ***** TOTAL: IGNATURE TELEPHONE 304-757-8094 1/24/13 FEIN President §5-0757403 ADDRESS CHANGES TO BE NOTED ABOVE

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- 1. Table of Contents
- 2. Section One: General Information
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- 4. Section Three: Project Specifications
- 5. Section Four: Vendor Proposal, Evaluation, and Award
- 6. Section Five: Terms and Conditions
- 7. Certification and Signature Page

SECTION ONE: GENERAL INFORMATION

- PURPOSE: The Acquisition and Contract Administration Section of the Office of West Virginia State Purchasing Division (Purchasing Division) is soliciting Expression(s) of Interest (EOI) for the West Virginia Department of Environmental Protection, Office of Abandoned Mine Lands and Reclamation (WVDEP/AML), from qualified firms (Vendors) to provide architectural/engineering services as defined herein.
- 2. PROJECT: The mission or purpose of the project for which bids are being solicited is to provide design services for the following:

LAKE LYNN COMPLEX:

Design of drainage conveyances. Installation of mine seals. Subsidence area reclamation. Highwall reclamation. Re-vegetation of disturbed areas.

3. SCHEDULE OF EVENTS:

Release of the EOI	12/21/2012
Addendum Issued	
Expressions of Interest Opening Date	01/24/2013
Estimated Date for Interviews (wk of ?)	TBD

SECTION TWO: INSTRUCTIONS TO VENDORS SUBMITTING BIDS

Instructions begin on the next page.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

- REVIEW DOCUMENTS THOROUGHLY: The attached documents contain a solicitation for bids.
 Please read these instructions and all documents attached in their entirety. These instructions provide
 critical information about requirements that if overlooked could lead to disqualification of a Vendor's
 bid. All bids must be submitted in accordance with the provisions contained in these instructions and
 the Solicitation. Failure to do so may result in disqualification of Vendor's bid.
- 2. MANDATORY TERMS: The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. PREBID MEETING: The item identified below shall apply to this Solicitation.

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required

information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. VENDOR QUESTION DEADLINE: Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are non-binding.

Question Submission Deadline:

Submit Questions to:

Frank Whittaker

2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305
Fax: 304-558-4115
Email: frank.m.whittaker@wv.gov

- 5. VERBAL COMMUNICATION: Any verbal communication between the Vendor and any State personnel is not binding, including that made at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.
- 6. BID SUBMISSION: All bids must be signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The bid delivery address is:

Department of Administration, Purchasing Division 2019 Washington Street East P.O. Box 50130, Charleston, WV 25305-0130

	considered:	
	SEALED BID	
	BUYER:	
	SOLICITATION NO.:	
	In the event that Vendor is responding to a request	for proposal, the Vendor shall submit one original convenience copies of each to the Purchasing the Vendor should identify the bid type as either a
	BID TYPE: [Tec	
7.	Houtified below on the date and time listed below	to this Solicitation will be opened at the location. Delivery of a bid after the bid opening date and time of this Solicitation, a bid is considered delivered when time clock.
	Bid Opening Date and Time:	4/2013 at 1:30 PM
	2019 P.O.	ntment of Administration, Purchasing Division Washington Street East Box 50130, leston, WV 25305-0130
8.	an official written addendum issued by the Purch	anges or revisions to this Solicitation will be made by asing Division. Vendor should acknowledge receipt of leting an Addendum Acknowledgment Form, a copy of ledge addenda may result in bid disqualification. The d with the bid to expedite document processing.

9. BID FORMATTING: Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result

The bid should contain the information listed below on the face of the envelope or the bid may not be

in bid disqualification.

SECTION THREE: PROJECT SPECIFICATIONS

 Location: Agency is located at 209 South Main Street, Philippi, WV 26416 and the Project is located in Monongalia County, WV.

Directions to Site: From Philippi, travel to the Morgantown area via Interstate 79 North and Interstate 68 East. Exit Interstate 68 at the Pierpont Road exit (Exit #7). At the stop sign, turn left and proceeds to US 119 North. From US 119 travel 3.0 miles and turn right onto the Stewartstown Road (CR 65). Travel 3.1 miles, past the Forks of the Cheat Church and Winery, then turn left and travel ~200' to the site on the left.

Directions to Site 2:

From site 1, proceed back to Stewartstown Road and turn left. Travel 0.3 mile and turn left (mailbox 3464 Stewartstown Road is on the right) onto a stone based road. Travel 0.2 mile turn right and travel \sim 300 feet to the old haul road on the left. (The haul road is beside a new two story - grey sided home) Follow the haul road past the pond to the site.

Directions to Site 3:

Proceed back to Stewartstown Road and turn left. Travel 0.1 mile to Woodlands housing development sign. Bear left at the sign and continue for 0.1 mile to the site on the left, above the road.

2. Background: Firms are to be licensed Architectural/Engineering Firms (A/E) and should be familiar with, and have a successful track record of design of similar projects. The anticipated contract will be for "full-service" A/E design. Aspects of the design are to include, but not be limited to, Civil, Structural, Geological and Hydrological.

The successful A/E will be responsible for Design of the following:

Design of drainage conveyances. Installation of mine seals. Refuse reclamation. Highwall reclamation. Re-vegetation of disturbed areas.

Preliminary design documents will be due 60 days from the issuance of the Purchase Order.

3. Qualifications and Experience: Vendors will provide information regarding its employees, such as staff qualifications and experience in completing similar projects; references; copies of any staff certifications or degrees applicable to this project; proposed staffing plan; descriptions of past projects completed entailing the location of the project, project manager name and contact information, type of project, and what the project goals and objectives where and how they were met.

The response should be presented in concise format which defines the corporation history and the experience, qualifications, and performance data of the firm's staff as requested by the AML Consultant Qualification Questionnaire (CQQ), Attachment "B" and the AML and Related Project Experience Matrix (RPEM), Attachment "C".

AML Consultant Qualification Questionnaire (CQQ) must be completed to be eligible (See Attachment "B").

AML and Related Project Experience Matrix (RPEM) must also be completed to be eligible (See Attachment "C").

Electronic copies of the above referenced documents Attachment "B" and Attachment "C" are available online for registered vendors at: http://www.state.wv.us/admin/purchase/newbul.htm.

4. Project and Goals: The project goals and objectives are:

Develop drawings and specifications to remediate an abandoned mine land problem area.

- 5. Oral Presentations (Agency Option): The Agency has the option of requiring oral presentations of all Vendors participating in the EOI process. If this option is exercised, it would be listed in the Schedule of Events (Section 1.3) of this EOI. During oral presentations, Vendors may not alter or add to their submitted proposal, but only clarify information. A description of the materials and information to be presented is provided below:
 - 5.1. Materials and Information Required at Oral Presentation:

"Evaluation and Award Process" will be conducted with the three firms selected as the most qualified by the WVDEP Selection Committee. The Committee will schedule the interviews.

The format for the interviews will be a 15-30 minute PowerPoint presentation consisting, at a minimum, of the following:

- Corporate/personnel experience as it relates to the project or projects
- Proposed project management plan
- Key personnel available for the proposed work
- Proposed subcontractors (mapping, geotechnical, etc.)
- Product quality control
- Project cost control

SECTION FOUR: VENDOR PROPOSAL, EVALUATION, & AWARD

1. **Economy of Preparation:** EOI's should be prepared simply and economically, providing a straightforward, concise description of firm's abilities to satisfy the requirements and goals and objectives of the EOI. Emphasis should be placed on completeness and clarity of content. The response sections should be labeled for ease of evaluation.

All responses should be submitted in a loose-leaf, three ring binder. Submit one original, one convenience copy and one copy on CD.

- 2. BIDS MUST NOT CONTAIN PRICE QUOTATIONS: The State shall select the best value solution according to §5G-1-3 of the West Virginia State Code. In accordance with the Code requirements, no "price" or "fee" information is requested or permitted in the bid response.
- 3. Evaluation and Award Process: Expressions of Interest for projects estimated to cost \$250,000 or more will be evaluated and awarded in accordance with West Virginia Code §5G-1-3. That Code section requires the following:
 - 3.1. Required Elements of EOI Response: The director of purchasing shall encourage such firms engaged in the lawful practice of the profession to submit an expression of interest, which shall include a statement of qualifications, and performance data and may include anticipated concepts and proposed methods of approach to the project.
 - 3.2. **Public Advertisement:** All EOI requests shall be announced by public notice published as a Class II legal advertisement in compliance with the provisions of West Virginia Code §59-3-1 et seq.
 - 3.3. Selection Committee Evaluation & Negotiation: A committee comprised of three to five representatives of the agency initiating the request shall:

- 3.3.1. Evaluate the statements of qualifications and performance data and other material submitted by the interested firms and select three firms which in their opinion are the best qualified to perform the desired service.
- 3.3.2. Conduct interviews with each firm selected and the conduct discussions regarding anticipated concepts and the proposed methods of approach to the assignment.
- 3.3.3. Rank in order of preference no less than three professional firms deemed to be the most highly qualified to provide the services required, and shall commence scope of service and price negotiations with the highest qualified professional firm.
- 3.3.4. Should the agency be unable to negotiate a satisfactory contract with the professional firm considered to be the most qualified, at a fee determined to be fair and reasonable, price negotiations with the firm of second choice shall commence. Failing accord with the second most qualified professional firm, the committee shall undertake price negotiations with the third most qualified professional firm.
- 3.3.5. Should the agency be unable to negotiate a satisfactory contract with any of the selected professional firms, it shall select additional professional firms in order of their competence and qualifications and it shall continue negotiations in accordance with this section until an agreement is reached.

3.4. **Vendor Ranking:** All evaluation criteria is defined in the Procurement Specifications section and based on a 100 point total score.

Points shall be assigned based upon the Vendor's response to the evaluation criteria as follows:

A. WV Registered Professional Engineers (Civil or Mining)
In the Primary Office:

20 points

B. Reclamation Engineering design experience of the Primary Office's WVRPE as it relates to the specific project problem Areas:

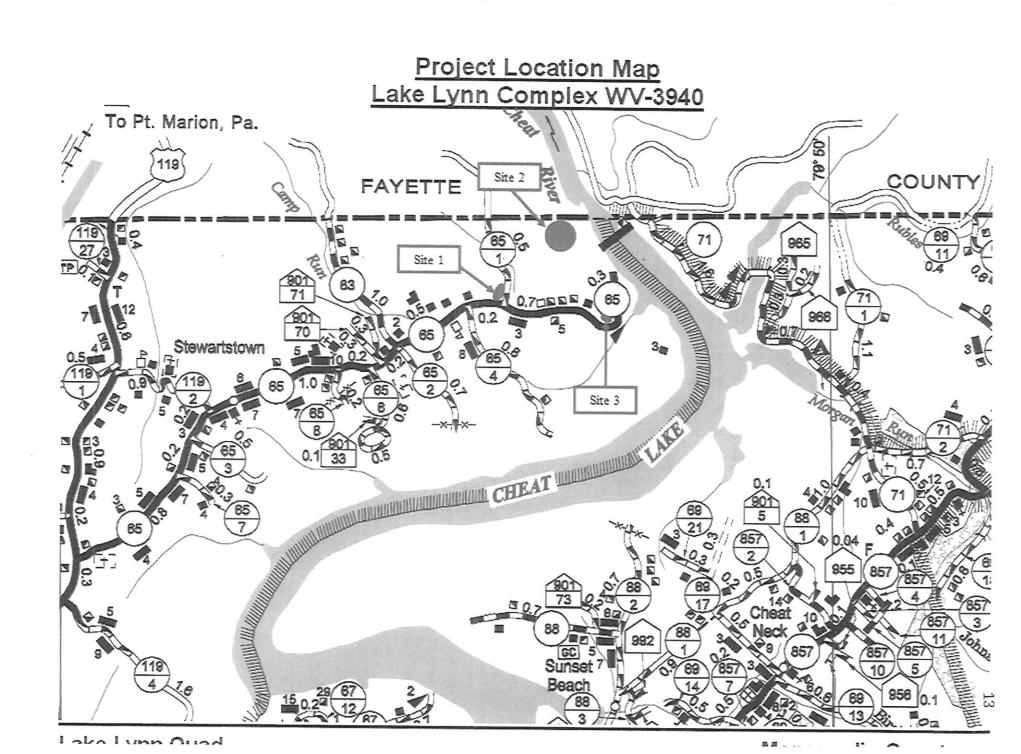
25 points

C. Available WV-AML Design Teams within the Primary office (A Design team should consist of one Project Engineer (Civil or Mining), one CAD person and availability of other support personnel a required by the particular project):

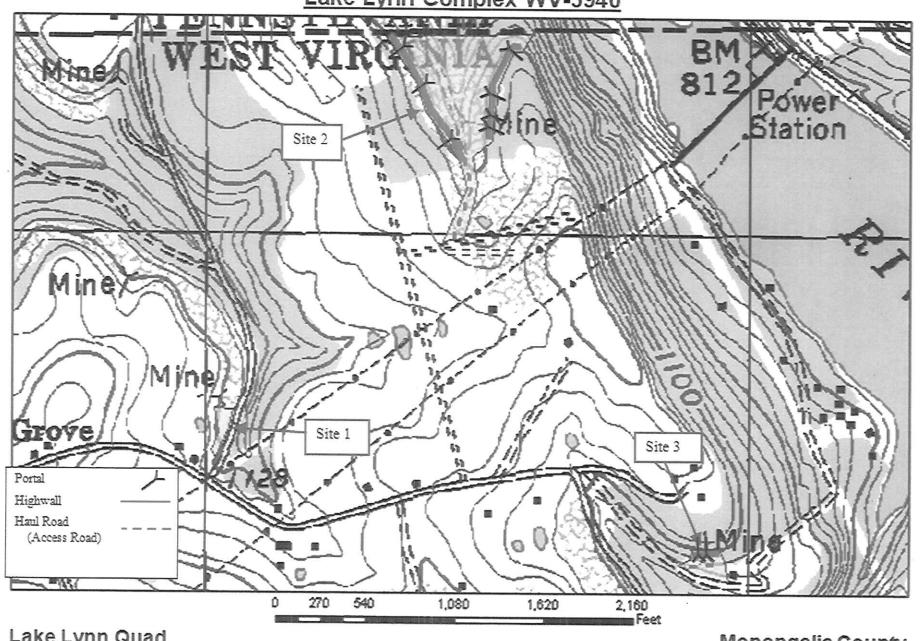
20 points

D. The Oral Interview (See Section 5.1 under Section 3 of this EOI):

35 points



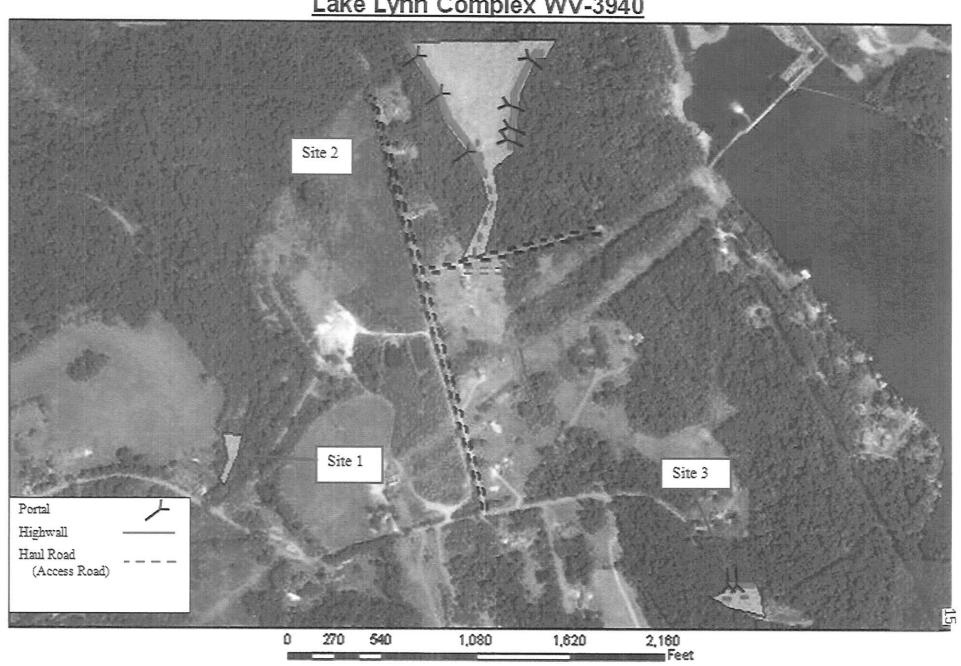
Project Location Map Lake Lynn Complex WV-3940



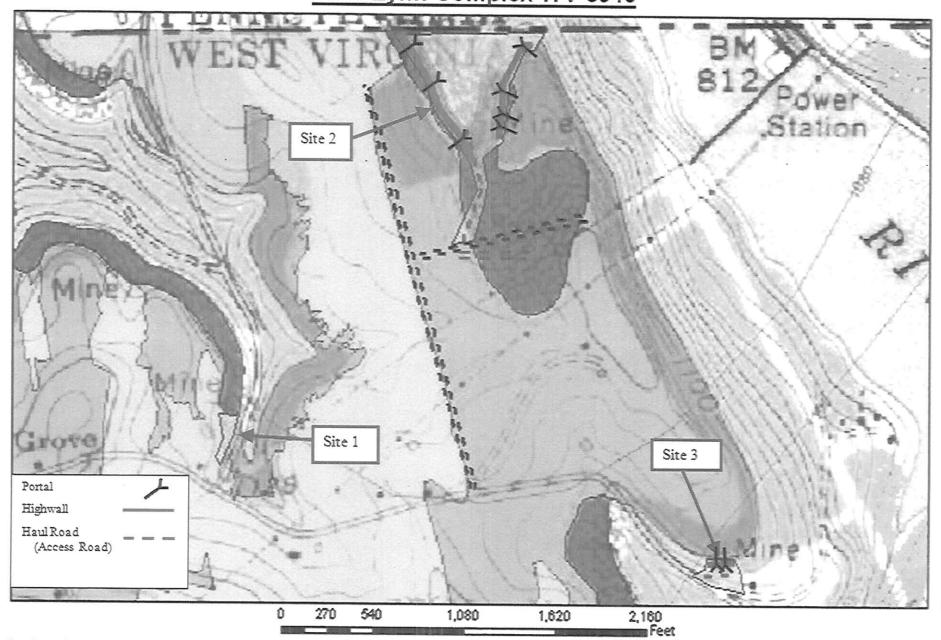
Lake Lynn Quad

Monongalia County

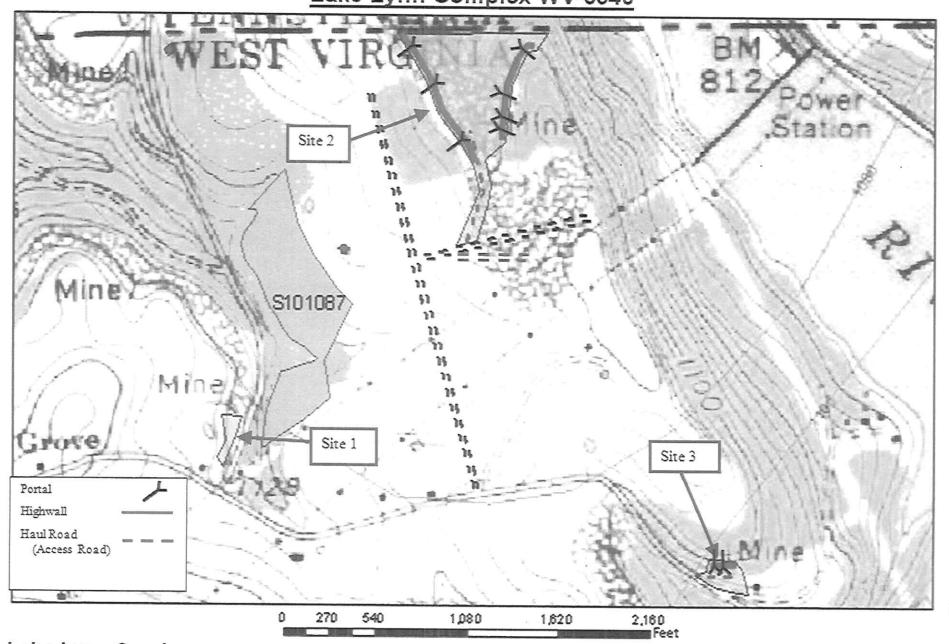
Project Location Map Lake Lynn Complex WV-3940



Project Mining Map Lake Lynn Complex WV-3940



Permit Boundary Map Lake Lynn Complex WV-3940



		ENT OF ENVIRONMENTA				
		IDENTIAL QUALIFICAT		IONNAIRE	Attachment "I	В″
PROJECT NAME Lake Lynn Complex (DEP16068)						
	January 24, 201		55-075740			
1. FIRM NAME		BUSINESS ADDRESS 3. FORMER FIRM NAME				
CIVIL TECH ENGINEERING INC.	300A Prestige D: Hurricane, West	rive Virginia 25526	1	A		
4. HOME OFFICE TELEPHONE 5. ESTABL	ISHED (YEAR)	6. TYPE OWNERSHIP		6a. WV REGISTERED	D DBE	
304-757-8094 1996		Individual Corpor	ation	(Disadvantaged Bu		
		Partnership Joint-	Venture	Enterprise) YES	NO XX	
7. PRIMARY AML DESIGN OFFICE: ADDRESS/	TELEPHONE/ PERSON	N IN CHARGE/ NO. AMI, DE	SIGN PERSON		NO XX	
300A Prestige Drive, Hurricane, WV						
8. NAMES OF PRINCIPAL OFFICERS OR MEMBE	RS OF FIRM -	8a. NAME, TITLE, & TEI	EPHONE NUM	BER - OTHER PRINCI	PALS	
Mark E. Pennington MS, PE Jennifer E. Pennington PE		NA				
9. PERSONNEL BY DISCIPLINE	Section and the section of the secti	274.2				_
9. PERSONNEL BI DISCIPLINE						
— ADMINISTRATIVE — ECOLOG		— LANDSCAPE ARCHI	TECTS	- STRUCTURAL ENG	GINEERS	
- ARCHITECTS - ECONOM	- MECHANICAL ENGINEERS 1 SURVEYORS					
1 774770	1 DAVIED CAMERINA I TOMO			- TRAFFIC ENGINE		
Z CADD OPERATORS	DD OPERATORS			OTHER (Technic	clans)	
- CHEMICAL ENGINEERS - ESTIMATORS - PLANNERS: URBAN/REGIONAL 3 CIVIL ENGINEERS 1 GEOLOGISTS - SANITARY ENGINEERS 12 TOTAL PERSONNEL				L PERSONNEL		
4 CONSTRUCTION INSPECTORS — HISTORIANS SOILS ENGINEERS						
- DESIGNERS - HYDROLOGISTS - SPECIFICATION - SPECIFICATION						
— DESIGNERS — WRITERS — DRAFTSMEN						
TOTAL NUMBER OF WV REGISTERED PRO			3			
*RPEs other than Civil and Mining supervise and perform this type o		pporting documentation	that qualif	ties them to		
supervise and periorm this type o	I WOIK.					
10. HAS THIS JOINT-VENTURE WORKED TOGET	HER BEFORE?	YES NO NA		Comments to the control of the contr	1188-0-3	
11. OUTSIDE KEY CONSULTANTS/SUB-CONSULT Questionnaire".	ANTS ANTICIPATED	TO BE USED. Attach "A	ML Consult	ant Confidential Qu	ualification	

NAME AND ADDRESS	CORPOLATION		
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE	
Novel Geo-Environmental PLLC	Drilling and Laboratory Soils Testing	ACC BOS	
806 B Street		X Yes	
St. Albans, WV 25177		5 B	
		No	
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE	
Triad Engineering Inc.	Drilling and Laboratory Soils Testing		
219 Hartman Run Road		X Yes	
Morgantown, WV 26505		N====0 N===============================	
		No	
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE	
Stantec	Mapping		
1 Moore Avenue		X Yes	
Buckhannon, WV 26201			
		No	
		·	
YES Description and Number of Projects: See Section A 152 AML Projects - Personnel Experience (Mark E. Pennington PE) 50+ Subsidence Claims - Corporate Experience			
NO			
B. Is your firm experienced in	Soil Analysis?		
YES Description and Number	of Projects: See Sections B.2, B.3, and	B A	
Description and Named	1500+ Projects - Corporate		
1		and reference.	
NO			
C. Is your firm experienced in	hydrology and hydraulics?	-	
YES Description and Number	of Projects: See Sections B.2, B.3, and 50+ Projects involving stor design.	B.4 m water controls and dam spillway	
NO			

D.	Does your firm produce i	ts own Aerial Photo	ography and	Develop Contour Mapping?						
	YES									
	NO XX									
E.	Is your firm experienced evaluation of aquifer de			? (Include any experience young.)	ur firm has in					
	YES Description and Number of Projects:Douglas Water line_(DEP ID#303)									
	NO									
F.	F. Is your firm experienced in Acid Mine Drainage Evaluation and Abatement Design?									
	YES Description and Nu	mber of Projects:_	Design of	Liming station and dams for C	ranberry River					
	NO									
	AL HISTORY STATEMENT OF PR t keep to essentials)	INCIPALS AND ASSOC	IATES RESPO	NSIBLE FOR AML PROJECT DESIGN	(Furnish complete					
NAME & TITL	E (Last, First, Middle Int.)			YEARS OF EXPERIENCE						
Pennington		YEARS OF AML DESIGN	EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN					
President	- Principal Engineer	16		35	EXPERIENCE: 2					

COMPANY RESPONSIBILTIES COMPANY MANAGEMENT BUSINESS DEVELOPMENT PROJECT PLANNING AND DIRECTION RECENT AND ONGOING PROJECTS THOMAS SUNRISE SANITATION - AML PROSPECT VALLEY HIGHWALL #4 - AML WINIFREDE (MCFANN) PORTALS - AML DOUGLAS WL DESIGN - AML CAMBRIA PORTALS & DESIGN - AML CAMBRIA PORTALS & DESIGN - AML BEBB'S CREEK HW #2 - AML WITCHER CREEK PORTALS - AML STOWE REFUSE PILES - AML RIDENOUR COMPLEX - AML BRAEHOLM PORTALS - AML	PROJECT RESPONSIBILITIES ENVIRONMENTAL PERMITTING TOPOGRAPHIC MAPPING HYDROLOGY AND HYDRAULICS FLOOD ASSESSMENT EROSION CONTROL STORM WATER CONTROLS SANITARY SEWER DESIGN GEOTECHNICAL ANALYSIS SUBSIDENCE ABATEMENT LANDSLIDE ANALYSIS AND DESIGN RETAINING WALL DESIGN DAM MODIFICATIONS ANNUAL DAM INSPECTIONS COMMERCIAL CIVIL SITE DEVELOPMENT CONSTRUCTION CONTRACT ADMINISTRATION			
BRAEHOLM PORTALS-AML s the former manager of the St. Albans Office of Triad Engineering and a founder of Civil Tech, Mr. Pennington has ained a broad knowledge of most civil engineering disciplines involving abandoned mine lands, storm water and erosion ontrols, dams, as well as private, industrial, and municipal projects involving topographic mapping, geotechnical nalysis, and civil site development. He has been responsible for 152 AML projects, 48 dam modification projects, and any large commercial, private, and industrial projects. Mr. Pennington has a working knowledge of AML projects including; subsidence, landslides, mine drainage/portals, erosion, shafts, burning refuse, and surface/subsurface rainage. He has served as project manager on 15 AML projects since 2008. These projects have included; the Thomas unrise Sanitation Mine Drainage Project, Prospect Valley HW #4, Cambria Portals, Winifrede Portals, Douglas WL, and itcher Creek Portals. Most of these project are complete and all have been successfully completed on time. Mr. ennington has substantial construction experience gained while administering the construction contract on over 100 rojects and while serving as the Assistant Project Manager on the USACOE Moorefield Flood Levee Project as an				
employee of Heeter Construction of Spencer, Wese EDUCATION (Degree, Year, Specialization) BSCE/1977/Civil Engineering Undergraduate Degree MSCE/1985/Soils and Foundations/WVCOG MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS American Society of Civil Engineers (ASCE) Association of State Dam Safety Officials (ASDS)	REGISTRATION (Type, Year, State) CE/1981/WV CE/1995/NC CE/1988/KY CE/1988/OH			

	In the state of th						
13. PERSONAL HISTORY STATEMENT OF PE data but keep to essentials)	INCIPALS A	ND ASSOCIATES RESPO	NSIBLE FOR AML PROJECT DESIG	N (Furnish complete			
NAME & TITLE (Last, First, Middle Int.) YEARS OF EXPERIENCE							
Pennington, Jennifer E.	YEARS OF AL	ML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN	YEARS OF DOMESTIC			
Vice President - Principal			EXPERIENCE:	WATERLINE DESIGN			
Engineer		16	24	EXPERIENCE: 0			
Brief Explanation of Responsibilitie	S						
COMPANY RESPONSIBILTIES			PROJECT RESPONSIBILITIES				
□ COMPANY MANAGEMENT □ PROJECT PLANNING AND DIRECTION	☐ COMPANY MANAGEMENT ☐ HYDROLOGY AND HYDRAULICS ☐ PROJECT PLANNING AND ☐ FLOOD ASSESSMENT						
Ms. Pennington is a multi-discipline geotechnical engineering projects in design/rehabilitation, civil site de Engineering. While with Triad, she for the analysis of the Rock Branch design engineering associated with rand Zebb's Creek. Ms. Pennington's design performance of geotechnical analysis She has expertise in the use of HEC1 Eaglepoint computer modeling softwar EDUCATION (Degree, Year, Specializat BSCE/1988/Civil Engineering Undergra	volving sulvelopment, performed Landslide ecent AML uties and , civil si , HEC2, Dane	osurface investigat storm water contro geotechnical analys Project in Kanawha projects including responsibilities at te design, dam modi ms2, Flowmaster, Hy	ion, geotechnical analysis, of s, etc. She is a former sensis for many AML projects and County. Ms. Pennington has a Thomas Sunrise Sanitation, Provide Tech include planning fication design, and hydrological formation, Prostable 5 and Arocad, SPW911, Postable 5 and Arocad, Aroc	dam ior engineer with Triad was directly responsible also been responsible for rospect Valley, Cambria, , direction, and gic/hydraulic analysis.			
MEMBERSHIP IN PROFESSIONAL ORGANIZAT	TONS		DECISIDATION / Time Very Ci	+ 2 + 2 \			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS REGISTRATION (Type, Year, State)							
American Society of Civil Engineers	(ASCE)		CE/1992/WV				
Association of State Dam Safety Offi		50)	PS/1995/WV				
13. PERSONAL HISTORY STATEMENT OF PR	TNCTPALS AL	ND ASSOCIATES PESDO	ISTRIE FOR AMI. PROJECT DESTO	N (Furnish complete			
data but keep to essentials)	L.OLLAND A	.b .lococitiino Respon	TON AM PRODUCT DESIGN	" /Idilian combiece			
NAME & TITLE (Last, First, Middle Int.)			YEARS OF EXPERIENCE				

Kessler, Robert R Geologist	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:				
			0				
Brief Explanation of Responsibilitie	s:	d					
Mr. Kessler is responsible for all geologic studies/investigations required to support engineering services for Civil Tech. Projects include mining subsidence investigations, blasting studies, and geologic studies for nearly 40 dam modifications throughout West Virginia.							
EDUCATION (Degree, Year, Specializat	ion)						
B.S Geology - 1965 - Ohio Univers Post Graduate Work - 1965 B.S Mathematics - 1980 - Universi	to 1966 - Geology - Ohio Univ	ersity					
MEMBERSHIP IN PROFESSIONAL ORGANIZAT	TONG	DECTORDANTON (Manage Value Ch	- + - \				
MEMBERSHIP IN PROFESSIONAL ORGANIZAT	IONS	REGISTRATION (Type, Year, St	ate)				
13. PERSONAL HISTORY STATEMENT OF PR	INCIDALS AND ASSOCIATES PESDO	NSTRIF FOR AMT DROTFOR DESIGN	I (Furnish complete				
data but keep to essentials)	INCIPALS AND ASSOCIATES RESPO	NOTELL FOR AME PRODUCT DESIGN	(rullish complete				
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE					
NAME & TITLE (Bast, FITSt, Middle Int.)	YEARS OF AML DESIGN EXPERIENCE:		YEARS OF DOMESTIC				
Arthur, Charles D CADD Designer		EXPERIENCE:	WATERLINE DESIGN				
& Survey Crew Party Chief	0	8	EXPERIENCE:				
			0				
Brief Explanation of Responsibilitie Senior designer responsible for dire		manageries of decise duction					
Eagle Point modeling software, surve							
as a senior designer for the followi		or mine maps and substactive.	iii. Iiiciidi iido ocived				
☐ Thomas Mine Drainage and Blowo							
☐ Prospect Valley Highwall No. 4							
☐ Winifred McFann Portals, Winif							
☐ Nellis (Smith) Drainage, Nelli	s, WV						
☐ Zebb's Creek HW#2, Barbour Cou	nty, WV						
☐ Cambria Portals, Harrison Coun	ty, WV						
☐ Hawkinberry Hollow Portals, Marion County, WV							
☐ Thomas Sewer-Stormwater Segregation Project, Thomas, WV							
☐ Thomas Stormwater Improvements, Thomas, WV							
☐ Nearly 40 dam modification projects throughout WV							
☐ Holiday Inn Express, Mineral Wells, WV							
☐ Fairfield Inn & Suites, Weirton, WV							
☐ Birds Creek Portals, Preston C	ounty, WV						
☐ Witcher Creek Portals, Kanawha County, WV							
Mr. Arthur also performs field surveying necessary to support engineering services and develop topographic mapping required for all civil project performed by our company.							

EDUCATION (Degree, Year, Specialization) Pre-blast Surveyor Training - May 2003 - WVDEP Computer-aided Drafting/1080 hours - June 2000 - Ben Franklin Career and Tech. Ed. Ctr., Dunbar, WV Welding/1,320 hours - June 1997 - Ben Franklin Career and Tech. Ed. Ctr., Dunbar, WV Welding/72 hours - Dec 1993 - Richmond Technical Center, Richmond, VA 14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE AML DESIGN SERVICES Software: ☐ Autocad Civil3D 2011 ☐ Microstation ☐ Eaglepoint 2009 ☐ HEC-1 ☐ HEC-2 ☐ HECRAS ☐ HEC-HMS ☐ Dams2 ☐ Hydrocad version 9 ☐ Flowmaster ☐ Sewercad ☐ Watercad ☐ PCstable 5 ☐ SPW911 - Pile Buck Sheet Pile Wall Design Program ☐ Word Perfect, Excel, and other office support programs. Equipment: ☐ 1 4WD Pickup ☐ 1 Jeep Grand Cherokee ☐ 4 Desktop Computers ☐ 5 Laptop Computers 4 Digital Cameras ☐ 1 HP Designjet 1050C Plotter ☐ 4 HP Deskjet Printers ☐ 1 Color Laser Printer ☐ 1 Leica TC600 Total Station ☐ 1 Leica Level ☐ Rods, prisms, tripods, targets, and survey support equipment 15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD PROJECT NAME, TYPE AND NAME AND ADDRESS OF NATURE OF YOUR FIRM'S | ESTIMATED CONSTRUCTION PERCENT COMPLETE

RESPONSIBILITY

COST

LOCATION

OWNER

Cacapon State Park Dam Modifications	Brad Leslie WVDNR Parks & Recreation Section Capitol Complex, Building 3, Room 723 Charleston, WV 25305	Permitting		\$ 1,500,000	Mapping 100% Design 100% Permitting 0% Bidding 0% Const. Monitoring 0% Contract Admin 0% Construction expected 2013/2014 season.
Witcher Creek Portals Kanawha County, WV	Jonathan Neal WVDEP-AML 254 Industrial Drive Oak Hill, WV	Subsurface In Design Permitting Bidding Construction		\$ 1,000,000	Design 60% Permitting 50% Bidding 0% Const. Monitoring 0% Construction expected 2013.
Douglas WL Extension Coketon to Douglas, WV City of Thomas Thomas, Tucker County, WV	Jonathan Holbert WVDEP-AML 601 57 ^t Street Charleston, WV 25304	Design Service Subsurface In		\$ 300,000	Design 100% Bidding 0% Const. Monitoring 0% Construction 2013.
Phase I - Units 1 & 2 Ash Handling Area Pavement Replacement Design Mt. Storm Power Station Mt. Storm, WV	Patrick W. Flaugher Dominion Energy Inc. HC 76 Box 430 Mt. Storm, WV 26739	Design Service	ces	\$ 2,000,000	Design 50% Bidding 100% Const. Monitoring 0% Construction 2013.
TOTAL NUMBER OF PROJECT	S: Four		TOTAL ESTIM	ATED CONSTRUCTION COSTS:	\$ 4,800,000

ROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CO	NSTRUCTION COST
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Thomas Sunrise Sanitation Mine Drainage Thomas, Tucker County, WV	Gregg Smith WVDEP-AML 209 South Main Street Philippi, WV 26416	\$ 250,000	2009	YES
Thomas Sunrise Sanitation Mine Blowout Thomas, Tucker County, WV	Gregg Smith WVDEP-AML 209 South Main Street Philippi, WV 26416	\$ 250,000	2009	YES
Longbranch Dam Dam Modification Pipestem State Park	Mr. Brad Leslie WV Division of Natural Resources Parks and Recreation Section Capitol Complex, Building 3, Room 723 Charleston, WV 25305	\$ 200,000	2012	YES
Berwind Dam Dam Modification Berwind WMA	Mr. Brad Leslie WV Division of Natural Resources Parks and Recreation Section Capitol Complex, Building 3, Room 723 Charleston, WV 25305	\$ 1,000,000	2012	YES
Prospect Valley Highwall #4 Shinnston, Harrison County, WV	Tim Lemasters WVDEP-AML 105 South Railroad Street Philippi, WV 26416	\$ 1,000,000	2011	YES
Winifred (McFann) Portals Winifrede, Kanawha County, WV	Dean Stiltner WVDEP-AML 116 Industrial Drive Oak Hill, WV 25901	\$ 250,000	2011	YES
Zebb's Creek Highwall #2 Junior WV, Barbour County, WV	Gregg Smith WVDEP-AML 209 South Main Street Philippi, WV 26416	\$ 200,000	2011	YES
Cambria Portals & Drainage Design Cambria, Harrison County, WV	Tim Lemasters WVDEP-AML 209 South Main Street Philippi, WV 26416	UNKNOWN	2011	YES

Mt. Storm Gate Modification	Mr. Patrick Flaugher	UNKNOWN	0011	
Mt. Storm Power Station	Dominion Generation	UNKNOWN	2011	YES
TO COULT TOWER COUCTON	Mt. Storm Power Station			
	Dominion Energy Inc.			
	HC 76 Box 430			
	Mt. Storm, WV 26739			
Drain Pipe and Gate Repair	Brad Leslie	\$ 280,000	2011	YES
Jimmy Lewis Dam	WVDNR Parks & Recreation Section			
Pinnacle Rock SP	Capitol Complex, Building 3,			
Mercer Co., WV	Room 723			
	Charleston, WV 25305			
Stony River Dam	Sterlin Rebuck	\$ 250,000	2009	YES
Breach Dam to Remove from WVDEP	NewPage Corporation		2009	TEO
Jurisdiction	300 Pratt Street			
Grant County, WV	Luke, MD 21540			
Phase I - Unit 3 Ash Handling Area	Patrick W. Flaugher	\$ 500,000	2009	YES
Pavement Replacement Design	Dominion Energy Inc.		2003	****
Mt. Storm Power Station	HC 76 Box 430			
Mt. Storm, WV	Mt. Storm, WV 26739			
Flow & Temperature Monitoring Weir	Patrick W. Flaugher	\$ 250,000	2009	YES
Stony River	Dominion Energy Inc.			
Mt. Storm Power Station	HC 76 Box 430			
Mt. Storm, WV	Mt. Storm, WV 26739			
Fairfield Inn & Suites	Michael Holtz	\$ 2,500,000 (Estimated)	2009	
Weirton, WV	MPH Hotels	\$ 2,500,000 (Estimated)	2009	YES
,	490 East Route 22		1 1	
	North Barrington, IL 60010			
Deegan & Hinkle Dams	Tom Brown - City Engineer	\$ 1,500,000	2008	YES
Dam Modifications	City of Bridgeport			
Bridgeport, WV	515 West Main Street			
	Bridgeport, WV 26330			
Flip Bucket Stabilization	Patrick W. Flaugher	750 000		
At. Storm Lake Dam	Dominion Energy Inc.	\$ 750,000	2008	YES
At. Storm Power Station	HC 76 Box 430			
Mt. Storm, WV	Mt. Storm, WV 26739			
ic. ocolin, wv	Mc. Scorm, WV 20/39			
Stormwater Improvements	Mayor Dorothy Wilson	\$ 750,000	2007	YES
Ditch and Piping Design	City of Thomas		2007	1110
City of Thomas, WV	P.O. Box 463			
zej ez znemae, nv	Thomas, WV 26292			

Parking Lot Expansion Civil Design & Permitting Mt. Vernon Baptist Church Hurricane, WV	Mr. Brad Leslie Mt. Vernon Baptist Church 2050 Mt. Vernon Road Hurricane, WV 25526	\$ 50,000	2007	YES
Holiday Inn Express Civil Design for Hotel & Permitting Mineral Wells, WV	Michael Holtz MPH Hotels 490 East Route 22 North Barrington, IL 60010	\$ 2,500,000 (Estimated)	2007	YES
Bailey and Lemley Dams Dam Modifications & Access Improvements Core, WV	Dennis Kincer WV Division of Natural Resources Wildlife Resources Section Capitol Complex Building 3, Room 816 1900 Kanawha Blvd., East Charleston, WV 25305	\$ 1,000,000	2007	YES
Burches Run Dam Height Reduction Below Jurisdiction Moundsville, WV	Dennis Kincer WV Division of Natural Resources Wildlife Resources Section Capitol Complex Building 3, Room 816 1900 Kanawha Blvd., East Charleston, WV 25305	\$ 450,000	2005	YES
Wilson Dam Dam Modification Romney, WV	Mr. James Wilson 17 Running Brook Lane Sterling, VA 20164	\$ 250,000 (Estimated)	2005	YES
Moncove Dam Dam Modification Moncove State Park	Mr. Brad Leslie WV Division of Natural Resources Parks and Recreation Section Capitol Complex, Building 3, Room 723 Charleston, WV 25305	\$ 400,000	2005	YES
The second state of the second	VEARS ON WHICH YOUR FIRM HAS BE VAS RESPONSIBLE) None AND ADDRESS ESTIMATED CON	EN A SUB-CONSULTANT TO OTHER FIRMS NSTRUCTION COST YEAR CONSTRUCT RM'S PORTION (YES OF	JCTED FIR	PHASE M ASSOCIATED WITH

19. Use this space to provide any additional informati to perform work for the West Virginia Abandoned Mi range of clients including, the Philippi, Charlest of Bridgeport, NewPage Corporation, Mt. Top PSD, D Energy, Huntersville, NC, WVDNR Parks and Wildlife Water, and other private concerns and contractors. Portals, Subsidence Abatement, and a waterline ext civil site design, infrastructure, & site grading knowledge makes our firm most qualified for AML De	ne Lands Program. Civil Tech providon, and Oak HIll Offices of the WVDE ominion Generation - Mt. Storm & Nor Sections, American Electric Power - Current and recent AML projects incension. Our experience with impound combined with our AML experience and	des engineering services to wide EP-AML, the City of Thomas, City of Branch Power Stations, Duke John Amos Plant, WV American clude AMD, Highwall Reclamation, liments, dam breach/reclamation,
20. The foregoing is a statement of facts.		Date: January 24, 2013
Signature:	Title: President	

Printed Name: Mark E. Pennington

			PROJECT EXPERIENCE REQUIREMENTS							PRIMARY STAFF PARTICIPATION/CAPACITY *** M=Management P=Professional												
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Nitigation/ Replacement	Construction Inspection/Manageme nt	Water Treatment	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Mark Pennington	Jennifer Pennington	Robert Kessler	Charles Arthur Jr.	H. Thomas Brown
Thomas Sunrise Sanitation Mine Drain	С	А		x		×					×		×					M/P	P		Р	
Thomas Sunrise Sanitation Mine Blowout	С	А		×	х	x					х		×				×	M/P	Р		Р	Р
Prospect Valley Highwall #4	С	А	X	x	х	x					x		x				x	M/P	Р	Р	Р	Р
Winifred (McFann) Portals	С	А		x	Х	x					х		x					M/P	Р	Р	Р	Р
Douglas WL Extension	С	А									X	x	×					M/P	Р	Р	Р	Р
Pines CC Subsidence	С	А				х			х		х	×	x				×	M/P	Р	Р	Р	Р
Cambria Portals & Drainage	С	А		×	Х	х					X	×	×				Х	M/P	Р	Р	Р	Р
Zebbs Creek HW#2	С	А	х			х					X		×				×	M/P	Р	Р	Р	Р
Nellis (Smith) Drainage	С	А				×					х		×					M/P	Р	Р	Р	Р
Hawkinberry Hollow	С	А	Х	×	х	×					Х	x	x					M/P	Р	Р	Р	Р
Birds Creek Portals	С	А	Х	x	Х	х					Х	x	x				х	M/P	Р	Р	Р	Р
Stowe Refuse Piles	С	A	Х	х		×					Х		×				х	M/P	Р	Р	Р	Р
Ridenour Complex	С	А	Х	х	Х	х					Х		x				×	M/P	Р	Р	Р	Р
Breaholm (Evans) Portals	С	А	Х	х	Х	х					Х		x				×	M/P	Р	Р	Р	Р
Witcher Creek Portals	С	А	Х	х	Х	х					х	x	x		X	Х	Х	M/P	Р	Р	Р	Р
Turner Slide	Р	А	х	х		x					×						х	M/P	Р			
Thomas Stormwater Improvements	С	B.2				x			x		х		x		×		×	M/P	Р		Р	
Thoms Stormwater/Sewer Segregation	С	B.2				x					x		×					M/P	Р		Р	Р
Deegan and Hinkle Dam Modifications	С	B.3				×					х		x		×		х	M/P	Р	Р	P	P
Bailey and Lemley Dam Modifications	С	B.3				x					х		x		×		х	M/P	Р	P	P	
Fleming Street Stabilization	С	B.4				×					х		х				х	M/P	Р	Р	Р	
Mt Storm Flip Bucket Stabilization	С	B.3				x					x		×		×		x	M/P	Р	Р	Р	

^{*} List whether project experience is corporate or personnel based or both.

^{**} Use this area to provide specific sections or pages if needed for reference.
*** List Primary Design personnel and their functional capacity for the projects listed.

RFQ No.	

STATE OF WEST VIRGINIA Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLO	OWING SIGNATURE:	
Vendor's Name:	Civil Tech Engineering In	nc. \
Authorized Signature:	11 Mr 2	Date: 1-8-13
State of	\bigvee	Y
County of	unam to-wit:	
Taken, subscribed, and	d sworn to before me this \sum d	day of January 2013
My Commission expires	10 10 00	, 20
AFFIX SEAL HERE	Notary Public. State of West Virginia	NOTARY PUBLIC SIMULA Wilbel
	TYMIA MILBEE	Purchasing Affidavit (Revised 07/01/2012)

100 Poplar Fork Rd. Scott Depot, WV 25560 My commission expires December 10, 2022

SECTION A - ABANDONED MINE LANDS EXPERIENCE

1.	201	Nearly 50 years combined experience with AML Projects: The principals of Civil Tech Engineering, Inc. have gained AML experience providing professional services to the OSM, WVDEP, and BRIM on abandoned mine lands projects including: Subsidence, Landslides, Mine Drainage, Mine and Refuse Fires, Mine Shafts, Water Impoundments, and Pollution of Ground and Surface Water. Recent AML Projects performed for the WVDEP AML&R Offices located in Philippi, Oak Hill, and Charleston, WV include:
		Thomas (Sunrise Sanitation) Mine Drainage Project (DEP14171). Complete June, 2010. Thomas Sunrise Sanitation Mine Blowout (Emergency Project). Complete Spring, 2009. Prospect Valley Highwall #4 (DEP 14433). Complete 2011. Winifrede (McFann) Portals (DEP 14479). Complete 2011. Pines County Club (Ponds) Subsidence (DEP14633). Preliminary Design – Project Cancelled. Douglas Water Line Extension (DEP14951). Bidding complete – Construction 2013. Cambria Portals & Drainage Design (DEP 14845). Construction complete 2012. Birds Creek Portals (DEP 15065). Construction complete 2012. Nellis (Smith) Drainage (DEP15002). Construction complete 2012 Zebb's Creek Highwall #2 (DEP14991). Construction complete 2011. Hawkinberry Hollow Portals and Drainage (DEP 15220). Construction started 2012. Stowe Refuse Piles (DEP15586). Design Complete Fall 2012. Witcher Creek Portals and Refuse (DEP15601). Preliminary design complete. Permitting underway Ridenour Complex (DEP15598). Design complete. Braeholm (Evans) Portals & Drainage (DEP15634). Design complete.
2.		Principals of Civil Tech were responsible for planning, performing, and managing past AML work performed by Triad prior to February of 1996: Prior to forming Civil Tech, Mark Pennington managed the branch office of Triad Engineering in St. Albans, West Virginia. Jennifer Pennington was a senior engineer in that office. While employed by Triad, our principals were responsible for the performance and/or management of virtually all AML projects performed until February of 1996 when we resigned from Triad. A total of approximately 137 AML projects were completed during the period of 1990 to early 1996.
3.		Civil Tech Mine Subsidence Determinations: Our corporate AML experience is detailed on the enclosed CCQQ forms. Our recent corporate experience includes examination of structures to determine cause of damage and mining relatedness. We have performed these mine subsidence determinations using information on file with the WVGS, and with the assistance of AML personnel and records. Services have been provided for insurance companies and BRIM.
4.		Civil Tech has demonstrated experience and professional capability in all aspects of engineering and support services required to successfully complete AML Projects. Since forming Civil Tech, our staff has successfully completed over 1500 projects. Services provided have included: surveying and mapping, subsurface investigations, laboratory analysis, geotechnical engineering, structural design and assessment, environmental engineering, sewer & stormwater projects, land use/planning, reclamation, hydraulic/hydrologic studies, flood routing, dam break analysis and risk assessment, design engineering, plans, specifications, bidding, contract administration, and construction monitoring. See enclosed CCQQ forms for Civil Tech Engineering, Inc. and Sections B.1 thru B.4.
5.		As highlighted in this submittal, our experience with the design of civil

A partial listing of AML experience gained while employed by Triad during 1990 to

infrastructure and dam design combined with our AML experience makes our

company uniquely qualified for AML Design Projects.

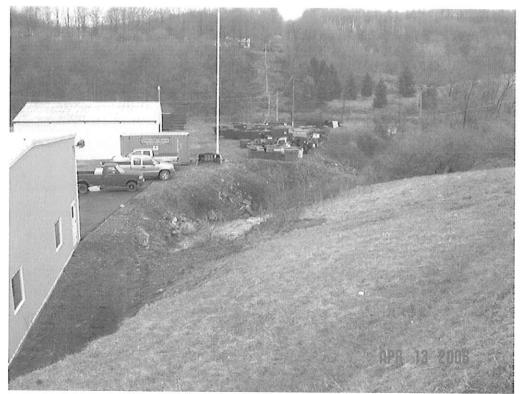
1996 is presented in this submittal along with other related projects which include photographs to showcase our capability to provide services for AML projects.

 □ Approximately 20 projects were completed. □ These projects included: mine drainage, subsidence, and landslides. □ Typical Projects included: Carbondale Portals, Smithers, WV < AML Representative: Neil Robinson < Services Provided: Drilling, Sampling, Engineering Tuppers Creek (Burford) Landslide, Kanawha Co., WV < AML Representative: Michael Richardson < Services Provided: Surveying, Mapping, Drilling, Stability Analysis, Mine Drainage Control, Min Seals, Plans, Specifications, Bidding Assistance.
 □ Typical Projects included: Carbondale Portals, Smithers, WV < AML Representative: Neil Robinson < Services Provided: Drilling, Sampling, Engineering Tuppers Creek (Burford) Landslide, Kanawha Co., WV < AML Representative: Michael Richardson < Services Provided: Surveying, Mapping, Drilling, Stability Analysis, Mine Drainage Control, Min
Carbondale Portals, Smithers, WV AML Representative: Neil Robinson Services Provided: Drilling, Sampling, Engineering Tuppers Creek (Burford) Landslide, Kanawha Co., WV AML Representative: Michael Richardson Services Provided: Surveying, Mapping, Drilling, Stability Analysis, Mine Drainage Control, Mine Co., Mine Drainage Control, Mine Co.,
 AML Representative: Neil Robinson Services Provided: Drilling, Sampling, Engineering Tuppers Creek (Burford) Landslide, Kanawha Co., WV AML Representative: Michael Richardson Services Provided: Surveying, Mapping, Drilling, Stability Analysis, Mine Drainage Control, Min
 Services Provided: Drilling, Sampling, Engineering Tuppers Creek (Burford) Landslide, Kanawha Co., WV AML Representative: Michael Richardson Services Provided: Surveying, Mapping, Drilling, Stability Analysis, Mine Drainage Control, Min
Tuppers Creek (Burford) Landslide, Kanawha Co., WV AML Representative: Michael Richardson Services Provided: Surveying, Mapping, Drilling, Stability Analysis, Mine Drainage Control, Mine
 AML Representative: Michael Richardson Services Provided: Surveying, Mapping, Drilling, Stability Analysis, Mine Drainage Control, Min
 Services Provided: Surveying, Mapping, Drilling, Stability Analysis, Mine Drainage Control, Min
 Services Provided: Surveying, Mapping, Drilling, Stability Analysis, Mine Drainage Control, Min Seals, Plans, Specifications, Bidding Assistance.
AML Projects Performed in 1991
☐ Approximately 20 projects were completed.
These projects included: landslides, mine shafts, subsidence, mine and refuse
fires, and mine drainage.
☐ Typical Projects included:
Pine Creek Mine Shaft, Logan Co., WV
< Work Performed for AML
 Services Provided: Surveying, Mapping, Drilling, Plans, Specifications, Bidding Assistance.
Monaville School Subsidence Determination, Logan Co., WV
< Work Performed for AML
< Services Provided: Drilling and Engineering
AML Projects Performed in 1992
☐ Approximately 25 projects were completed.
☐ These projects included: landslides, subsidence, mine shafts, refuse fires, and
mine drainage.
☐ Typical Projects included:
McMillian Drainage, Davis Creek, Kanawha Co., WV
< Work Performed for AML
< Services Provided: Surveying, Mapping, Drilling, Lab, Engineering.
Millburn Burning Refuse, Kanawha Co., WV
< Work Performed for AML
< Services Provided: Surveying, Mapping, Drilling, Lab, and Engineering
AML Projects Performed in 1993
Approximately 26 projects were completed.
These projects included: aerial surveying and mapping, landslides, subsidence,

	and mine drainage. Typical Projects included:
Eckm < <	wan Refuse Pile, McDowell Co., WV Work Performed for AML Services Provided: Ground Control, Aerial Photography, Aerial Mapping.
Oxley < <	Subsidence and Slide, Davis Creek, Kanawha Co., WV AML Representative: Michael Richardson Services Provided: Surveying, Drilling, Engineering
	AML Projects Performed in 1994
	Approximately 27 projects were completed.
	These projects included: aerial surveying and mapping, landslides, subsidence,
_	and mine drainage.
Ц	Typical Projects included:
Turn	er Landslide, Belle, WV
<	Work Performed for AML
<	Services Provided: Surveying, Mapping, Drilling, Sampling, Plans, Specifications, Bidding Assistance
Samn	nons Drainage, Chauncey, WV
<	Work Performed for AML
<	Services Provided: Drilling and Engineering
	AML Projects Performed in 1995
	Approximately 19 projects were completed.
	These projects included: aerial surveying and mapping, landslides, subsidence,
	burning refuse, and mine drainage.
	Typical Projects included:
Mulli	ns Subsidence, Crab Orchard, WV
<	AML Representative: Michael Richardson
<	Services Provided: Drilling, Sampling and Engineering
Big C	ub Creek Refuse Pile
<	AML Representative: Dean Stiltner

Sample design drawings and photographs from our recent AML Projects follow this page.

Services Provided: Aerial Photography, Ground Control, Aerial Mapping



Thomas Sunrise Sanitation - DEP14171



Thomas Sunrise Sanitation - DEP14171



Prospect Valley Highwall #4 – DEP14433



Prospect Valley Highwall #4 – DEP14433



Prospect Valley Highwall #4 – DEP14433



Prospect Valley Highwall #4 – DEP14433

SECTION B.1 - HISTORY OF FIRM

<u>Services:</u> Civil Tech Engineering, Inc. has provided in-house professional engineering services since 1996 in the following areas of expertise.
 □ AML Design Services □ Civil Design/Consulting □ Wastewater Treatment and Collection □ Dam Safety, Design, and Rehabilitation □ Geotechnical Engineering □ Surveying & Mapping □ Construction Contract Administration/Construction Monitoring
<u>Background</u> : Civil Tech Engineering Inc. was formed in 1996 by our principals, Mark and Jennifer Pennington. Prior to forming Civil Tech, Mark Pennington managed the branch office of Triad Engineering in St. Albans, West Virginia. Jennifer Pennington was a senior engineer at Triad. <u>Our principals have a combined experience of 55 years in civil and geotechnical engineering</u> .
<u>Typical Projects and Capability:</u> Since forming Civil Tech, our staff has provided professional engineering services for a variety of clients and projects involving:
AML Design Services 48 Dam rehabilitation and design projects Site planning, development, and permitting Sanitary sewer/storm water segregation Storm water evaluation and design Foundation investigation and design Construction storm water pollution prevention plans and permitting USACOE 404 Permitting. Topographic mapping to support our engineering projects Construction monitoring and testing for our design projects Construction contract administration for our design projects Cause of damage assessment of residential and commercial structures for insurance companies Subsidence Claims for BRIM
<u>Submittal</u> : We have prepared this submittal to illustrate our complete capabilities in civil engineering. The reader will find information on a variety of projects intended to illustrate the quality of our work, complete capability, and qualifications to provide the engineering services for most civil engineering projects.

SECTION B.1 - OFFICE, STAFF, & EQUIPMENT

Office: All work is performed from our office located in Hurricane, West Virginia. The physical address, telephone number, email address and staff information is provided below:

CIVIL TECH ENGINEERING, INC. 300A Prestige Drive Hurricane, West Virginia 25526

Phone 304-757-8094
Fax 304-757-8095
email civiltech1@frontier.com



Mark E. Pennington MS, PE, PLS Jennifer E. Pennington PE, PLS

Staff:

H Tom Brown PE – Senior Engineer Robert Kessler - Senior Geologist Charles Arthur Jr. - CADD H Neal Craig - CADD



	M THAN	2016年
Resun	mes: Resumes for key personnel and staff follow this section.	
equipm compline Pertine	ment: Civil Tech Engineering, Inc. maintains complete in-house computerment and software to support our engineering services. This equipment is imented by our electronic survey instruments with onboard data collectors. ent equipment and software are summarized below: Software: HEC1, HEC2, HECHMS, HECRAS, Dams2, WaterCad, SewerC HydroCad, Flowmaster, PCStable5, AutoCad Civil3D 2011, Eagle Point D Software, and office support programs including Word and Excel. Equipment: Seven computers, Two Digital Cameras, HP 1050C Plotter, HI and laser printers, fax, copier, and necessary office support. Vehicles: Three 4 wheel drive Survey: Leica TC600 Total Station, Leica Automatic Level, Rods, Tripods Prisms as required to support our survey crew.	Cad, Design P inkjet

RESUME OF MARK E. PENNINGTON PRESIDENT – CIVIL TECH ENGINEERING INC. 12 - 31 - 12

EDUCATION:

B.S.C.E. - Civil Engineering - 1977 - West Virginia University
M.S.C.E. - Civil Engineering - 1985 - West Virginia College of Graduate Studies

PROFESSIONAL REGISTRATION:

Registered Professional Engineer - West Virginia, Ohio, Kentucky, and North Carolina Professional Land Surveyor - West Virginia

EMPLOYMENT HISTORY:

Principal Engineer President CIVIL TECH ENGINEERING, INC.

February 1996 to Present

Chief Engineer Vice President Heeter Construction, Inc., Spencer, WV

February 1996 to April 1997

Principal Engineer Vice President

Triad Engineering, Inc., St. Albans, WV

September 1980 to February 1996

Staff Engineer

American Electric Power Service Corporation

-Civil Engineering Laboratory - May 1977 thru July 1978 -Ash Utilization & Research - August 1978 to Sept. 1980

PERTINENT EXPERIENCE:

<u>General:</u> Mr. Pennington is one of the founding principals and president of Civil Tech Engineering Inc. In this capacity, he is responsible for overall management of the company, business development, proposal preparation, and the direction/technical review of all engineering work produced by the company.

After graduation from college, Mr. Pennington worked as a staff engineer for American Electric Power. He initially performed various engineering tasks for the Civil Engineering Lab in New Haven, West Virginia. He later joined the ash utilization and research section where was involved with landfill design and testing. Mr. Pennington authored the "Fly Ash Structural Fill Inspection and Training Manual" dated February 15, 1979 which is still in use today in the AEP system. Recently, Mr. Pennington managed compaction testing at the John Amos Plant Quarrier Landfill under contract with AEP.

Prior to establishing Civil Tech Engineering, Mr. Pennington served as Branch Manager of the St. Albans Office of Triad Engineering, Inc. In this capacity, he supervised and coordinated all projects performed by the St. Albans Office and managed over 60 employees including; engineers, geologists, technicians, designers, draftsmen, environmental, surveyors, drillers, marketing, and clerical personnel. Mr. Pennington's areas of expertise include: general civil design, dam

design/rehabilitation/safety, abandoned mine lands reclamation, geotechnical engineering, hazardous and municipal waste design/permitting, hydraulics, hydrology, groundwater studies, laboratory testing, surveying and mapping, drilling, construction inspection/testing, and construction project/contract administration. Mr. Pennington also reviewed and approved mine permits for the Logan Office of Triad Engineering.

Mr. Pennington has provided and directed engineering services on over 1600 projects since forming Civil Tech Engineering, Inc. These projects have been performed for clients including: WVDEP-AML, BRIM, Steel of West Virginia, FMC, WVDNR, WVDEP, Dominion Generation, Duke Energy, Huntington Area Development Authority, City of Belington, Culloden PSD, City of South Charleston, City of Thomas, Cedar Lakes Conference Center, Middleport Terminals, Contractors, Architects, Private Home Owners, and insurance companies. Mr. Pennington has been responsible for a wide range of engineering projects and services including:

- Abandoned Mine Land Projects
- Dam Inspection, Design, and Rehabilitation
- Foundation Investigations for Industrial, Commercial, and Residential Structures
- Civil Design for Residential/Commercial Projects.
- Damage Investigation/Evaluation of Commercial/Residential Structures.
- Mine Subsidence Claims
- Municipal Landfill Design/Permitting
- Municipal Sewage Design and Permitting
- Hazardous Waste Landfill Design/Permitting
- Groundwater Contamination Studies
- Stormwater Design and Control
- Erosion and Sediment Control Design and Permitting
- Surveying and Mapping
- Construction Quality Control
- Construction Contract Administration

<u>Insurance and BRIM Investigation:</u> During Mr. Pennington's 35 year career, he has provided professional engineering services to insurance companies including State Farm, Nationwide, St. Paul, Westfield, Travelers, Allstate, Prudential, and Hartford. Since 2002, Mr. Pennington has also investigated numerous mine subsidence claims for BRIM. Services provided to insurance companies have included examination/evaluation of damage to various structures including:

- Light Commercial Buildings
- Residential Houses
- Manufactured Houses
- Small Bridges
- Retaining/Basement Walls
- Pavements/parking lot surfaces
- Chimneys/fireplaces
- Municipal Concerns

Mr. Pennington is experienced in the assessment of damage caused by wind, flood, snow, erosion, fire, leaking utility lines, earth movement (problem clay soils, settlement, landslides, etc.), vehicle

impact, structural defects/failure, and manufacturing defects (related to housing), blasting and subsidence related to mining.

Civil Design, Municipal Sewage and Water Service: Mr. Pennington was the design engineer for a \$3,000,000 sanitary sewer/storm water segregation project for the City of Thomas, West Virginia. He routinely assists the city of Thomas with the evaluation of storm water problems and has been responsible for the design and construction of a \$750,000 storm water improvement project which was completed in 2006. Past experience with general civil engineering including utility and roadway infrastructure, site grading, storm water, and permitting has included large commercial and private projects such as Southridge Centre (100 acres), First Church of God (10 acres), Ridgeline Developments (100 acres), Dudley Farms (50 acres), and recent 2 acre developments for hotel sites in Mineral Wells, and Weirton, West Virginia.

<u>Dam Safety:</u> Mr. Pennington is qualified in the field of dam safety, rehabilitation, and design. He is responsible for performing over 65 annual safety inspections for various dams and clients throughout West Virginia and surrounding states. Mr. Pennington has been responsible for the design of over 44 dam design and rehabilitation projects. His areas of expertise include the use of Roller Compacted Concrete (RCC) in the rehabilitation of dams. Mr. Pennington made a presentation at the ASCE fall technical conference in 1994 discussing the use of Roller Compacted Concrete as overtopping protection at the Anawalt Lake Dam. A partial list of typical dam design and rehabilitation projects for which Mr. Pennington has been responsible include:

- No. 2 Impoundment Dam Modification Union Carbide, Sistersville, WV
- Anawalt Lake Dam (new construction) WVDNR McDowell Co, WV
- Warden Lake Dam Modification WVDNR Hardy Co., WV
- Seneca Lake Dam Modification WVDNR Pocahontas Co., WV
- Teter Creek Lake Dam Modifications WVDNR Barbour Co., WV
- Belington Water Supply Dam Modifications City of Belington Barbour Co., WV
- FMC Tailings Pond Dam Modifications FMC Corp.- Bessemer City, NC
- Water Supply Dam Modifications Culloden PSD Culloden, WV
- Joyce Lake Dam Modifications Joyce Properties Clarksburg, WV
- Handley Dam WVDNR Pocahontas Co., WV
- Thomas Dam Rehabilitation City of Thomas, WV
- Old Pond 11 McClintic Wildlife Management Area
- Wells Lock and Dam Emergency Repairs, Elizabeth, WV
- Rollins Dam Emergency Repairs, Ripley, WV
- Handley Dam Modifications, Pocahontas County, WV
- Winterplace Dam, Raleigh County, WV
- Anawalt Flood Damage Repairs, McDowell County, WV
- Bailey and Lemley Dams, Monongalia County, WV
- Wilson Big Hollow Dam, Hampshire County, WV
- Burches Run Dam Height Reduction, Marshall County, WV
- Mt. Storm Power Station Dam, Grant County, WV
- Deegan and Hinkle Dam Modifications, Bridgeport, WV
- Mill Run Water Supply Dam, Mt. Top PSD, Mt. Storm, WV
- Canaan Valley Resort Water Supply Reservoir, Davis, WV

Construction: Mr. Pennington provided engineering and construction management services to Heeter Construction of Spencer, West Virginia in 1996 and 1997. He assisted Heeter with bidding, project management, and any technical problems requiring engineering expertise. During 1996 and early 1997 while with Heeter Construction, he served as the assistant project manager for the construction of a 10 million dollar flood control levee designed by the US Army Corps of Engineers for the City of Moorefield, West Virginia. Mr. Pennington continues to provide bidding and construction consultation as well as value engineering proposals, waste site design, and other engineering services for Heeter Construction.

<u>US Army Corps of Engineers:</u> While with Triad Engineering, Mr. Pennington managed the Huntington District Corps of Engineers indefinite delivery geotechnical contract for a period of 3 years. During this time, he was responsible for the design of Charleston Haddad Riverfront Park, certification of Pond 16 (a small dam designed by the COE at McClintic WMA), landslide investigations, seepage/stability analysis for flood levees, and numerous re-analysis investigations for dams including Dillon and Beech City Dams in the State of Ohio.

<u>Mine Permitting/Surveying:</u> While employed by Triad Engineering, Mr. Pennington was responsible for review and approval of mine permitting and surveying operations conducted in the Logan, West Virginia Office of Triad.

WVDEP-AML Experience: Mr. Pennington has been responsible for the completion of 15 AML projects for the WVDEP since 2008. These projects have ranged in size from under \$ 250,000 to over \$ 1,000,000. He was also responsible for all AML work produced by the St. Albans office of Triad Engineering prior to resigning from the company in early 1996. His work included proposal preparation, planning, direction, management, and performance of all engineering activity associated with Triad's AML contract. Mr. Pennington was responsible for the successful completion of approximately 137 projects during the period from 1990 to 1996. His expertise includes the abatement of mine related problems associated with subsidence, blasting, landslides, mine drainage, refuse fires, mine fires, mine shafts, drainage, impoundments, and groundwater/surface water pollution. Since leaving Triad and forming Civil Tech, he has also been responsible for the investigation of mine subsidence claims throughout West Virginia for the State Board of Risk and Insurance Management (BRIM) and various insurance companies including State Farm and Nationwide. Prior to working with the WVDEP - AML, he worked with the Office of Surface Mining on similar projects. Mr. Pennington has 26 years of pertinent experience with the abatement of mine related problems.

RESUME OF JENNIFER E. PENNINGTON

PRINCIPAL ENGINEER
12-31-12

EDUCATION

BSCE - Civil Engineering - 1988 - University of Kentucky

CERTIFICATION/REGISTRATION

Registered Professional Engineer - West Virginia Licensed Land Surveyor - West Virginia

EMPLOYMENT HISTORY

Principal Engineer

Civil Tech Engineering, Inc., St. Albans, WV

March 1996 to Present

Senior Engineer

Triad Engineering, Inc., St. Albans, WV, 1988 to 1996

PERTINENT EXPERIENCE

Ms. Pennington has served as a team member and project manager on AML, civil design, and geotechnical projects involving abandoned mine land reclamation, subsurface investigation, geotechnical analysis, and dam design. She has been responsible for technical analysis and review of all AML projects completed by Civil Tech since 2008. She was responsible for all dam design and rehabilitation projects, and projects performed for the Huntington District Corps of Engineers (HDCOE) while employed by Triad Engineering during 1988- 1996. Work performed on those projects and current projects for which she is responsible at Civil Tech Engineering include:

- Geotechnical Investigation and Analysis
- Civil Design
- Hydrologic/hydraulic analysis using HEC-1, HEC-2, and Dams2 Computer Programs
- Stability Analysis using UTEXAS2, PCStable5, and HDCOE Hand Check Methods
- Seepage Analysis using graphical flow net and HDCOE mathematical methods
- Preparation of Project Narratives, Design Drawings, Specifications, Construction Schedules, Erosion and Sediment Control Plans, and Construction Cost Estimates.

Since the company was formed, Civil Tech Engineering has performed numerous dam safety inspections, dam breach analysis and risk assessments, geotechnical studies, and dam rehabilitation design projects. Civil Tech has also completed 8 AML projects since 2008. Ms. Pennington has been responsible for project management on these and many other large scale projects including design and extensive geotechnical/foundation investigations. She is proficient in organizing and maintaining scheduling during the course of long term projects. She has complete familiarity with all of the above mentioned in house computer programs as well as Word, Excel, AutoCad, Eagle Point, Flowmaster, Dams2, HEC1 and II, HECRAS, and Hydrocad.

Ms. Pennington is responsible for technical review of all work produced by Civil Tech. In this capacity, she reviews and approves all work produced by the company including AML, civil design, and dam safety projects.

H. Thomas Brown

Objective

Engineering Management

Work experience

2004-Present

City of Bridgeport

Bridgeport, WV

Director of Community and Public Works

- Managed City Departments: Engineering & GIS, Public Works, Public Utilities, Community Development and Parks & Recreation.
- Employee Evaluations: GIS Manager, Office Manager, Department Directors
- Prepared Annual Budget for Engineering/GIS Department
- Reviewed and Recommended Department Directors Budgets
- Managed Engineering Consultants and Contracts
- Prepared, Reviewed, Managed and Inspected all Construction Contracts

1991-2003

Harman Construction, Inc/West Virginia Paving, Inc Grafton/Charleston, WV

Senior Estimator (2001-2004)

- Prepare and sign construction cost estimates: Paving, Roadway Repair & New Construction, Excavation, Utility (water, sewer & storm drainage) construction & repair and Retaining wall.
- · Review and sign Contracts, Change orders, and Sub-Contracts
- Purchase Materials

Grafton Office Manager (1998-2001)

- Prepare, review, and sign: Cost proposals, Contracts, Change Orders, and Sub-Contracts
- Purchase Materials
- Schedule: Crews and Sub Contractors
- Close Branch Office

Senior/Chief Estimator (1991-1998)

- Prepare, review and recommend for signature: Cost proposals, Contracts, Change Orders, and Sub-Contracts
- Manage: Company Safety Program, Equipment Maintenance and repair, and
- Schedule: Crews and Equipment

1987-1991

Advanced Surveys, Inc

Prince Fredrick, MD

Project Engineer

- Prepare, review and recommend for signature: Engineering Proposals and Contracts
- · Manage: Engineer, Technicians, inspectors and CAD system
- Schedule: Project designs, Project Inspections, and Sub-Consultants
- Prepare plans, specifications and contract documents: Commercial and Residential developments, Roadway and Intersection modifications and improvements, utility improvements and drainage improvements; including all studies and calculations required for excavation, grading, water, sewer, storm drain, storm water management, paving, side walk, curb and sediment control plans

1986-1987

Trible Construction, Inc..

Manassas, VA

Estimator

- Prepare, review and recommend for signature: Cost proposals, Contracts, Change Orders, and Sub-Contracts: Utility, Grading and Site Construction
- Purchase Materials
- Market Company

1986-1986

The Driggs Corporation.

Capitol Heights, MD

Estimator

 Prepare, review and recommend for signature: Cost proposals for excavation and utility projects

1985-1986

Marvaco, Inc.,

Capitol Heights, MD

Senior/Chief Estimator

 Prepare, review and recommend for signature: Cost proposals for excavation and utility projects

1984-1985

CMX Industrial Ceramics...

Bridgeport, WV

Manager

· Manage: Coal preparation plant rebuild shop

1983-1984

Hopke Company, Inc...

Alexandria, VA

Estimator

Prepare, review and recommend for signature: Cost proposals for utility projects

1981-1983

Soil Conservation Service

Morgantown, WV

Technician

· Economic and hydraulic study preparation

1972-1981

Various

• Construction, Retail and Church Service

Education

December 1982

West Virginia University

Morgantown, WV

Civil Engineering

BSCE

Accreditations

West Virginia Professional Engineer License

West Virginia Professional Surveyor License

Professional memberships

American Society of Civil Engineers

North Central West Virginia Highway Engineers

RESUME OF CHARLES D. ARTHUR, Jr. SENIOR DESIGNER 10 - 18 - 11

EDUCATION:

June 2000 Benjamin Franklin Career and Technical Education Center Dunbar, WV

Computer-aided Drafting/1080 hours

Honor roll in computer drafting, experience with MicroStation 95/SE, AutoCAD

2000, Windows 98 SE, 3D drawings, mechanical/architecture drawings,

isometric/oblique drawings and orthographic projections

June 1997 Benjamin Franklin Career and Technical Education Center Dunbar, WV

Welding/1,320 hours

Honors included a second place finish in the State Welding Competition, Elkins, WV, April 1997 sponsored by the Vocational Industrial Clubs of America,

Certificate of Recognition and experience with SMAW, GMAW, GTAW and TB

Dec 1993 Richmond Technical Center Richmond, VA

Welding/72 hours

Honor roll in welding, experience with SMAW, GMAW, GTAW and TB

June 1990 **Dunbar High School** Dunbar, WV

Diploma

EMPLOYMENT HISTORY

June 2000 to Civil Tech Engineering, Inc. Hurricane, WV

Present Senior Designer

Responsible for preparation of design drawings using Autocad 2000 and 2004, design modeling using Eagle Point 99 software, survey party chief, and

evaluation of mine maps and subsidence.

July 1999 to Custom Upholstery St. Albans, WV

June 2000 Helper/Deliverer Part Time

Experience keeping track of shop inventory and related sales, tearing down

furniture to be upholstered and transporting furniture

Aug 1997 to American Commercial Barge Line Jeffersonville, IN

June 1999 Deck Hand

Experience rigging barges together, making locks, chipping, grinding, painting,

working in close quarters and maintaining tug boats/chemical barges

Jan 1995 to Pizza Hut Inc. South Charleston, WV

Aug 1997 and Shift Manager

RESUME OF CHARLES D. ARTHUR, Jr. Continued

July 1989 to June 1993 Experience updating customer data, completing close of daily receipts, insuring that paperwork balances, operating computerized cash register and possessing exemplary customer and employee relations

June 1993 to

First Choice Equipment

Ashland, VA

Dec 1994

Mechanic

Experience maintaining tractor-trailers, various welding jobs, paint preparation and painting

PERTINENT EXPERIENCE:

Since joining Civil Tech in 2000, Mr. Arthur has been responsible for preparation of design drawings using Autocad for a variety of civil engineering, AML, mine subsidence claims, hotel site development, and dam modification projects. A partial list of projects including recent AML experience follows:

- Thomas (Sunrise Sanitation) Mine Drainage Project (DEP14171).
- Thomas Sunrise Sanitation Mine Blowout (Emergency Project).
- Prospect Valley Highwall #4 (DEP 14433).
- ➤ Winifrede (McFann) Portals (DEP 14479).
- Pines County Club (Ponds) Subsidence (DEP14633).
- Douglas Water Line Extension (DEP14951).
- Cambria Portals & Drainage Design (DEP 14845).
- ➤ Birds Creek Portals (DEP 15065).
- ➤ Nellis (Smith) Drainage (DEP15002).
- Zebb's Creek Highwall #2 (DEP14991).
- Hawkinberry Hollow Portals and Drainage (DEP 15220).
- Fairfield Inn and Suites, Weirton, WV
- Holiday Inn Express, Mineral Wells, WV
- Thomas Sunrise Sanitation Mine Drain
- Old Pond 11 Dam Rehabilitation
- Anawalt Flood Damage Repair
- > Teter Creek Dam Modification
- Wells Lock and Dam Repair
- ➢ Wilson Big Hollow Dam
- ➤ Winterplace Dam Modification 1 and 2.
- Cedar Lakes Dam No. 2 Flood Damage Repair
- Bailey and Lemley Dam Modifications
- Deegan and Hinkle Dam Modifications
- Thomas Storm Water Improvements
- Thomas Sewer/Storm Water Segregation Project
- ➤ Amish Exchange
- Mine Subsidence and Insurance Investigations
- Landslide corrections
- Geotechnical Investigations

Mr. Arthur also serves as survey crew chief for property and topographic mapping projects for Civil Tech Engineering. During his employment he has also provided construction inspection and testing services for civil and dam modification projects and has inspected subsurface investigation projects for geotechnical projects.

Mr. Arthur is also certified by the State of West Virginia as a pre-blast inspector.

RESUME OF H. THOMAS DIBACCO

ENVIRONMENTAL ENGINEER

EDUCATION:

B.S. Environmental Engineering-2000-Kennedy Western University. Electronic Systems-DeVRY Institute of Technology Fairmont State College-1961-1963

CERTIFICATION/REGISTRATION:

Class 1 Public Water Supply Operator Supervisory Development Program Radiation Safety FCC General License Visual Emissions EPA Method 9

EMPLOYMENT HISTORY:

Virginia Power Environmental Compliance Coordinator Mt. Storm Power Station, North Branch Power Station 1966 to June 2000.

Civil Tech Engineering, Inc.
Project Manager July 2000 to present.

PROFESSIONAL EXPERIENCE:

Air pollution permits PSD Title 5
Water pollution control NPDES
Hazardous waste management
Lake management
Dam safety inspections
Alternate energy source development
Consultant wind energy development
Advisor for Dominion Energy
Advisor wind energy program James Madison University
Representative for Springhouse Energy Systems
Biological studies with Ohio State University
Engineering and development of ash storage facilities and haul roads

Environmental awareness training
Supervised activities of GAI Engineering
Ground water monitoring
Environmental audits.
Wastewater treatment (1500gpt to150,000gpd)
Storm water sampling
Spill prevention control and countermeasures
Solid waste management
Environmental inspections with WV Office of Air Quality, EPA, WVDEP.

PERTINENT EXPERIENCE: Mr. DiBacco has worked extensively with water and wastewater treatment systems at Mt. Storm Power Station, the North Branch Power Station, and the City of Thomas. As Environmental Compliance Coordinator at both the Mt. Storm Power Station and the North Branch Power Station, Mr. DiBacco has considerable experience in all areas of Environmental Regulations. He is also experienced in dam safety requirements. Mr. DiBacco was Project Manager for the Thomas Dam Modifications Project and is currently working on the Teter Creek Dam Modification Project. He has worked as an advisor/consultant for Dominion Energy, Springhouse Energy Systems, James Madison University and Ohio State University. During his employment with Virginia Power he was involved with construction of haul roads and ash storage facilities and alternate energy development.

RESUME OF ROBERT R. KESSLER **GEOLOGIST** 11 - 11 - 10

EDUCATION:

B.S. - Geology - 1965 - Ohio University Post Graduate Work - 1965 to 1966 - Geology - Ohio University B.S. - Mathematics - 1980 - University of Charleston

CERTIFICATIONS:

Certified Aggregate Inspector - WVDOH Certified Concrete Inspector - WVDOH Certificate of Completion - Wetland Training - WVDOH Certificate of Completion - Techniques for Pavement Rehabilitation - WVDOH Certificate of Completion - Aerial Photo Interpretation - WVDOH

Certificate of Completion - Alkali Silica Reactivity in Concrete - FHWA

EMPLOYMENT HISTORY:

Geologist Civil Tech Engineering, Inc. 1996 – present

Responsible for all geologic studies/investigations.

Typical projects include mining subsidence investigations, Teter Creek Dam, Thomas Dam, Old Pond 11 Dam, and

Seneca Dam.

Geologist Group Leader Aggregate Group, West Virginia Division of Highways August 1998 to Present, Materials Control Division

Division Reorganization

Geologist Testing Group Leader All Materials Testing Sections & Roadway Analysis

West Virginia Division of Highways

April 1992 to August 1998, Materials Control Division

Division Reorganization

Geologist Technical Advisor

West Virginia Department of Transportation

January 1986 to April 1992, Materials Control Division

Division Reorganization

Geologist **Assistant Director** Aggregate Section, West Virginia Department of Highways May 1984 to January 1986, Materials Control Division

RESUME OF ROBERT KESSLER CONTINUED

Geologist - Aggregate Section, West Virginia State Road Commission

Section Leader May 1969 to May 1984, Materials Control Division

Geologist - Aggregate Section, West Virginia State Road Commission

July 1966 to May 1969, Materials Control Division

PERTINENT EXPERIENCE

Mr. Kessler has performed geologic study on eleven mine subsidence claims investigated by Civil Tech for BRIM since 1996. Geologic investigation has included review of available mining maps and the county geologic reports providing important information concerning mining history and geologic formations and mine subsidence potential.

In addition to his duties reviewing mine subsidence claims, Mr. Kessler has also been responsible for the geologic study and investigation for over 40 dam rehabilitation projects in West Virginia.

Mr. Kessler has an intimate knowledge of geologic formations in the state of West Virginia and has recently authored and published a book on the geology of the Kanawha Valley.

SECTION B.2 - CIVIL DESIGN

design d piping at erosion of parking documer	Cour principals and key personnel have been responsible for developing civil rawings including site grading plans, highway access, storm water and mine drain and controls, highwall and portal reclamation, storm water rail road crossings, control, sanitary sewer collection and treatment, lift stations, retaining walls, layout, sidewalks, handicap access, utilities, permits, specifications, and bid atts for various projects including: Thomas Sunrise Sanitation Mine Drain Thomas Sunrise Sanitation Mine Blowout Trospect Valley Highwall #4 Vinifrede (McFann) Portals Thomas Varies Sunrise Sanitation Mine Blowout Trospect Valley Highwall #2 Vinifrede (McFann) Portals Thomas WL Extension Tambria Portals & Drainage Subb's Creek Highwall #2 Sirid's Creek Portals Design Sellis (Smith) Drainage Idellis (Smith) Drainage Idellis (Smith) Drainage Idellis (Smith) Projects in WV and NC Storm/Sanitary Segregation, City of Thomas, WV Storm Water Improvements, Thomas, WV Sirst Church of God, Charleston, WV Itt. Vernon Baptist Parking Lot Expansion Soliday Inn Express, Mineral Wells, WV Sairfield Inn & Suites, Weirton, WV Sarrifield Inn & Suites, Weirton, WV Sarrifield Inn & Suites, Weirton, WV Sarrifield Inn & Suites, Weirton, WV Southridge Centre 100 acre Commercial Development Sobert C. Byrd Federal Court House Sidewalks, Utilities, and Drainage addad Riverfront Park, Charleston, WV Southridge Centre 100 acre Commercial Development Sobert C. Byrd Federal Court House Sidewalks, Utilities, Texas Steakhouse, Kenny Sougers, etc. arious Hazardous Waste and Sanitary Landfills arious Abandoned Mine Land Projects
\Box V	arious Hazardous Waste and Sanitary Landfills
□ V	arious Landslide Stabilization Projects throughout West Virginia
	leans and Methods, Pipe Crossings – CSX Railroad, Rt. 10, Rita to Midway Plaza Highway roject
Cost Es Most reco	leans and Methods, Pipe Crossings – CSX Railroad, Rt. 10, Rita to Midway Plaza Highway

Pines Country Club (Ponds) Subsidence - Project Cost \$ 2.6 million
Winifrede (McFann) Portals – Project Cost \$ 450,000.
Cambria Portals - Project Cost \$ 682,000
Douglas WL Extension – Project Cost \$ 250,000
Storm/Sanitary Segregation Project, City of Thomas - Project Cost \$ 3 million
Storm Water Improvements, City of Thomas - Project Cost \$ 750,000
Ansinelli Retaining Wall Replacement, Private - Project Cost \$ 50,000
Fleming Street Stabilization, City of Monongah - Project Cost \$ 70,000
Mt. Vernon Baptist Parking Lot Expansion - Project Cost \$ 50,000
Holiday Inn Express, Mineral Wells – Project Cost Unknown
Teter Creek Dam Modifications, WVDNR, Wildlife Resources - Project Cost \$ 1.2 Million
Old Pond 11, WVDNR, Wildlife Resources - Project Cost \$ 150,000
Moncove Dam Rehabilitation, WVDNR - Project Cost \$ 600,000
Burches Run Dam Rehabilitation, WVDNR - Project Cost \$ 600,000
Deegan and Hinkle Dam Modifications – Project Cost \$ 1.5 Million
Bailey and Lemley Dam Modifications – Project Cost \$ 1.2 Million
Wilson Dam Modification – Project Cost \$ 250,000
Belington Dam Modification – Project Cost \$ 50,000
Mill Run Dam Modification – Project Cost \$ 200,000
Stony River Dam Breach - Project Cost \$ 250,000.
Temperature and Flow Monitoring Weir – Project Cost \$ 250,000
Jimmy Lewis Dam Modification – Project cost \$ 500,000
Pipestem and Berwind Dam Modifications - Project Cost \$ 1,200,000
Cacapon Dam Modifications – Project Cost \$ 1,300,000

Our engineers have extensive experience in cost estimating and bidding gained on projects which were bid and successfully constructed. This experience was gained by Mark Pennington estimating costs for construction projects for competitive bidding while working for Heeter Construction, of Spencer, West Virginia. See Resume for Mark Pennington. Hayward Phillips, our senior construction inspector, has over 55 years experience estimating and building all types of construction. Our construction experience is invaluable in the development of accurate cost estimates for budgeting, and development of practical designs which are Aconstructable@.

Construction Contract Administration: We have, or are providing contract administration on virtually all of the civil projects listed herein. Our experience has been gained administering contracts on projects ranging in size and complexity from a few hundred thousand to upwards of 30 million plus for the Southridge Centre/Ridgeline developments. Mark Pennington also served as assistant project manager on a 10 million dollar flood levee construction project for the City of Moorefield, West Virginia in 1996, while employed with Heeter Construction.

Civil Project Photographs: Photographs of some of our recent projects follow this section of the submittal.

Sample Project Drawings: Typical design drawings from some of our projects are enclosed to illustrate our capabilities.



FIRST CHURCH OF GOD – CHARLESTON, WV PROJECT COST UNKNOWN – COMPLETE 2001

- □ TOPOGRAPHIC MAPPING
- □ SUBSURFACE INVESTIGATION
- □ STORM WATER CONTROLS
- □ PERMITTING
- ☐ UTILITY LOCATION & DESIGN
- WASTE WATER TREATMENT RECIRCULATING SAND FILTER
- □ PAVEMENT AND WALKS
- □ PLANS AND SPECIFICATIONS



Erosion Repair - Rip Rap Armored Ditch



New Storm Drains and Catch Basins

STORM WATER IMPROVEMENTS – THOMAS, WV

PROJECT COST \$ 750,000 - COMPLETE 2007

- □ TOPOGRAPHIC MAPPING
- ☐ STORM WATER CONTROLS & EROSION REPAIR
- □ PERMITTING
- □ PLANS AND SPECIFICATIONS
- BIDDING
- □ CONSTRUCTION CONTRACT ADMINISTRATION



HOLIDAY INN EXPRESS – MINERAL WELLS, WV PROJECT COST UNKNOWN – COMPLETE 2007

- □ TOPOGRAPHIC MAPPING
- □ STORM WATER CONTROLS
- □ PERMITTING
- ☐ UTILITY LOCATION & DESIGN
- □ WASTE WATER LIFT GRINDER STATION DESIGN
- □ PAVEMENT AND WALKS
- □ PLANS AND SPECIFICATIONS



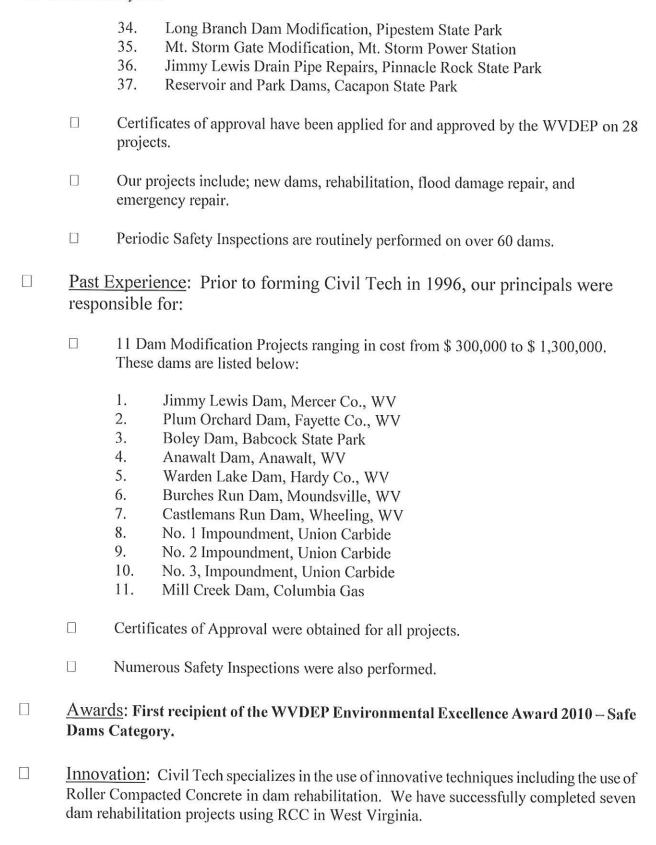


MT. VERNON BAPTIST PARKING LOT EXPANSION – HURRICANE, WV PROJECT COST \$ 50,000 – COMPLETE 2007

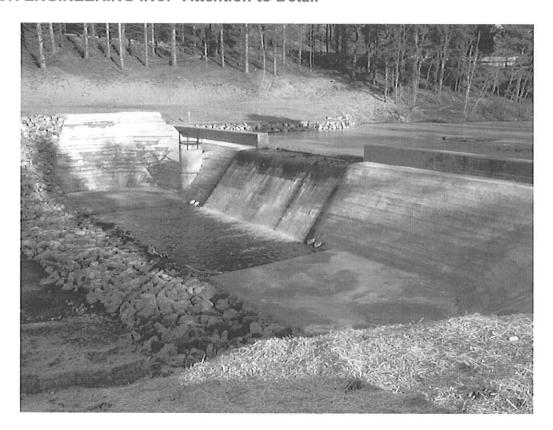
- □ TOPOGRAPHIC MAPPING
- ☐ STORM WATER CONTROLS
- □ PERMITTING
- □ PAVEMENT AND WALKS
- □ PLANS AND SPECIFICATIONS

SECTION B.3 - DAM SAFETY EXPERIENCE

- Civil Tech Experience: Civil Tech's dam experience over the last 17 years has included 37 Dam Modification Projects ranging in cost from \$50,000 to \$1,500,000. All dam projects involve civil, environmental, geotechnical, surveying/mapping, construction monitoring, and contract administration. We believe this experience makes our firm uniquely qualified for AML Design Work. Civil Tech Dam Projects are listed below.
 - 1. Rollins Dam, Evans, WV
 - 2. Seneca Dam, Pocahontas Co., WV
 - 3 Teter Creek Dam, Barbour Co. WV
 - Wells Lock and Dam, Elizabeth, WV
 - 5. Handley Dam, Handley WMA, Pocahontas Co., WV
 - 6. Anawalt Flood Damage Repair, Anawalt, WV
 - Old Pond 11, McClintic WMA, Mason Co., WV
 - 8. Burches Run Breach Plan, Moundsville, WV
 - 9. Edwards Run Dam, Cacapon Bridge, WV
 - 10. Culloden PSD Dam, Culloden, WV
 - 11. Belington Water Supply Dam, Belington, WV
 - 12. Cedar Lakes Dam No.s 1 and 2, Ripley, WV
 - 13. Joyce Lake Dam, Clarksburg, WV
 - 14. Tailings Pond No. 2, Bessemer City, NC
 - 15. City of Thomas Dam, Thomas, WV
 - 16. Fly Ash Dam, FMC Peroxide Plant, So. Charleston, WV
 - 17. Dickenson Dam, FMC Sportsman's Club, Hurricane, WV
 - 18. Brood Pond Dam, FMC Sportsman's Club, Hurricane, WV
 - 19. Winterplace Dam Modification, Winterplace Ski Resort
 - 20. Wilson Big Hollow Dam, Hampshire Co. WV
 - 21. Burches Run Dam, Marshall Co., WV
 - 22. Moncove State Park Dam, Monroe Co., WV
 - 23. Winterplace Dam Reservoir Enlargement, Winterplace Ski Resort
 - 24. Bailey Dam Rehab, Monongalia Co. WV
 - 25. Lemley Dam Rehab, Monongalia Co. WV
 - 26. Deegan Dam Modification, Bridgeport, WV
 - 27. Hinkle Dam Modification, Bridgeport, WV
 - 28. Stony River Dam Breach, Grant Co., WV
 - 29. Mill Run Dam Modification, Mt. Top PSD, Grant Co., WV
 - 30. Mt. Storm Lake Dam Flip Bucket Stabilization, Dominion Generation
 - 31. Temperature and Flow Measurement Weir Design, Dominion Generation
 - 32. White Dam Modification, Private Owner, Sissonville, West Virginia
 - 33. Berwind Dam Modification, Berwind WMA



Breach Analysis and Risk Assessment: Civil Tech has successfully used breach analysis and risk assessment to reduce the hazard classification of many of our dam projects. This analysis resulted in a reduction in the design storm and substantial savings for our clients.
<u>Facility Improvements:</u> Our dam rehabilitation projects have resulted in facility improvements including:
 □ Access For Fishermen. □ Boat Launching Ramps. □ Access Roads. □ Parking Facilities. □ Walkways □ Handicap Access. □ Toilet facilities.
Maintenance of Facility: Our personnel are sensitive to the dam setting and make every effort to complete our projects with minimal disruption of the facility. Our designs are practical and planned to fit the site.
<u>Project Photographs:</u> Representative photographs and sample drawings illustrating our Dam Rehabilitation experience are included herein.



THOMAS DAM MODIFICATION, THOMAS, WV



TETER CREEK DAM MODIFICATION, BARBOUR CO., WV

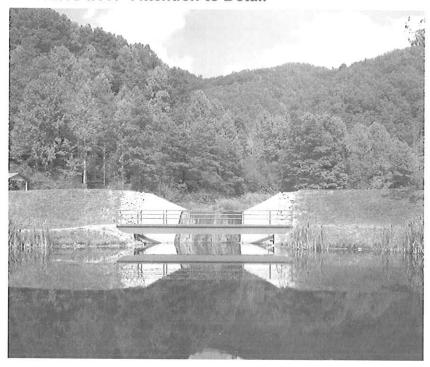


BELINGTON DAM MODIFICATION, BELINGTON, WV



WILSON DAM MODIFICATION, HAMPSHIRE CO., WV

CIVIL TECH ENGINEERING INC. "Attention to Detail"



OLD ANAWALT DAM FLOOD DAMAGE REPAIR, MCDOWELL CO., WV



BAILEY DAM MODIFICATION, MONONGALIA CO., WV



LEMLEY DAM MODIFICATION, MONONGALIA CO., WV



MONCOVE DAM MODIFICATION, MONROE CO., WV

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SENECA DAM MODIFICATION, POCAHONTAS CO., WV



PLUM ORCHARD DAM MODIFICATION, FAYETTE CO., WV

CIVIL TECH ENGINEERING INC. "Attention to Detail"



JIMMY LEWIS DAM MODIFICATION, MERCER CO., WV



WARDEN LAKE DAM MODIFICATION, HARDY CO., WV

<u>SECTION B.4</u> - <u>GEOTECHNICAL/SURVEYING</u>

<u>Civil Tech Experience</u> : Geotechnical engineering is a small, but important part of our business because so much of our work related to dams depends on geotechnical sampling, testing, and analysis. Our principals have a very strong background in this discipline from our history at Triad Engineering. Civil Tech has provided geotechnical services on a variety of projects including; mechanically stabilized walls, water and asphalt storage tanks, commercial buildings, churches, industrial equipment and buildings, etc. Typical projects for which Civil Tech has provided geotechnical engineering services include:
Steel of West Virginia Expansion, Huntington, WV Service Wire Building Damage Evaluation, Culloden, WV First Church of God, Charleston, WV Various Water Storage Tanks, WV American Water Company Asphalt Storage Tanks, MTI, Gallipolis, Ohio Bridge Replacement, Elkem Metals, Alloy, WV Zim Bagging, Wayne County, WV Wurtland Marine Harbor, Wurtland, KY Steel of West Virginia Warehouse - Greenbottom, WV HADCO Shell Building - Huntington, WV Service Wire Warehouse Expansion, Culloden and Huntington, WV Countless Landslides Throughout WV Service Wire Warehouse Expansion, Huntington and Culloden, WV Waste Site Design, Means and Methods RR Crossings, Rt. 10 Rita to Midway Plaza Highway Project, Man, WV
<u>Past Experience:</u> Our principals were directly responsible for large geotechnical projects including:
 □ Southridge Centre, Charleston, WV □ Ridgeline Development, Charleston, WV □ Cabell East High School, Huntington, WV □ Beckley Federal Prison, Beckley, WV □ Rhodimet Plant, Rhone Poulenc, Institute, WV □ Countless Highway Projects for the WVDOT □ Hazardous and Sanitary Landfills throughout WV, KY, and Ohio □ Over 120 Abandoned Mine Land Projects for the WVDEP
<u>Surveying and Mapping:</u> Surveying and mapping services are performed by our inhouse crew using electronic instruments with onboard data collectors, and computer software to reduce data and develop drawings. The work is performed under the direction of one of our Professional Surveyors. Since forming Civil Tech, we have performed field surveying necessary to develop topographic mapping and locate existing site features for most of our ongoing and past engineering projects. Clients have included:

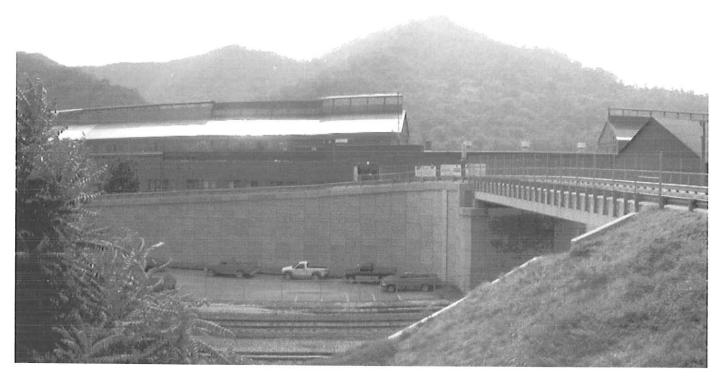
Steel of West Virginia
FMC Peroxide
Simpson - Litman Builders
WVDNR - Wildlife Section
Joyce Properties
City of Thomas
City of Belington
City of Culloden
WVDNR - Parks & Recreation
Winterplace Ski Resort
Mt. Top PSD
NewPage Corporation
Dominion Generation
WV American Water
Private Concerns

CIVIL TECH ENGINEERING INC. "Attention to Detail"



ASPHALT STORAGE TANK FARM - MIDDLEPORT TERMINALS INC.

- □ SUBSURFACE INVESTIGATION
- ☐ GEOTECHNICAL ANALYSIS
- ☐ FOUNDATION DESIGN
- □ PLANS AND SPECIFICATIONS
- □ CONSTRUCTION CONSULTATION



ELKEM METALS BRIDGE APPROACH - ALLOY, WV

- □ SUBSURFACE INVESTIGATION
- ☐ GEOTECHNICAL ANALYSIS
- ☐ FOUNDATION RECOMMENDATIONNS
- □ CONSTRUCTION CONSULTATION

CIVIL TECH ENGINEERING INC. "Attention to Detail"



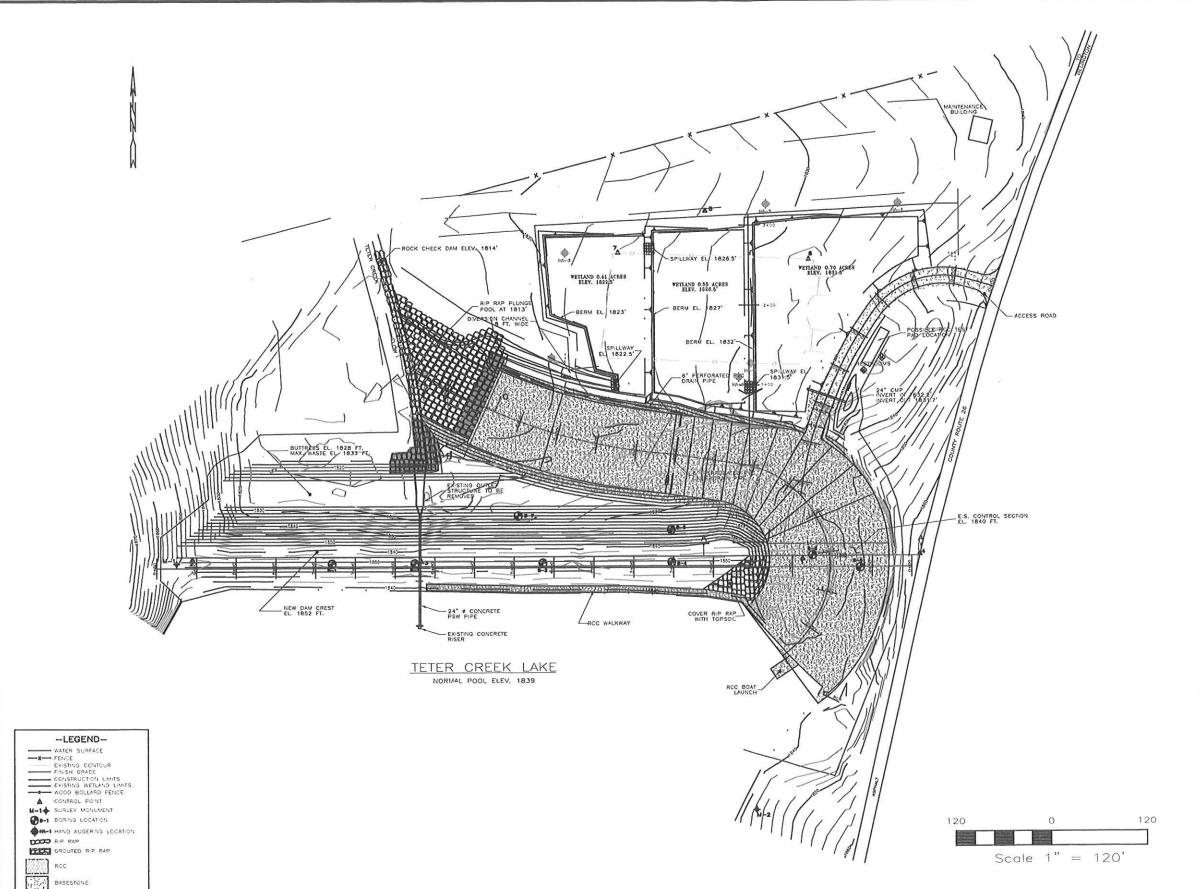
FLEMING STREET PROJECT - MONONGAH, WV

- TOPOGRAPHIC MAPPING
 - SUBSURFACE INVESTIGATION
- EROSION AND SLIDE STABILIZATION
- PLANS AND SPECIFICATIONS
- **BIDDING**
- CONSTRUCTION CONTRACT ADMINISTRATION



SARVER LANDSLIDE PROJECT - HURRICANE, WV

- TOPOGRAPHIC MAPPING
 - SUBSURFACE INVESTIGATION
- GEOTECHNICAL ANALYSIS
- DRILLED PILE WALL DESIGN AND GRADING OPTION
- PLANS AND SPECIFICATIONS
- **BIDDING**



		REVISIONS
DATE	BY	DESCRIPTION
2/22/00	RKM	ADDED PLUNGE POOL, RCC ON BEGINNING OF SPILLWAY, AND ADDED WETLAND.
3/16/00	BDJ	REMOVED BERM AND RIGHT CUT OFF WALL, AND ADDED RIP RAP.

SURVEY DATA			
CONTROL POINT	EASTING	NORTHING	ELEVATION
1	10000:000	10000.000	1846.990
2	9231.321	10000.084	1846.407
3	9519.762	9997.425	1846.647
4	10146.693	10005.343	1862 302
5	9877.703	10434.459	1826.188
6	10008.915	10373.994	1835,135
7	9767.961	10382.644	1826.185
M-1	9211.162	9995.140	1850.663
M-2	9940.742	9697.215	1844.266

NOTE: MONUMENTS ARE 1/2" REBAR

- NOTES: 1) REFER TO DRAWING NO. 98114-4 FOR PARKING LAYOUT, WALKWAY, AND BOAT RAMP INFORMATION.

 2) SEE DRAWING NO. 98114-7 FOR SECTIONS A-A AND B-B.

 3) E&S MEASURES SHOWN ON DRAWING NO. 98114-3.

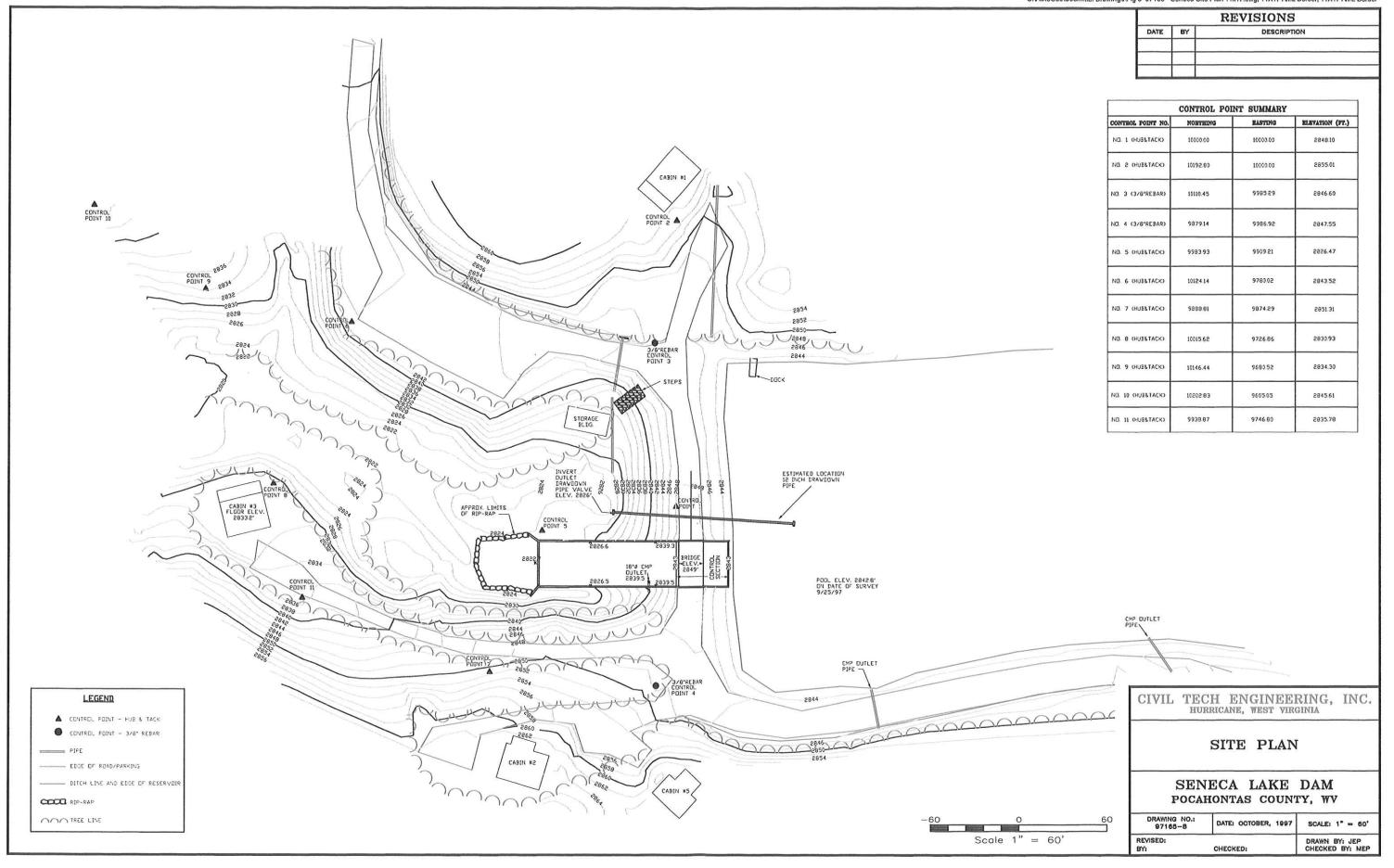
 4) SEE DRAWING NO. 98114-20 FOR SECTION C-C

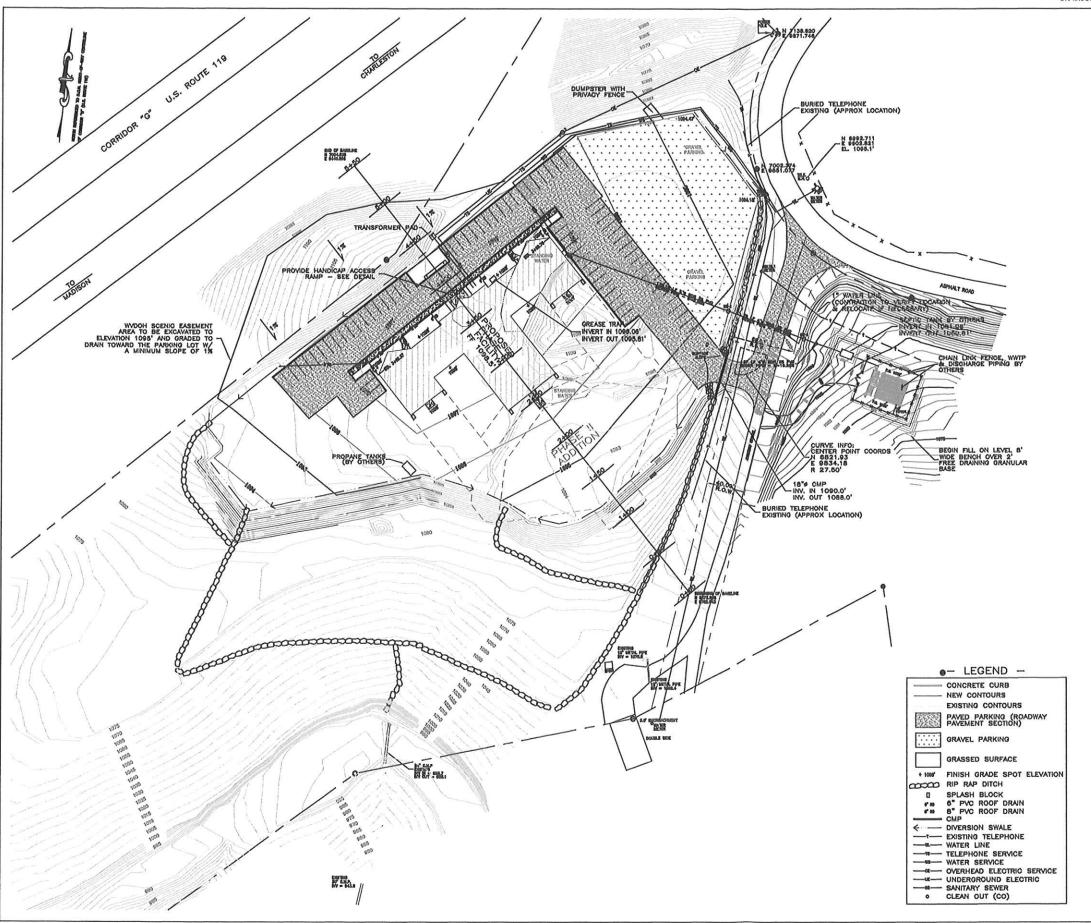
CIVIL TECH ENGINEERING, INC. ST. ALBANS, WEST VIRGINIA

SITE PLAN PROPOSED MODIFICATIONS

TETER CREEK LAKE DAM BARBOUR COUNTY, WEST VIRGINIA

DRAWING NO.: 98114-7	SOALE: 1" = 120"
DATE: APRIL 8, 1999	DRAWN BY: JOH, RK





		REVISIONS
DATE	BY	DESCRIPTION
8/8/00	BOJ	CHANGED SEWER PIPE LOCATION EXITING THE BUILDING
9/20/00	RKM	RELOCATED WATER AND SEWER LINES ENTERING/EXITING BUILDING. ADDED WWTP SURVEY/PLANT LOCATION

SITE WORK GENERAL NOTES:

8. Wasta Materiali Excess soll/rock material not needed for sits development shall be disposed of offsits at an approved borrow area, unless an onsits wasta area is approved by the Engineer. The Contractor shall compty with all environmental and erosion/sediment control requirements for the wasta area imposed by the regulatory agencies.

Povement: Base stone shall consist of of WVDOT 307-1 (Closs 1) Stone.

Aspholito base shall consist of WVDOT Base 1 mlx.

Aspholito base shall consist of WVDOT Base 1 mlx.

Aspholito searing course shall consist of WVDOT storing 1 mlx.

Aspholito searing course shall consist of WVDOT with WVDOT specifications.

Subgrade to be composed to 95% of the maximum day density as determined by ASTM D696.

See Stone to be underdain by a suitable stabilitation fabric as opproved by the England.

9. Sewer Piping (Building to Septio Tank Only): Piping shall consist of SDR 35 PVO with bell and spiget connections. Pitings shall be moided plastic suitable for solvent welding. Install with minimum slope 0.00% and provide a cleanout with sanitary likys where the piping leaves the building and 4 200 foot intervals bracefuls. Bedding and borninum an electron spice to the manufacturers recommendations. The to be nestless and borninum and electron spice over the top of the pipe. The Confliction will be responsible for installing the sanitary sever line complete beginning 0 feet from the building and extending to within 8 feet of the septio tank as shown on the Design Drawings.

10. Water Service Pipingi Woter service piping shall extend from the water meter to be installed by WV American Water to within 6 feet of the building as shown on the plans. Water service line shall be installed of a minimum depth of 4 feet below finish grade. Service piping shall comply with AWMA 0901 or 0902 for Polysthylene (PE) pressure pipe and tubing or Polysthylene (PE) pressure pipe and tubing is inch thru 3 inch for water service. Oopper piping may be used as approved by the Engineer. Pipe shall be installed in accordance with ASTM 028774. Pipe joints shall comply with ASTM 02877 Sechnique II — Butt Pupin. If the service lines is not immissiblely compressed to the motion of the supply and to the service in t

11. Curb: WVDOT Pialn Curb -Type I as modified on the detail.

12. Foundations: Design foundations for alloyable bearing pressure of 3000 psf. Extend all foundations to bear on bedrock. Minimum foundation depth is 30 inches below exterior grade for frest protection. Where depth to rock exceeds 30 inches use ison concrete to extend the foundation to rock. Foundation bearing surface to be approved by the Engineer prior to placement of concrets.

13. Building Floor Slob: The elob shall be underlain by 6 inches of compacted dry bed material to be approved by the Engineer.

nd furnished with a wall thickness of 0.078 inches and corrugations of 2-2/3 x ½ inches.

8. Electrical: AEP will furnish and install all underground cable, power pole, and transformer, he general contractor will pay for this work directly at the agreed upon price. The underground able will be pulled through plastic conduit to be installed by the Contractor as part of all works on a contract will also constitute the transformer pod in accordance with AEP requirements, or an accordance with AEP requirements. On the contractor will also consist of two (2.) B inch disenteer Prior place installed a minimum of 30 inches also agrees transformer pod the contractor of 30 inches all and the contractor of 30 inches and 10 inches a

- 18. Refer to architectural drawings for building dimensions and layout.
- 19. All disturbed areas to be revegetated in accordance with the WVDOT Section 652. Lawn area to be Type C-2. Fill and cut elopes to be Type D. Table 652.5-Seed Mixtures.
- 20. E & S measures to comply with the approved General Permit Issued by the WVDEP OWR.
- 21. Refer to sheets 97208-2 thru 97208-3.

NOTE: SURVEY PERFORMED BY SITE BLAUVELT ENGINEERS

CIVIL TECH ENGINEERING, INC ST. ALBANS, WEST VIRGINIA SITE PLAN FIRST CHURCH OF GOD KANAWHA COUNTY, WEST VIRGINIA DRAWING NO. 97208-5 SCALE: NTS DRAWN BY: RKM DATE: APRIL, 2000 CHECKED BY: MEP

