Proposal for Engineering Project Management Adviser Services

Prepared for WV Department of Administration, General Services Division, Energy Department.

CEOI GSD1900000005

By: SMC Inspections, LLC FEIN#272551717

1010 1st Avenue

Charleston, West Virginia 25302

F. Scott Mason, Member

Contact: Ph 304-345-6429 or scott.mason@suddenlink.net

3/8/2019

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

FRED SCOTT MASON, MEMBER
(Name, Title)

FRED SCOTT MASON
(Printed Name and Title)

1010 1ST AVENUE, CHARLESTON, WV 25302
(Address)

304-345-6429
(Phone Number) / (Fax Number)

SCOTT-MASON@SUDDENLINK.NET
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

SMC HOME INSPECTIONS, LLC
(Company)

Fred Scott Mason
(Authorized Signature) (Representative Name, Title)

FRED SCOTT MASON
(Printed Name and Title of Authorized Representative)

3/22/2019
(Date)

304-345-6429
(Phone Number) (Fax Number)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.:

CEOI 0211 GSD 1900000005

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

☒ Addendum No. 1	☐ Addendum No. 6
☐ Addendum No. 2	☐ Addendum No. 7
☐ Addendum No. 3	☐ Addendum No. 8
☐ Addendum No. 4	☐ Addendum No. 9
☐ Addendum No. 5	☐ Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

SMC HOME INSPECTIONS, LLC
Company

Jason Scott Mann PE
Authorized Signature

3/22/2019
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

F. Scott Mason PE

1010 1st Avenue, Charleston, WV 25302 | 304-345-6429 | scott.mason@suddenlink.net

03/27/2019

Mr. Gregory Melton

Director

General Services Division

112 California Avenue, Building 4 5th Floor, Charleston, West Virginia 25305

RE: CEOI GSD 1900000005, Engineering Project Management Adviser Services

Dear Mr. Gregory Melton:

Please find attached my proposal for the above referenced EOI. I have also attached my resume and work history for your consideration. In my career, I have had six years-experience as a Project Engineer while also serving as a mechanical lead engineer if required. In 2015 I completed 41 TAR projects for the Teflon unit at the Chemours Washington Works as a project manager. In addition, I was engineering manager for GSD for five years. My engineering skills include mechanical, electoral, and structural engineering. These skills coupled with 33 years of plan review and specification writing, provide inherent coordination of the disciplines. I was able to complete a six-year D&R project for DuPont/Chemours without a recordable injury on the project demonstrating a "Safety First" and hands on approach to projects.

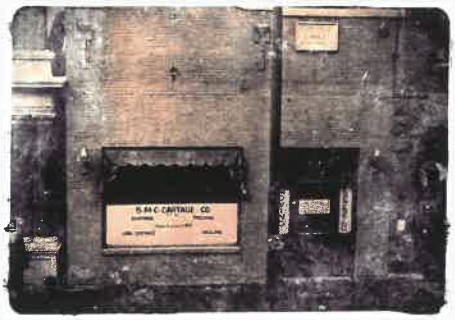
I am a long-time resident of the west end of Charleston, WV and a registered professional engineer in Ohio and West Virginia.

I would like to take this opportunity to thank-you for considering me for this position.

Sincerely,

F. Scott Mason

F. Scott Mason PE



PROFILE

F. Scott Mason PE, Member:

Mr. Mason has over 35 years of experience in all phases of Project Management, including five years as Engineering Manager for the General Services Division of The State of WV. His primary responsibilities include project management and mechanical design. He is experienced in constructability and planning, specification writing, design engineering and field engineering. His expertise includes Demolition and Removal, Chemical plant projects, Hospital and Industrial HVAC and historical building renovation.

CONTACT

PHONE:
304-345-6429
EMAIL:
scott.mason@suddenlink.net

SMC INSPECTIONS LLC.

Proposal for Engineering Project Management Advisor Services

CEOI GSD1900000005

Date 3/8/2019

TABLE OF CONTENTS:

F. Scott Mason PE (OH, WV)

304-345-6429, scott.mason@suddenlink.net

Project Manager/Mechanical Lead

Summary of Experience

Mr. Mason has over 35 years of experience in all phases of Project Management, including five years as Engineering Manager for the General Services Division of The State of WV. His primary responsibilities include project management and mechanical design. He is experienced in constructability and planning, specification writing, design engineering and field engineering. His expertise includes Demolition and Removal, Chemical plant projects, Hospital and Industrial HVAC and historical building renovation.

Detailed Experience

Project Engineer/Mechanical Lead

- Mechanical, Electrical, and Structural systems design with 33 years of experience
- Specification writer, cost estimator, and project manager.
- Mechanical experience includes design of building Heating Ventilation and Air Conditioning Systems for buildings including schools, hospitals and industrial plants
- Electrical background includes medium voltage distribution, low voltage, DC, UPS, building controls and fire alarm systems
- Structural experience includes modifications to existing buildings, and industrial cranes
- Specification experience includes many tank/equipment specifications for DuPont/Chemours. This experience provides inherent project coordination
- Engineering Manager for five years with a staff of seven personnel performing over $71M per year construction for the State of WV
- Demolition and Removal includes several projects for the DuPont Belle Plant spanning several years and totaling over $17 Million dollars.
- Project engineer for DuPont Electrical Infrastructure project and Glycolic Acid MAA reduction projects as well as many demolition projects for DuPont.
- Project manager for Chemours Bravo, Design and detailed cost estimate for Methanol Plant site utilities.
- Project Manager for 41 TAR projects for the Chemours Teflon unit at Washington Works running concurrently.
- Mechanical Integerity and API vessel reconditioning and repair.

Education

- Bachelor of Science in Mechanical Engineering, Ohio University
- Air Force Institute of Technology; Dayton, Ohio
- Air National Guard Academy of Military Science; Knoxville, Tennessee

Professional Training

- Regulatory Training Center – Aerial Lift Operator Training

- GHS: Chemical Labeling and Classification
- TWIC

Registrations/Certifications

- Professional Engineer, West Virginia, No. [redacted]
- Professional Engineer, Ohio, No. [redacted]
- Home Inspector, West Virginia, No. [redacted]

Affiliations

- Member of the Antique Auto Club of America
- Member of the Model A Ford Club of America
- Veteran of the WV Air National Guard

Value Added

- Idea #36973 Specification for D&R of Spent Acid Unit 12/19/2011, $4.7 Million in savings.
- Idea #48258 GA MAA Reduction-Eliminate pump building and pit 11/14/2013, $359 Thousand in savings.

Recent Project Experience

- Medium voltage power upgrades for the Main Unit of the WV Capitol building
- Exterior cleaning and repairs to the WV Capitol building
- Structural evaluation to State of WV Fairmont office building
- Chilled water loop modifications to WV Capitol Campus
- Acrylics D&R DuPont Belle Plant
- PG&S idle pipe and minor D&R
- DuPont Belle, Glycolic Acid MAA reduction project.
- Chemours, Project Bravo, OSBL design and estimate for methanol plant
- Chemours Washington Works, Teflon Unit TAR, 2016
- Methanol Plant construction and repairs to mechanical equipment and API vessels.
- Construction supervision and structural steel repairs.
- Methanol Plant mechanical integerity program/plant engineer.

Fred Scott Mason PE (OH, WV)-Work Experience-3/08/2019
(Beginning with most recent)

State of West Virginia, General Services Division, 112 California Avenue, Building 4, 5th Floor, Charleston, West Virginia 25305
September 17, 2018 to March 8, 2019, Supervisor: David Parsons

Temporary Engineer:

- Design of various energy saving and maintenance projects for the Capitol Complex.
- Coordination with various State Agency's including Culture and History.
- Specification writing.

US Methanol LLC, 400 Capital Street, Suite 200, Charleston, WV 25301
November 1, 2017 to June 1, 2018, Supervisor: Jeff Beverly

Title-Plant Engineer, Institute/Mechanical Lead Engineer PE:

- Methanol Plant Mechanical Integrity, Equipment reconditioning/repairs.
- Structural Steel design/repairs.
- API vessels/exchangers reconditioning and repairs.
- Construction supervision.

Chenega, 3000 C Street, Suite 301, Anchorage, AK 99503 & Global Tech. Services, 3301 C Street, Suite 400, Anchorage, AK 99503
January 31, 2017 to November 1, 2017 Supervisor: Jason Belcher

Title-Engineer Region C9, 99th Regional Support Command, US Army Reserve:

- Mechanical engineer/specification writer for oil/water separator replacement for Charleston, WV AFRC/AMSA
- Mechanical engineer/specification writer for revised drainage system for Clarksburg, WV AMSA #2

KBR, 2403 Fairlawn Avenue, Dunbar, West Virginia 25064
January 12, 2015 to May 6, 2016, Supervisor: Jeremy Perry

Title-Project Manager/Mechanical Lead Engineer PE:

- Project manager, for the Chemours Bravo project. That includes the design and detailed cost estimate for Methanol Plant site utilities.
- Mechanical engineer/specification writer for DuPont Blackhawk project HVAC renovations, in Nevada Il.
- Project Manager for 41 TAR projects for the Chemours Teflon unit at Washington Works running concurrently with a value of $30 million dollars.
- Mechanical engineer, specifying decanter tanks for the Teflon unit at Chemours Washington Works.
- Mechanical engineer specifying tanks and pumps for DuPont MeSH unloading at LaPorte TX.

Jacobs Engineering, 5000 Elk River Road South, Elkview, West Virginia

September 12, 2011 to January 9, 2015, Supervisor: Thomas Kay PE

Title-Project Engineer/Mechanical Lead Engineer PE:

- Demolition and Removal includes several projects for the DuPont Belle Plant spanning five years and totaling over $17 Million dollars. Credited with $4.7 million in savings.
- Project engineer for DuPont Electrical Infrastructure project and Glycolic Acid MAA reduction projects. Credited with $359 thousand in savings.
- Project manager for DuPont Bravo, Design and detailed cost estimate for Methanol Plant site utilities.

State of West Virginia, General Services Division, 1900 Kanawha Blvd. East,
Room MB60, Charleston, West Virginia

9/29/2006 to 10/5/2011, Supervisor: David M Oliverio

Title-Engineering Manager PE:

- Engineering Manager for State of WV supervising seven engineers, architects, and construction managers.
- Responsible for $71 million dollars in renovation and construction.
- Provided engineering support for WV State Capitol complex boiler and chiller facilities.
- Responsible for all WV Capitol Complex buildings including the State Capitol Building.

Your **ACTIVE PE** renewal fee has been received...

Your ACTIVE PE renewal fee has been received. Your pocket card indicating you are entitled to practice engineering in West Virginia until the noted expiration date may be detached and used unless invalidated as a result of Board audit of your renewal form or formal disciplinary action.

IMPORTANT REMINDERS:

1. Please include your WV ACTIVE PE license number on any correspondence to this office.
2. To use this license as a pocket card, please cut along the dotted line and laminate if desired.
3. You are required to immediately notify the Board, in writing, of the following: loss or theft of license or seal, any name change, any address change, or any employment change.

West Virginia State Board of Registration for Professional Engineers

300 Capitol Street, Suite 910
Charleston, West Virginia 25301
304-558-3554 Phone
800-324-6170 Toll Free
www.wvpebd.org

THIS IS ONE FORM OF YOUR RENEWAL RECEIPT

PLEASE SAVE THIS FOR YOUR RECORDS

Date of Renewal: December 8, 2018
Amount Paid: $70.00

West Virginia State Board of Registration for Professional Engineers

FRED S. MASON
WV [redacted]

This is to certify that the above named PROFESSIONAL ENGINEER has met the requirements of the law, is duly registered and is entitled to practice engineering in the State of West Virginia.

EXPIRES December 31, 2020

FRED S. MASON
[redacted]

Ohio | eLicense Ohio Professional Licensure

License Look Up

8/1/2018 11:54 AM

Fred Scott Mason

Status	Active
Sub-Status	
Board	Engineers and Surveyors Board
License Type	Professional Engineer
License Number	[redacted]
License Issue Date	12/19/1997
License Expiration Date	12/31/2019
License Effective Date	01/01/2018
City	Charleston
State	WV
Country	United States
Board Action	No

Current date & time: **8/1/2018 11:54 AM**

Disclaimer: The Joint Commission and NCQA consider on-line status information as fulfilling the primary source verification requirement for verification of licensure in compliance with their respective credentialing standards.

As authorized by WV Title 87 Series 5: Certification of Home Inspectors, the following Certificate of Registration has been issued to:

FRED S MASON

ADDRESS: 1010 1ST AVE., CHARLESTON, WV 25302-

PERMIT NUMBER: [redacted]

TYPE: HOME INSPECTOR

EMPLOYER: SMC HOME INSPECTIONS

PERMIT EXPIRATION DATE: 6/30/2019

WEST VIRGINIA
STATE FIRE MARSHAL
EST. 1909

STATE FIRE COMMISSION
WEST VIRGINIA

Scott Mason

has successfully completed

OSHA 10 Hour Training Course for Construction

Instructor: Jonathan R. Trout

February, 28th two thousand nineteen

CERTIFICATE OF TRAINING

This certifies that

Scott F. Mason

has successfully completed the training
program requirements for

WV Confidentiality Agreement

Awarded on this **2nd** day of **October 2018**

SUSAN C. HAGA

CERTIFICATE OF TRAINING

This certifies that

Scott F. Mason

has successfully completed the training
program requirements for

West Virginia Cybersecurity Awareness Training
2018-2019

Awarded on this **2nd** day of **October 2018**

DANIELLE N. COX

CERTIFICATE OF TRAINING

This certifies that

Scott F. Mason

has successfully completed the training
program requirements for

West Virginia Information Security Awareness Training 2017-2018

Awarded on this **2nd** day of **October 2018**

DANIELLE N. COX

CERTIFICATE OF TRAINING

This certifies that

Scott F. Mason

has successfully completed the training
program requirements for

Think WV Privacy

Awarded on this **3rd** day of **October 2018**

SUSAN C. HAGA

References 2019, for F. Scott Mason PE.

(scott.mason@suddenlink.net)

Mr. David Parsons, Energy Manager

General Services Division, 112 California Avenue, Building 4, 5th Floor, Charleston, West Virginia, 25305

304-957-7122 Office

304-610-1706 Cell

Mr. James Hawley, Custodial Manager

General Services Division, 112 California Avenue, Building 4, 5th Floor, Charleston, West Virginia, 25305

304-558-2335 Office

304-541-3665

Mr. Roger Wines, Maintenance Manager

General Services Division, 112 California Avenue, Building 4, 5th Floor, Charleston, West Virginia, 25305

304-558-2335 Office

304-541-3665

Mr. Jeremy Perry, Mechanical Dept. Manager

KBR REO-Charleston

1-406-672-1355 Cell

jeremyrayperry@gmail.com

Mr. Philip Farley, Assistant Director

Department of Military Affairs and Public Safety, Division of Administrative Services

1201 Greenbrier Street, Charleston, WV 25311

Phone: 304-558-2036, ext: 53463

Phone: 304-558-2350, ext: 53463

Cell: 304-549-1050

Email: Philip.K.Farley@wv.gov

Final Grades

B00064325 Fred S. Mason
Spring 2015
Jun 05, 2015 02:05 pm

Student Information

Current Program
Associate Degree

Level:	Undergraduate Level
Program:	Associate in Applied Science
Admit Term:	Spring 2015
Admit Type:	Admitted
Catalog Term:	Spring 2015
College:	BridgeValley CTC
Campus:	Montgomery Campus
Major and Department:	Industrial Pipe Dsgn Tech-AAS, Electromechanical & Process
Academic Standing:	Good Standing

Undergraduate Level Course work

CRN	Subject	Course	Section	Course Title	Campus	Final Grade	Attempted	Earned	GPA Hours	Quality Points
1389	DRFT	287	I02	PDMS	Course - Home Campus	B	3.000	3.000	3.000	9.00

Undergraduate Level Summary

	Attempted	Earned	GPA Hours	Quality Points	GPA
Current Term:	[redacted]				
Cumulative:					
Transfer:					
Overall:					

Select another Term

RELEASE: 8.4

Goal 1

Goal one requires the ability to review construction spec. and drawings. Please refer to the projects tab and note page one, where the author created the specifications for the new boiler plant for building 6. This project has just been awarded for construction (CIMCO). Pages five and six as well as nine provide examples of project drawings as well plan notes that were created by the author for GSD energy projects. To further meet the agency's goals the author is versed in the flowing design programs:

Visio, Microsoft word, Microsoft project, Adobe, Trane CDS, PDMS

PDMS is a 3D piping program that is widely used I the chemical industry. The training for PDMS is considered a collage level course. The authors grades are included under tab 5. The author has over 30 years' experience as a plan reviewer.

Goal 2

Goal two requires the ability to troubleshoot, various type of HVAC systems. Please refer to the projects tab page one. The author has designed the building six boiler plant twice. Once in 1997 and again in 2019. Projects tab page two, shows the redesign on the building 5 high pressure boiler plant that was done in 2005. Recently the author has been involved in trouble shooting problems with the air-cooled chiller and ice plant at the GSD Fairmont building. The author has also been tasked to trouble shoot problems with the building 1 house and senate air handling units being starved of chilled water.

During the authors time with the GSD energy department as well as previous experience as the GSD engineering manager, the author has worked with or designed the following systems.

- Roof top cooling and heating units, (such as the one on building 11)
- The central chiller plant, (were an energy savings experiment involving Culture & History just concluded)
- Heat Pumps, (such as the Building 17 Chilled water interconnect now in the bidding phase)
- Steam radiators and reheats (such as the continuing humidity problems in building 1)
- Water and steam heat exchangers, (such as the Building 17 Chilled water interconnect now in the bidding phase)
- Ice generation plants (such as the chiller and ice plant problems at the Fairmont building.)
- Centrifugal chillers (such as building 11, were an energy savings experiment involving Culture & History just concluded)
- Air cooled chillers, (such as the chiller and ice plant problems at the Fairmont building.)

The author has 33 years of experience, including the maintenance and modification of obsolete HVAC and electrical systems some dating back to the turn of the last century.

Goal 3

Goal three requires experience with construction administration. The author was the Project Engineer for a $17 million-dollar D&R project at the DuPont Belle plant that spanned over 6 years. Duties included construction supervision as well as Mechanical, Electrical, and Structural engineering support as the project's only engineer. The author was credited with saving DuPont over six million dollars during the project bidding process.

The author was Engineering Manager for five years with a staff of seven personal performing over $71M per year construction for the State of WV including the renovation of the Capitol Café (see projects tab page 4).

The author was project engineer for DuPont Electrical Infrastructure project and Glycolic Acid MAA reduction projects for DuPont.

The author was project manager for Chemours Bravo, Design and detailed cost estimate for Methanol Plant site utilities.

The author was Project Manager for 41 TAR projects for the Chemours Teflon unit at Washington Works running concurrently.

The author was responsible Mechanical Integrity and API vessel reconditioning and repair for US Methanol, supervising TEAM inspection of pressure vessels and boilers.

Goal 4

Goal four requires experience with coordination with other state agencies. The Author has coordinated with other agency's including design of a replacement data room unit for DOT (see projects tab page 6). The author was the lead contact for the recent chilled water temperature experiment involving **Culture & History**. The author has given presentations to the **Capitol Building Commission** on behalf of **The Division of Protective Services** (Governor's Mansion Fence). The author coordinated with various Constitutional Officers and the House and Senate during the electrical upgrades to building one (see the projects tab page 8). The author was tasked with an evaluation of the Anthony Correctional Center for the **Department of Corrections**. Within three days of receiving the task the report was delivered to the Director of General Services. (Contact Mr. Phillip Farley for additional information).

The author has successfully completed the IT department class on "West Virginia Cybersecurity Awareness Training", "WV Confidentiality Agreement", "Think WV Privacy", "West Virginia Information Security Awareness Training 2017-2018".

Safety: Six years of chemical plant D&R without a recordable injury on the project.

Goal 5

Goal 5 requires professional registration. The author is a registered professional engineer in **Ohio and West Virginia** as well as a registered home inspector in West Virginia (see tab 3). The author has no obligations, either contractual or personal to any A/E firm, vender or Contractor in the United States of America.

Goal 6

Goal six requires the willingness to work in the GSD offices. The author is a long-time resident of Charleston's West Side, having lived at 1010 1st Avenue for almost 20 years. The author has worked with Mr. Dave Parsons in building #4 for the last six months. The author has passed the proper background checks and has been issued a maintenance door pass. I am willing and able to work at the agency's offices.

The existing boiler plant for building 6 was designed in 1997 by the author to replace two condemned Clever Brooks boilers installed in 1967. The noncondensing modular hot water boilers were considered cutting edge technology at the time. In 2019 the GSD Energy Depart designed, wrote project specifications, and bid a replacement system using condensing boiler for greater economy. The bids for the new system all fell within the project estimate range. The project is projected to sane about 15% on fuel cost over the existing boiler system.

The existing high-pressure boiler plant was installed in 2005-2006 as part of the ESCO campus wide energy saving project. The design as presented located the three boilers at various parts of the 11th floor requiring additional piping and making the design unnecessarily complex. The GSD Engineering Manager redesigned the plant to consolidate the boilers and auxiliary. At this same time feed water heating was added to increase economy and reduce the shock on the boilers. At this time the design was modified in house to include an additional boiler for a future Lottery building that was to be built on the campus.

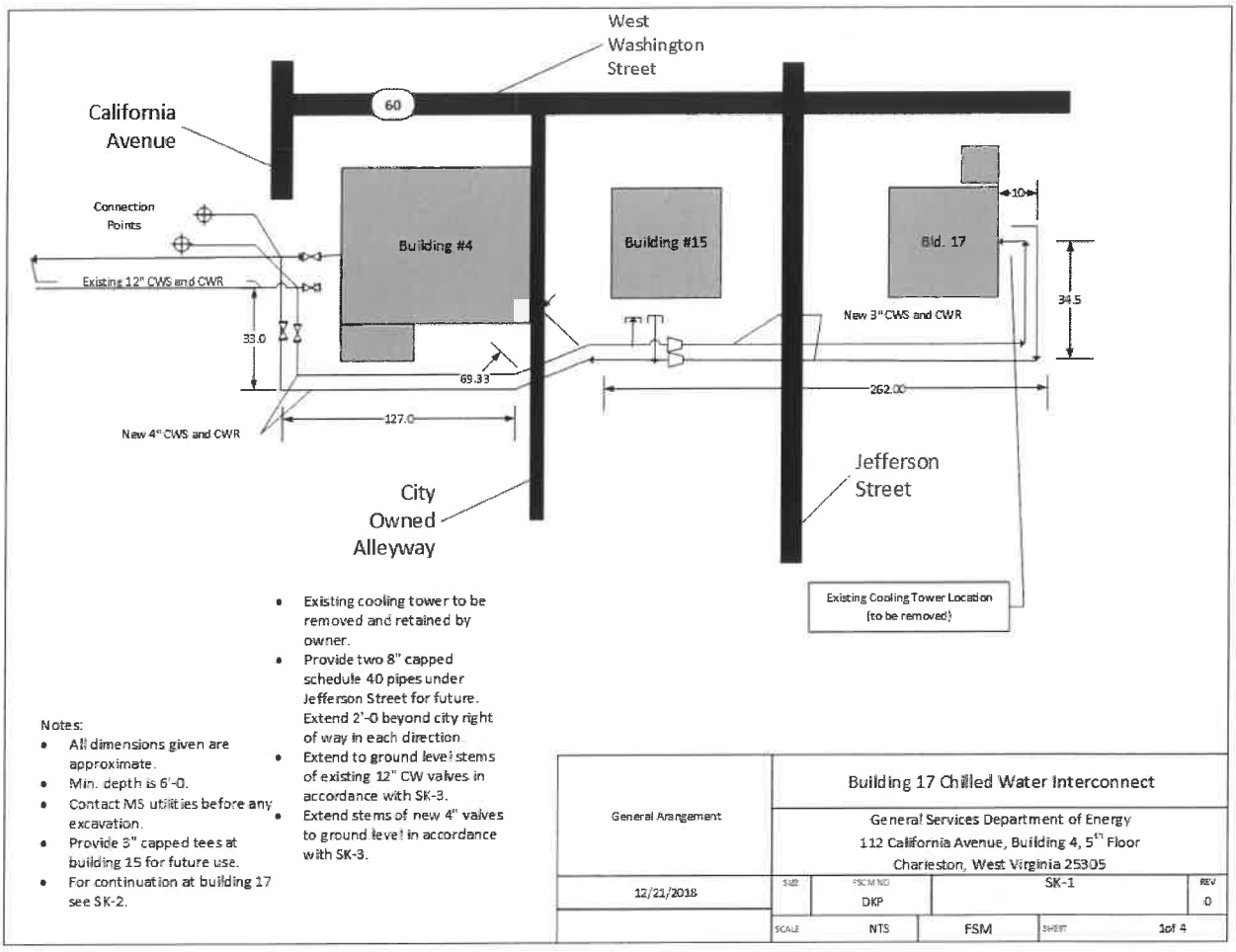
In 2018 the GSD Energy Department began a program to improve the efficiency of the main high-pressure boiler plant. The main thrust is intended to include stack economizers that are projected to save about 15% of the yearly fuel bill which is about $750,000/year.

The Chiller plant HVAC system for building 11 was designed by ZDS for GSD. The roof top units' weight was more than the roof could accommodate with out structural modifications to the building. The structural consultant for ZDS (Carol Stevens) was determined to be charging an excessive fee. The GSD engineering manager designed the structural modifications to building 11 and the project drawings and specifications were done at his direction.

Other structural projects by the author include the deaerator tank structural steel for the building 5 boiler plant, removing a wall at the Governor's Mansion for the kitchen renovation, and designing structural steel for the proposed building 5 boiler plant economizers.

In 2005, the author, was appointed as the project manager for the Capitol Café project. The project manager was responsible for D&R, asbestos abatement, as well as supervision of the general contractor (Wiseman). The project manager was responsible for coordination with the A/E firm (ZMM) as well as the kitchen consultants, state agencies, and the Governor's office. The project manager was responsible for the upsized utilities required and coordinated the same with the Building 1 electrical upgrades also under construction.

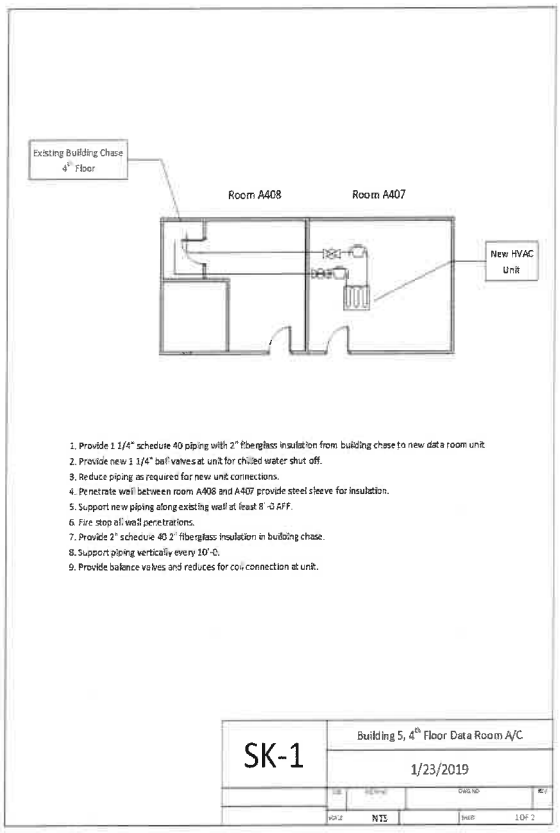
The Capitol Café Project D&R disclosed the huge problem with abandoned cabling in building 1. This kicked off a $2.5 million-dollar project by OT to remove the unused communication cables and consolidate the computer rooms. The OT personal involved were directly supervised by the author.



The soon to be bid, Chilled Water Interconnect will provide cooling to building 17 by connecting it to the campus chilled water loop. The existing building heat pump unit will be served via a water to water heat exchanger located in the existing building mechanical room. The project will eliminate the existing failing building cooling tower. By elimination of the cooling tower the project will remove an existing eye sore, reduce the maintenance costs, and make the replacement unnecessary. The project required close coordination with the City Engineers Office as well as The Charleston Sanitary Board. The lines are sized, and taps provided for future interconnect of building 15. The entire project from conception to bidding was the product of GSD Energy Department.

Projected Project Cost: $150,000.00

Projected Project Savings: TBD



The GSD Energy Department was asked to review and redesign an inadequate vender proposal that DOT had solicited to correct and ongoing waste issue in their 4th floor mechanical room. Without input from GSD and for, an unknown amount of time, the data room was cooled by a pass-through data unit that used domestic water for cooling and then dumped it down the drain. The effect approximately 53 GPM 24 hours per day, seven day a week charged to the building 5 water and sewage bill. Both bills paid by GSD. GSD Energy Department sized the equipment and provided plans and an RFQ for the proposed solution.

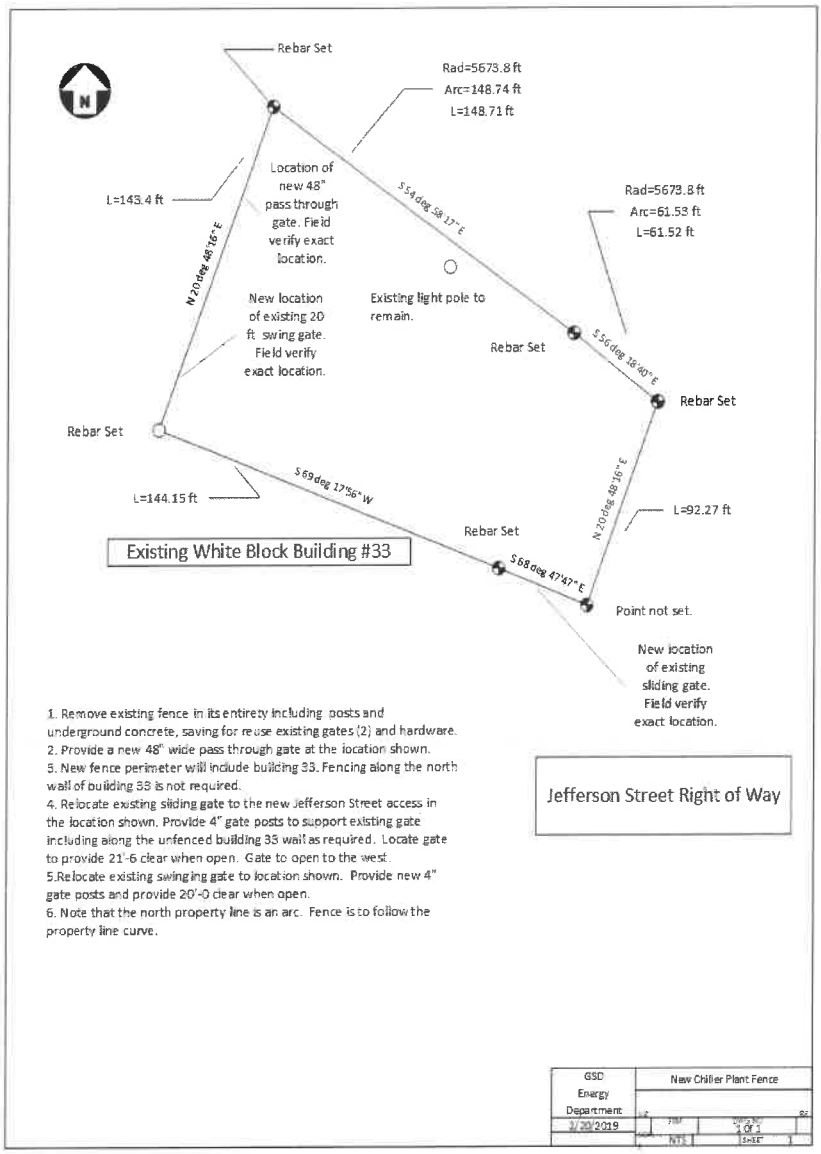
Projected Savings: TBD

In early 2006 the existing switchboards for buildings 5-6-7 which were installed in 1967 experienced a catastrophic failure when a contractor overloaded a freight elevator. The existing switches were located in an open courtyard exposed to weather and susceptible to sabotage. After thoroughly investigating the building electrical, layout including two medium voltage switches that belonged to AEP, GSD produced a new layout for the new switchboards and transformers. These documents were turned over to an A/E firm (ZMM) for final design and enclosure of the courtyard. GSD supervised the A/E firm during design and had a substantial input in the final design documents.

Since this project impacted every tenant in the building, GSD was tasked with coordination with the agencies including the OT computer room. The GSD team coordinated the several electrical outages to ensure minimal impact on the tenants.

In 2005 an inspection of the building 1 medium voltage power systems was conducted by AEP and found to be so deficient that they considered cutting off power to the building. The GSD engineering manager designed the new systems, selected the new equipment, and produced the new bid documents. The power system effected all the occupants of building 1 and the various outages required (including the first complete power down since 1932) had to be coordinated with the constitutional officers, the Governor's office, and well as the House and Senate. The electrical project was completed on time and budget with the help of the contractor (Brown Electric).

Since the Capitol Café project was running concurrently with the power upgrade coordination was to provide upgraded utilities to the Café project.



The proposed ice plant for building 11 requires extending the existing fence to include part of Jefferson Street (which will be deeded to Administration by the city). The extension of the fence is the first step towards the proposed ice plant. The proposed ice plant was studied by the engineering department at West Virginia University and found to be economically viable. As part of an energy department study, an experiment was conducted in December 2018 that sought to raise the chilled water temperature in cooperation with Culture and History. The experiment was a success with building 9, but uncovered several other weak points in the system.