



165 Capitol Avenue
Hartford, CT 06106-1658

February 24, 2014

Karen LeBuffe
IBM Customer Relationship Representative
IBM Corporation
One Financial Plaza
Hartford, CT 06103


Re: Master Agreement A-99-031

Dear Ms. LeBuffe:

I have received your request to update the Product Schedule associated with the above noted Department of Administrative Services Master Agreement. **This change adds IBM Services for Site Planning Assistance per the attached quotation.**

Given the Terms and Conditions of this agreement, the request to update the Product Schedule is approved. A copy of your Product Schedule update request is attached to this letter. Please consider the services a part of the associated Master Agreement and file this approval with the appropriate agreement for future reference.

Thank you for your interest in doing business with the State of Connecticut.



Jean Del Greco
Contract Specialist
Procurement Services

cc: Master Agreement File A-99-031



*One Financial Plaza
Hartford, CT 06103*


February 24, 2014

Ms. Jean Del Greco
Contract Specialist
Department of Administrative Services
165 Capitol Avenue, 5th Floor South
Hartford, CT 06106-1658

Subject: Product Schedule Update to Master Agreement A-99-031

Dear Ms. Del Greco,

IBM would like to add IBM Global Technology Services for Site Planning Assistance to Master Agreement A-99-031 per the attached Services Supplement. Please advise if you have any questions or need additional information. Please provide us with your written or email concurrence to the above.



Karen LeButte ✓
IBM Customer Relationship Representative
860-275-5714
lebuffe@us.ibm.com



**AN IBM Global Technology Services
Optional Services Supplement For**

**Site Planning Assistance
for the Groton, CT Location**

**Prepared for
State of Connecticut**

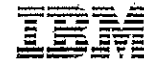
**101 East River Drive
East Hartford, CT 06108-3285**

February 10th, 2014

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Optional Services Supplement: Site Planning Assistance



State Agreement Number: A-99-031

This Optional Services Supplement is between State of Connecticut (also called "you", "your" or "Customer") and the IBM legal entity referenced below ("IBM").

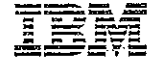
1. Optional Services Supplement

This Optional Services Supplement defines the scope of work to be accomplished by IBM under the terms and conditions of the IBM Agreement for Business Recovery Services for The State of Connecticut Agreement #A-99-031 ("the Agreement"). The tasks to be performed by IBM are defined and an estimated schedule is provided. In addition, the responsibilities of the State of Connecticut are listed:

The Optional Services Supplement includes the following subsections:

- General Assumptions
- IBM Responsibilities
- The State of Connecticut Responsibilities
- Estimated Schedule
- Deliverable Materials
- Completion Criteria
- Charges
- Signature Page

Optional Services Supplement: Site Planning Assistance



State Agreement Number: A-99-031

2. General Assumptions

This Optional Services Supplement is based on the following assumptions:

1. This Optional Services Supplement addresses only the following:
 - Site Planning for the Pfizer site location
 - Design Services
 - Configuration (Engineering Services)
 - Product Specification
 - Bill of Materials
 - Implementation Services
 - Commissioning Services

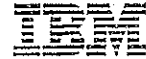
If any assumptions change or become invalid, the Charges, Estimated Schedule and other terms and conditions may change through invocation of the "Project Change Control Procedure" (refer to Appendix B).

3. Scope of Work

IBM to provide design, project management, and commissioning services to meet the initial data center configuration of up to 570KW of PDU capacity and MEP configuration as illustrated in this Scope of Work for the Pfizer site located in Groton, CT. To the extent there is any contradiction, inconsistency or ambiguity between the terms of this SOW and the Agreement identified below, this SOW will govern.

3.1 Facilities and Hours of Coverage

- a. The Services will be performed onsite at State of Connecticut's location in Groton, CT, and off-site, at IBM location(s). Associated charges will be invoiced to State of Connecticut. State of Connecticut understands IBM is permitted to use global resources (non-permanent residents used locally and personnel in locations worldwide) for purposes of administrative functions such as order management, billing and collections. IBM will use domestic resources only for design activities listed herein.
- b. IBM will provide the Services during normal business hours, 8:00 a.m. to 5:00 p.m. Monday through Friday in State of Connecticut's time zone, except national holidays, unless otherwise specified. In some cases, State of Connecticut may be required to provide access to its locations outside normal business hours, as mutually agreed between State of Connecticut and IBM.



4. Definitions

Capitalized terms not defined in this SOW are defined in the Agreement.

ATS – Automatic Transfer Switch

AHJ – Authority Having Jurisdiction

ACR – Air Conditioning & Refrigeration

CRAC – Computer Room Air Conditioner

Commissioning – Configuration, Start-up, and Testing

DX – Direct Expansion

EPO – Emergency Power Off

IFC – International Fire Code

MEP – Mechanical, Electrical, & Plumbing

NEC – National Electrical Code

NEMA – National Electrical Manufacturer's Association

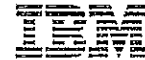
NFPA – National Fire Protection Association

PDU – Power Distribution Unit

RPP – Remote Power Panel

SOW – Statement of Work

UPS – Uninterruptible Power System



5. Services

5.1 Project Management Services

5.1.2 IBM Project Management Responsibilities

The purpose of this activity is to provide an IBM Project Manager who will establish a framework for communications, reporting, procedural and contractual activities for the Services. The IBM Project Manager will:

- a. review the SOW, and any associated documents, with the State of Connecticut Point of Contact;
- b. coordinate and manage the technical activities of IBM's personnel;
- c. establish and maintain communications through the State of Connecticut Point of Contact, as defined in the section entitled "State of Connecticut Point of Contact Responsibilities" below;
- d. review and administer the Project Change Control Procedure with the State of Connecticut Point of Contact, as defined in this SOW;
- e. prepare within three (3) weeks of purchase order receipt, and maintain the project plan which lists the activities, tasks, assignments, milestones and estimates for performance of this SOW;
- f. measure, track and evaluate progress against the project plan;
- g. help resolve deviations from the project plan with the State of Connecticut Point of Contact;
- h. conduct regularly scheduled meetings as defined in this Scope of Work, with the State of Connecticut project team to review the project status;
- i. prepare BI-weekly Status Reports.

Completion Criteria:

This activity will be complete when the other tasks described as IBM Responsibilities have been completed, according to IBM's completion criteria, or the data center has been commissioned.

Deliverable Materials:

- BI-weekly Status Reports
- Initial Project Plan

5.1.3 State of Connecticut Point of Contact Responsibilities

Prior to the start of the Services, State of Connecticut will designate a person ("State of Connecticut Point of Contact") with whom all communications relative to the Services will be addressed. The State of Connecticut Point of Contact will:

- a. complete and return any IBM questionnaires or checklists within five (5) business days of receipt, if applicable or mutually agreed to;
- b. ensure that IBM is provided with accurate details of the existing building structural, architectural, electrical, mechanical and fire detection/suppression systems;
- c. serve as the interface between IBM's project team and all State of Connecticut departments participating in the Services;
- d. ensure that communication with the State of Connecticut subcontractor(s) is through the IBM Project Manager;
- e. obtain and provide applicable information, data, consents, decisions and approvals as required by IBM to perform the Services and as set forth in the Project Plan, within two business days of IBM's request if applicable or mutually agreed to;
- f. approve the Project Plan and work with the IBM Project Manager on contributions to, and administration of, the Project Plan;

- g. advise building landlords and any other authorities at your location of the work that will take place and obtain any necessary approvals in writing and any required permits for work to be performed as detailed in the Project Plan;
- h. help resolve Services issues, and escalate issues within State of Connecticut's organization, as necessary;
- i. approve equipment submittals and bills of materials for all IBM furnished equipment;
- j. assist in the coordination and expediting the delivery of the IBM supplied equipment to meet the required delivery dates for the project;
- k. assist with the coordination and management of the project design and improvements;
- l. provide the required purchase order prior to starting the project; and
- m. administer the Project Change Control Procedure with the IBM Project Manager.

5.1.4 State of Connecticut General Responsibilities

The responsibilities listed in this section and those listed in Section IBM Responsibilities are in addition to those responsibilities specified in the Agreement and its Supplement. IBM's performance is dependent upon the State of Connecticut's management and fulfillment of its responsibilities, at no charge to IBM. Any delay in performance of the State of Connecticut responsibilities may result in additional charges and/or delay of the completion of the Services. Such additional charges and/or delay will be handled in accordance with the Project Change Control Procedure, as applicable. State of Connecticut will:

- a. provide all necessary security badges and clearance for access to all locations as required at the start of the project;
- b. make appropriate personnel available to assist IBM in the performance of its responsibilities;
- c. provide all information and materials reasonably required to enable IBM to provide the Services. You agree that all information disclosed or to be disclosed to IBM is and will be true, accurate and not misleading in any material respect. IBM will not be liable for any loss, damage or deficiencies in the Services arising from inaccurate, incomplete, or otherwise defective information and materials supplied by you;
- d. ensure that current maintenance, license, and other appropriate agreements are in place with third parties to enable IBM to perform the Services under this SOW, where you are using or providing IBM with third party information, support or materials for a project including but not limited to, where you are employing other suppliers whose work may affect IBM's ability to provide the Services. Unless specifically agreed to otherwise in writing, you will be responsible for the management of the third parties and the quality of their input and work. Except to the extent IBM specifically agrees otherwise in this SOW, you are solely responsible for any third party hardware, software or communications equipment used in connection with the Services;
- e. unless otherwise expressly stated in this SOW, be responsible for ensuring your own compliance with all laws and regulations, including but not limited to, those pertaining to product safety and regulatory compliance for non-IBM products including those recommended by IBM. You are solely responsible for obtaining advice of competent legal counsel as to the identification and interpretation of any relevant laws, rules and regulations that may affect your business and any actions you may need to take to comply with such laws. IBM makes no representations or warranties with respect to product safety or regulatory compliance of non-IBM products;
- f. take all reasonable precautions and implement all safety related procedures reasonably requested by IBM for the purpose of providing the Services described herein;
- g. acknowledge and agree that IBM does not provide legal services or represent or warrant that the services or products IBM provides or obtains on your behalf will ensure your compliance with any particular law, including but not limited to any law relating to safety, security or privacy;
- h. Communicate with your landlord and receive any required approvals prior to starting the project; and
- i. The State of Connecticut acknowledges that all preexisting equipment, along with any systems of which the equipment are a part of the Pfizer data center, have not been tested, re-commissioned or otherwise inspected prior to commencing these Services. IBM shall not have any responsibility or liability in connection with the functionality or performance of any pre-existing equipment or systems, or the lack thereof, before or after the service.

5.1.5 Mutual Responsibilities

IBM and State of Connecticut will comply with applicable export and import laws and regulations, including those of the United States that prohibit or limit export for certain uses or to certain end users, and each of us will cooperate with the other by providing all necessary information to the other, as needed for compliance. Each of us shall provide the other with advance written notice prior to providing the other party with access to data requiring an export license.

5.2 Site Planning Assistance Services

5.2.1 Overview

The State of Connecticut Department of Administrative Services/Bureau of Enterprise Services (DAS/BEST) commissioned IBM to perform a Data Center study to evaluate the Pfizer Data Center facility located at Building 230, 445 Eastern Point Road, Groton, CT 06340. The primary intent of the Data Center study was to determine the feasibility of utilizing the Pfizer Data Center as a replacement Data Center for the DAS/BEST hardware currently located at 101 East River Drive. Appendix C, D, and E are attached to this scope of work as referenced from IBM's initial Data Center Study.

IBM also will provide in Section 5.2 of this scope of work the design services to reconfigure the existing Pfizer Data Center to provide up to 570KW of PDU capacity, and additional cooling units to achieve up to 570 KW of cooling capacity when running on the backup chillers.

5.2.2 IBM Responsibilities

Activity 1 - Project Kickoff Meeting

The purpose of this activity is to facilitate a high-level project kickoff meeting for the State of Connecticut Point of Contact for up to two (2) hours on a mutually agreed date and time to:

Task 1 - Project Kickoff Meeting

- Review the project scope of work with the State of Connecticut Point of Contact;
- Review the project schedule and discuss major milestones;
- Review the design standards for the data center;
- Review the current load and load capacity for the electrical and mechanical systems; and
- Review the programming requirements.

Completion Criteria: The Project kickoff meeting will be considered complete when the meeting has taken place.

Deliverable Materials: None

Activity 2 - Design and Engineering Services

The purpose of this activity is to provide the design and engineering services required to develop the design documents for approval by the local Authority Having Jurisdiction (AHJ). The following services are included:

1. IBM design services shall include providing the professional services required for the complete project, as defined in this Statement of Work and shall include assisting with obtaining permits for the data center alterations, and mechanical, fire detection/suppression, IT cabling and electrical systems modifications.
2. IBM will determine and verify existing conditions and field design criteria related to this project, and will check and validate the information contained in available as-built drawings provided by State of Connecticut with the requirements for this project.
3. The proposed design documents are plans for approval by the AHJ. The plans will be developed for obtaining building permits and/or specifications required for competitive bidding.
4. The design documents will be submitted for the AHJ for plan review and the building permit process.

The major tasks for design services provided by IBM are:

Data Center Design Services

Task 1 - Architectural Design Services

1. Provide architectural design documentation necessary for the issuance of a building permit and design services including the following as required:
 - 1.1 General notes

- 1.2 Site and reference plan
- 1.3 Space plan including IT equipment and hot isle containment layout
- 1.4 Reflected ceiling plan and details
- 1.5 Wall finish schedules
- 1.6 Raised access floor installation details
- 1.7 Selective demolition plans and notes of which a partial demolition plan will be provided within two weeks of receipt of the purchase order for this project
- 1.8 Roof plan and mounting details for new CRAC unit condensers
- 1.9 Wall penetration details for electrical conduits and piping

Task 2 - Mechanical Design

- 1. Provide mechanical design documentation for the issuance of a building permit and design services including the following:
 - 1.1 Mechanical equipment layout including exterior equipment (e.g. generator, chiller, cooling tower)
 - 1.2 Route of refrigerant/fluid piping for the new dual source CRAC units
 - 1.3 Mechanical equipment schedules
 - 1.4 Piping support details
 - 1.5 Piping insulation details
 - 1.6 Plumbing installation details for condensate piping for the new CRAC units
 - 1.7 Plumbing installation details for humidification piping
 - 1.8 Reflected ceiling plan with location of return air grills and ducts to new CRAC units
 - 1.9 Provide general notes and installation specifications for mechanical systems

Task 3 - Electrical Design

- 1. Provide electrical design documentation for the issuance of building permit and design services including the following:
 - 1.1 Electrical single line diagram
 - 1.2 Short circuit calculations, load calculations and panel schedules
 - 1.3 Grounding details and requirements for the data center electrical modifications only
 - 1.4 Extension of connections from present PDU locations to new locations and the connection of the new CRACs to the existing EPO system. The emergency power off system (EPO) control diagram and operating sequence to remain as is.
 - 1.5 PDU supply feeder extensions to new locations and electrical circuit wiring to the IT equipment racks
 - 1.6 Power and controls wiring for the new mechanical equipment only
 - 1.7 Power modifications to prepare for future installation. This is limited to panel level only.
 - 1.8 Power and lighting alterations for new light fixtures and relocation of existing fixtures
 - 1.9 Provide general notes and installation specifications for the electrical modifications.

Task 4 – Fire Detection and Suppression Modification Design

Provide fire detection and suppression modification design documentation for the issuance of building permit and design services including the following:

- 1. Alteration of the existing smoke detection system at the ceiling line, under the raised floor and the return air plenum to comport with the space alterations and to comply with current codes.
- 2. The existing Inergen clean agent under access floor fire suppression system shall remain as is.

3. Alteration of the existing data center fire sprinkler system to comport with the space alterations. Design will include the new sprinkler heads and the relocation of existing sprinkler heads.
4. The existing signage and labeling is to remain. IBM will specify labeling for new devices to match the existing.
5. Building fire life safety interface is to remain as is.
6. Provide fire suppression system installation specifications.

Task 5 – Cabling Design Service

Provide a cabling design based on a top of rack and/or top of row switching design for the data center including the following:

1. Reflect day one cabinets as understood at the time of the design.
2. Define the requirements for the copper and fiber cabling that supports the day one cabinets as understood at the time of the design.
3. Define the requirements for the cable tray attached to the top of the rack for the day one server pods.
4. Define the requirements to modify the subfloor tray based on the day one cabinets as understood at the time of the design.
5. Develop the rack elevation for the core area cabinet that details the location of the patch panels and the wire managers.
6. Define the path for each fiber and/or copper run in the data center.
7. Develop the rack elevation for the racks that have either copper and/or fiber patch panels that reflect the location of the patch panels and wire manager.
8. Define the specifications for the fiber optic and copper cable network components for the data center environment.

Task 6 - Design Review Meeting (40% and 80% Review)

1. Prepare a 40% and 80% Design Package for review with the State of Connecticut Point of Contact.
2. Conduct a design review meeting with the State of Connecticut Point of Contact to review the following progress of 40% and 80% design documents:
 - 1.1 Equipment space plan including IT equipment layout
 - 1.2 Demolition plans
 - 1.3 Heat containment
 - 1.4 Long lead time equipment specifications
 - 1.5 Reflected ceiling plan
 - 1.6 Mechanical equipment layout
 - 1.7 Mechanical equipment schedule
 - 1.8 Electrical single line diagram
 - 1.9 Electrical equipment layout
 - 1.10 Electrical equipment schedule
 - 1.11 Fire detection / suppression plans

Task 7 – Design Review Meeting (100% Final Design Package)

1. Prepare a final design package for review with the State of Connecticut Point of Contact.

2. Conduct Design Package review meeting with the State of Connecticut Point of Contact to review the final design package.

Task 8 - AHJ Plan Check Submittal and Building Permits

1. Prepare and submit a final design package to the AHJ for plan check and approval.
 2. Incorporate, as required, the AHJ comments and issue the Design Documents.
- Completion Criteria:** This activity will be considered complete when the 100% Final Design Package and the Cabling Design Documents have been delivered to the State of Connecticut Point of Contact.

Deliverable Materials:

- 40% Design Package
- 80% Design Package
- 100% Final Design Package
- Cabling Design Document

Activity 3 - Commissioning Services

The purpose of this activity is to perform startup and testing of the data center electrical and mechanical systems to verify the operation according to design topology. The following specific scope of work will be performed:

Task 1 - Develop Startup and Testing Criteria

1. Collect the manufacturer startup procedures and operating manuals for the CRAC units and outdoor condensers.
2. Prepare a startup and test plan for the modified data center electrical and mechanical systems.
3. Develop a schedule for the electrical and mechanical system startup and testing activities.

Task 2 – Data Center Electrical System and UPS System Startup and Testing

The electrical system infrastructure will be tested following complete installation and successful vendor startup of all new and existing equipment. Subsystem performance will be tested to equipment specifications, then the integrated systems will be tested to design requirements and standards. It is understood that testing of existing systems will be performed by the respective equipment vendors at no charge to IBM. The following scope of work will be performed.

1. Examine the existing data center electrical installation integrity including panels, circuit breakers, feeders, control wiring and terminations.
2. Verify voltage and phase rotation for the electrical equipment to design standards. Record meter readings.
3. Inspect the grounding installation including, ground electrodes, ground cables, ground bus, equipment grounding conductors and bonding.
4. Perform neutral to ground and phase to ground testing in the data center.
5. Verify the equipment vendor's startup procedures and settings for vendor-supplied equipment and internal circuit breakers.
6. Perform a UPS battery discharge test at full load to the specified design duration.
7. Perform Infra-Red (IR) heat scanning of accessible electrical panels and circuit breakers during the onsite load test.
8. Test electrical branch circuits and power whips for voltage, shorts and grounds.
9. Inspect nameplates and equipment labels for identification.
10. Document the startup and test results.

Task 3 – Data Center Mechanical Equipment Startup and Testing

The mechanical equipment will be tested following complete installation and successful vendor startup of all new equipment. Performance will be tested to the equipment specifications then the integrated systems will be tested to the design.

The following will be performed:

1. Examine the installation of the new refrigerant piping, new CW piping, condensate lines and make up water to the CRAC units for proper installation. Inspect the pipe insulation for proper coverage and installation where modified by the installation.
2. Verify operation of new manual and automatic valves.
3. Verify the settings of the mechanical equipment to the design
4. Perform a mechanical system redundancy test with the failure of one cooling unit.
5. Verify alarm conditions for the new mechanical equipment.
6. Test and check the monitoring system alarm points.
7. Inspect nameplates and equipment labels for identification.
8. Document the startup and test results.

Task 4 – Testing of the modified Data Center Fire Detection and Suppression Systems

1. Develop a test plan to describe the fire detection and suppression systems tests.
2. Perform a visual examination of the fire detection and suppression systems including smoke detectors, control devices, storage container, piping, labeling and signage.
3. Perform a room pressurization test to determine the presence of openings which could affect the clean agent concentration levels. Pressure is required to be maintained for 10 minutes per the design.
4. Test the data center smoke detectors and control devices for sequence of operation as per the design drawings.
5. Perform test of manual and automatic controls for performance per the design drawings.
6. Test motorized dampers for operation.
7. Perform an emergency power off control system test including a test of 2nd alarm and discharge signals.
8. Test fire life safety building interface with the new fire control panel. The existing fire control panel is assumed to have a spare module to interface the new fire control panel alarms.

Task 5 – Testing of the Emergency Power Off

The emergency power off will be tested following complete installation and successful vendor startup of all the new equipment. The following will be performed:

1. Test the existing wall-mounted EPO station located at the exit door for shutdown of the data centers PDUs and CRAC equipment.
2. Verify shutdown of the PDUs.
3. Verify shutdown of the CRAC equipment.
4. Verify operation of the motorized dampers of the fresh air make-up to the data center.
5. Reset the EPO system and verify restart procedures of the electrical equipment and CRAC equipment.
6. Document the results of the EPO testing.

Completion Criteria: This activity will be complete when the PDU, CRAC, fresh air dampers and EPO devices have been tested per the design and the Startup and Testing Results have been delivered to the State of Connecticut Point of Contact.

Deliverable Materials:

- Commissioning Results

Activity 4 - Training Services and Project Closeout Documentation

The purpose of this activity is to provide up to six (6) data center personnel with two (2) eight (8) hour onsite training sessions for the operation of the new equipment provided in this SOW.

Secure the appropriate occupancy approvals from the local AHJs. The following will be performed:

Task 1 – On Site Training Services

1. Providing client data center personnel with training in the operation of the following pieces of equipment.
 - Emergency Power Off system
 - Electrical equipment including new panels
 - Mechanical equipment
 - Fire detection and suppression systems
 - IBM will supply product training manuals for newly installed equipment only.
2. The IBM Project Manager will work with the State of Connecticut Point of Contact to schedule the training during the one day event.

Task 2 – Data Center Occupancy Approval Documentation

1. Assist the Contractor in the acquisition of the appropriate and required certificate of occupancy approvals from the local AHJ.

Task 3 – Project Closeout Documentation for new data center equipment

1. Review manufacturers' operating manuals for the State of Connecticut for the provided equipment.
2. Provide Record Set Drawings for the data center project in electronic format for the following disciplines. State of Connecticut to assist IBM in obtaining final red-line or as-built documents from each contractor upon completion of work for IBM to finalize record set drawings:
 - Architectural
 - Electrical systems
 - Mechanical systems
 - Fire detection / suppression
 - Data center cabling
 - IBM's Design Package

Completion Criteria: This activity will be complete when the onsite training has been conducted, occupancy approval documentation and the project closeout documentation and Record Set Drawings has been delivered to the Customer Point of Contact.

Deliverable Materials: Record Set Drawings

5.2.3 State of Connecticut Implementation Services Responsibilities

The following are deemed responsibilities of the State of Connecticut:

- a. Provide a physical location where the Products and equipment can be received, unpacked, inventoried, and securely stored.
- b. Provide all permits required for environmental permitting related to emissions and fuel purchase, storage and be responsible for any permits or fees required by the air quality management district, water district, county sewage, electric or gas company.
- c. Be responsible for fees associated with any accelerated plan check or express plan check review. Fees for such will be billed as an extra.
- d. Advise building landlords and any other authorities at State of Connecticut's location of the work that will take place and obtain any necessary approvals in writing and any required permits for work to be performed.

- e. Provide IBM with the accurate as-built or record set documents of the proposed building including current architectural, structural, mechanical and electrical drawings at the start of the project.
- f. Provide proper identification, mark-outs and / or relocation of any sub-surface utilities which may be located within the proposed work area. IBM will schedule excavation / trenching / demolition work in the proposed area once the area's are marked out.
- g. Removal or remediation of subterranean obstructions, concealed utilities, rocks, historical artifacts or other similar conditions of the existing property.
- h. Perform all shut downs/ startup of the fire protection systems as required to facilitate the new installation work and to ensure the site is protected during the renovation phase.
- i. Communicate to those affected by any planned power outages.
- j. Power down and restore all affected IT equipment and any building systems interrupted for the installation and testing.
- k. Provide geotech services of any kind i.e. test borings, test pits, should these become necessary.
- l. Be responsible for implementing or not implementing IBM's recommendations and for the results achieved.
- m. Acknowledge that any responsibilities not specifically stated in this SOW as IBM responsibilities are deemed out of scope.
- n. Ensure all existing power and communications cabling has been removed / disposed of from the data center prior to IBM starting this project scope of work.
- o. Be responsible for addressing all handicap/ADA issues outside the floor plan of the data center and provide documentation to IBM to support compliance.

6. Deliverable Materials

The deliverable Materials resulting from these Services are:

- Bi-weekly Status Reports*
- Initial Project Plan*
- 40% Design Package and 80% Design Package
- 100% Final Design Package
- Cabling Design Document
- Commissioning Results
- Record Set Drawings

* = Deliverable Material exempt from the Deliverable Material Acceptance Process which will be considered accepted by State of Connecticut upon delivery to State of Connecticut Point of Contact.

See Appendix A, "Deliverable Materials Guidelines", for a description of each deliverable Material.
See Appendix B, "Deliverable Material Acceptance Process", for the Material acceptance process.

7. Estimated Schedule

The Services will be performed consistent with the estimated schedule below. Both IBM and the State of Connecticut must make reasonable efforts to carry out our respective responsibilities in order to achieve the following schedule.

Estimated Start Date: February 10, 2014

Estimated End Date: September 09, 2014

If the SOW signature date is beyond the Estimated Start Date, the Estimated Start Date will automatically be extended to the date of the last signature on this SOW. The Estimated End Date will automatically be extended by the same number of days.

The estimated schedule is based on the following:

			MONTH							
			1	2	3	4	5	6	7	8
			Month	Month	Month	Month	Month	Month	Month	Month
Project Management Plan	IBM									
High Level Time Line	IBM									
Detail Schedule and Critical Path items	IBM									
Design	IBM									
Partial Demolition Package	IBM									
Mechanical, Electrical, and General Design At 40%	IBM									
Mechanical, Electrical, and General Design At 80%	IBM									
Mechanical, Electrical, and General Design At 100%	IBM									
Permits	Pfizer									
State/Local	Pfizer									
Procurement	Pfizer									
Procure Demolition	Pfizer/State									
Identify all long lead items	IBM									
Provide Specs for Procuring long lead items	IBM									
Procure all Long lead items	Pfizer/State									
Qualify potential bidders	Pfizer/State									
Bid and award 3 packages(mechanical, electrical, general)	Pfizer/State									
Demo	Pfizer									
Demo	Pfizer									
Construction/Upgrades	Pfizer									
Electrical	Pfizer									
Mechanical	Pfizer									
General	Pfizer									
Clean up/Punch List	Pfizer									
Commissioning	IBM									
Remediation	Various									

Neither party shall be responsible for delays or additional requirements imposed by any government agencies, labor disputes, fire, unavoidable casualties, or unforeseen conditions. The IBM furnished equipment must be delivered to the site to allow adequate time to receive, place and install.

Multiple existing equipment and systems such as generators, transfer switches, breakers, disconnects, UPS systems, PDUs, HVAC units, condensers, etc. are being provided by State of Connecticut. Faults, failures or damages that may occur with any of the existing equipment may impact the project schedule. Schedule impacts or delays will result in additional charges which will be addressed through the Project Change Control Procedure described in Appendix B-1.

8. Completion Criteria

IBM will have fulfilled its obligations for the Services described in this SOW when any one of the following first occurs:

1. IBM completes the activities described in this SOW, including provision of the deliverable Materials, or
2. The Services are terminated in accordance with the provisions of the Agreement identified below.

9. Charges

1. The total charge for the Services and products described in this SOW, exclusive of shipping and travel and living is \$ **985,000.00** IBM will invoice according to State Agreement Number: A-99-031.
2. State of Connecticut will be invoiced per the following milestones:

Description	Unit Fees	Total Fees
Project Management and Technical Services		
PM Fee Month One	\$50,000.00	
PM Fee Month Two	\$50,000.00	
PM Fee Month Three	\$50,000.00	
PM Fee Month Four	\$50,000.00	
PM Fee Five	\$50,000.00	
PM Fee Six	\$50,000.00	
PM Fee Seven	\$50,000.00	
<i>Total Fees Project Management Services</i>	\$350,000.00	\$350,000.00
Design Services		
Design Kickoff	\$84,000.00	
Forty Percent Drawings	\$105,000.00	
Eighty Percent Drawings	\$105,000.00	
One Hundred Percent Drawings	\$84,000.00	
Permit Obtained	\$42,000.00	
<i>Total Fees Design Services</i>	\$420,000.00	\$420,000.00
Commissioning Services		
Start-up & Testing Mobilization	\$80,000.00	
Commission Report Delivery	\$85,000.00	
<i>Commissioning Services Fees</i>	\$165,000.00	\$165,000.00
Training & Project Close-out		
Training & Project Close-out Completed	\$50,000.00	
<i>Total Training & Project Close-out Services Fees</i>	\$50,000.00	\$50,000.00
Total Solution Price:		\$985,000.00

3. The proposal is based on open shop non-union labor and that the trades/contractors/vendors are not restricted for use.
4. Invoices are due upon receipt and payable as per the Agreement.
5. State of Connecticut agrees to pay by electronic funds transfer (to an account specified by IBM) or other means acceptable and agreed to by the parties.
6. Travel and Living expenses which will be billed as actual and reasonable are in addition to the above charges and will be invoiced monthly as incurred in accordance with the State Comptrollers guidelines for State Managers and/or IBM expense travel policy guidelines.
7. Cancellation or changes in orders will incur an administrative fee. Once orders are placed is subject to additional fees and will be handled according with this SOW and manufacturers' terms.
8. If travel is required, Customer is responsible for all reasonable travel and living expenses, which would include actual transportation and lodging, per diem meal expenses and other reasonable and necessary charges associated with such travel and living expenses (e.g. luggage charges) incurred by IBM's personnel during the performance of the Services. Travel and living expenses are in addition to the above charges and are currently estimated at 15% of the total Services charge. Travel and living expenses will be invoiced monthly.
9. Unless otherwise stated herein, Charges are based upon a contiguous work schedule. Delays in the work schedule, other than IBM delays, are subject to the Project Change Control Procedure and may result in an increase in charges to State of Connecticut.

10. Other

10.4 General

1. Some of the Services may be performed by an IBM-subcontractor. If an IBM subcontractor assists with the project, IBM is solely responsible for completion of the work described herein and compliance with the terms hereof and coordinating any involvement of IBM subcontractors who may be engaged to assist IBM in accomplishing the work described herein.
2. IBM is not required to (a) perform any work outside the scope described in the SOW, (b) to the extent IBM does perform any work outside of scope, IBM may cease to perform such work at any time and (c) any changes to the scope must be agreed to in accordance with the Project Change Control Procedure specified in this SOW.
3. Title passes upon shipment to State of Connecticut.
4. The State of Connecticut will be responsible for any required seismic retrofit or upgrades to the existing building structure as identified by the IBM design specific to this scope of work. IBM assumes the existing roof structure is capable of supporting the weight of proposed ceiling, mechanical piping, electrical feeders, sprinkler piping, sprinkler pipes, gas piping, lighting and mechanical equipment.
5. The local city ordinances will not require sound attenuated equipment and that the proposed exterior roof mounted equipment will meet the local sound ordinance
6. IBM assumes that all existing equipment outside of the data center is completely functional or will be made functional at no charge to IBM.
7. Exclusions
 - a. Environmental work, including environmental testing or Environmental Impact Statement.
 - b. Structural defects (as it relates to existing conditions) and/or design.

- c. Reinforcement of the existing roof structure
- d. Any act or omission of any governmental or jurisdictional authority including without limitation, regulatory, or other legal charges.
- e. Non-performance by any third party beyond the reasonable and contractual control of IBM, including without limitation, termination or disruption of service by a common carrier or any failure, disruption, or malfunction of services under control of others.
- f. Computer equipment migration and/or relocation.
- g. Zoning and/or variance professional testimony and/or representation. Should the services be required, the billing will be hourly per the attached rate schedule.
- h. Soils testing and/or topographic surveys.
- i. Payment or Performance Bonds.
- j. Testing and/or commissioning Pfizer's existing data center building/environmental support systems that are existing.
- k. Warranties and/or liabilities for Pfizer's existing data center/building environmental support systems (e.g. UPS, generator, transfer switches, mechanical equipment & systems, fire, controls / protection, etc.).
- l. IT capacity beyond the 570kW Pfizer-provided UPS systems.
- m. Structural details for the roof mounted equipment support pads
- n. Customized operating manuals or training programs beyond the manufacturers' standard documentation.
- o. Any repairs, service replacement of the existing electrical / mechanical systems which may fail or may be damaged during the testing of the electrical / mechanical systems. Charges to repair, replace and retest the equipment will be coordinated by the Project Change Control Procedure provided in Appendix B.
- p. Building or site upgrades that may be required by the State, County or city to comply with the American Disability Act.
- q. Any responsibilities not specifically stated in this SOW as IBM responsibilities.
- r. Soundproofing of data center perimeter walls and interior space.
- s. Soundproofing of the exterior mechanical equipment.
- t. Preventative maintenance contract for the new electrical and mechanical systems.
- u. Extended warranties beyond the manufactures standard warranty.
- v. Customized operating manual or training programs beyond manufacturers' standard package.
- w. Fire caulking of existing conduits or piping within the existing walls.
- x. Removal of existing IT equipment / racks, power cables, communications cables, etc. to allow for construction.
- y. All work outside of the data center unless otherwise noted.

10.5 Safety or Code Violations

IBM is not responsible for the identification or correction of any safety and/or code violations, whether federal, state or local, including, but not limited to, fire and electrical codes. If IBM discovers any such safety and/or code violations during the course of this SOW, IBM will notify the State of Connecticut. IBM will not be required to proceed with the Services until the State of Connecticut remedies such violation. IBM is not responsible for the detection or removal of asbestos, hazardous waste, or other pollutants nor is IBM responsible for any delays caused by such safety and/or code violations.

In addition to the items described in the paragraph above, this SOW does not include any of the following:

- Rerouting or installation of fiber and data cabling
- Seismic design considerations

The information contained in this SOW is based on information provided to IBM by the State of Connecticut. If conditions are found to differ from what was indicated by the State of Connecticut, any changes necessary in this SOW will be handled via the Project Change Control Procedure, if applicable.

Product Safety Approval Statement: IBM's Corporate Safety Policy states that IBM is committed to "provide safe products for our customers." IBM's Product Safety Standards document our requirements and responsibilities. The two primary requirements are certification of hardware by a nationally recognized testing lab (i.e., UL or ETL) and compliance with IBM Product Safety Standards. Compliance is mandatory and must be satisfied prior to product shipment to our customers. It is our assumption that all the non-IBM hardware included in this proposed solution will fully comply with IBM's Product Safety Standards. If the non-IBM hardware does not fully comply, then we will attempt to negotiate a suitable replacement that will comply.

10.6 Asbestos, Hazardous Waste and Pollutants

The detection or removal of asbestos, hazardous waste or other pollutants is not included within the scope of this SOW.

The State of Connecticut represents, and IBM relies upon the State of Connecticut's representation, that a commercially reasonable program of investigation, detection and abatement or removal of asbestos, hazardous waste or other pollutants has been completed with regard to the data center, and that the same is "clean" and in compliance with all applicable standards. The State of Connecticut further represents that it has or will retain all necessary and sufficient guidance and assistance from experts specializing in such matters.

If asbestos, hazardous waste or other pollutants are uncovered during the performance of this SOW, the State of Connecticut agrees to be responsible for retaining the experts necessary to remove such asbestos, hazardous waste or other pollutants from the data center. The State of Connecticut will also be responsible for any testing and for corresponding with appropriate government authorities.

It is specifically understood by the State of Connecticut and IBM that all matters relating to the detection, abatement or removal of asbestos, hazardous waste or other pollutants are beyond the scope of this SOW and that IBM will not be liable for any delay or additional cost incurred as a result of such detection or abatement.

To the fullest extent permitted by law, the State of Connecticut will indemnify, defend and hold IBM harmless from and against any and all losses, claims, costs, damages and expenses (including, without limitation, attorneys' fees, disbursements, court costs, penalties and fines) attributable to any action commenced against IBM involving asbestos, hazardous waste or other pollutants existing in, on or under the data center, provided such loss, claim, cost, damage or expense does not arise from the breach, default, willful misconduct or negligence of IBM under this SOW.

Appendix A: Deliverable Materials Guidelines

A - 1: BI-Weekly Status Report

Purpose: IBM will provide a bi-weekly Status Report (every 2 weeks) during the project to describe the activities which took place during that period.

Delivery: One (1) hard copy and one (1) electronic copy will be delivered to the State of Connecticut Point of Contact within five (5) working days following the reporting period.

Content: The report will consist of the following, as appropriate:

- Activities performed during the reporting period
- Activities planned for the next reporting period
- Project change control activity
- Problems, concerns, and recommendations
- Delays, reschedules, work around
- Cost impacts, travel and living expenses

A - 2: Initial Project Plan

Purpose: IBM will provide a Project Plan outlining the tasks to be performed.

Delivery: One (1) hard copy and one (1) electronic copy will be delivered to the State of Connecticut Point of Contact within three weeks of receipt of the purchase order from the State.

Content: The Project Plan will consist of the following, as appropriate:

- Detailed required tasks
- Timelines for the tasks
- Resource assignments

A - 3: 40% and 80% Design Package

Purpose: IBM will provide a 40% and 80% plan set for a design document review meeting.

Delivery: One (1) hard copy and one (1) electronic copy will be delivered to the State of Connecticut Point of Contact.

Content: The drawings will be made available in original file formats as appropriate:

- Detailed floor plan including equipment layout
- Demolition drawings
- Long lead time equipment specifications
- Heat containment
- Reflected ceiling plan
- Mechanical equipment layout
- Mechanical equipment schedule
- Electrical single line diagram
- Electrical equipment layout

A - 4: 100% Final Design Package

Purpose: IBM will provide a 100% Final Design Package for the State of Connecticut records.

Delivery: One (1) hard copy and one (1) electronic copy in original file format will be delivered to the State of Connecticut Point of Contact.

Content: The drawings will be in original format and consist of the following, as appropriate:

- General notes
- Site and reference plan
- Detailed equipment space plan including IT equipment rack layout (footprint only)
- Roof plan and details
- Reflected ceiling plan
- Floor and wall finish schedules
- Raised floor installation details
- Demolition plans and notes
- Long lead time equipment specifications
- UL listed wall penetration details for electrical conduits and piping
- Anchoring details for the new electrical and mechanical equipment
- Mechanical equipment layout including exterior equipment
- Routes of coolant piping for the new CRAC units
- Mechanical equipment schedule
- Piping support details
- Piping insulation details
- Plumbing installation for condensate piping for the CRAC units
- Provide general notes and installation specifications for mechanical systems
- Electrical single line diagram
- Load calculations and panel schedules
- Grounding details and requirements for new electrical systems
- Emergency power off control diagram and operating sequence modifications
- PDU and electrical wiring to the IT equipment racks
- Power and controls wiring for new mechanical systems
- Provide general notes and installation specifications for electrical systems
- Grounding details for IT equipment racks
- Labeling scheme for IT equipment racks and cabling
- Cabling design topology per IT design layout

A - 5: Cabling Design Document

Purpose: IBM will provide the cabling design document as defined in this Statement of Work.

Delivery: One (1) hard copy and one (1) electronic copy in PDF format will be delivered to the State of Connecticut Point of Contact within five (5) working days of completing the cabling design.

Content:

The Cabling Design Document will consist of the following, as appropriate:

- Location of the LAN core cabinets

- Location of the SAN core cabinets
- Location of Server area
- Location of the tape and storage area
- Location of specialized area such as mainframe environment.
- Location of the under floor tray
- Location of the overhead tray
- Cabling bill of materials
- Rack elevation of main patching field for SAN/LAN
- Typical rack elevation of server cabinets
- Rack elevation of zone cabinets
- Cabling path notes

A - 6: Commissioning Results

Purpose: IBM will provide the documented results from startup and testing of the mechanical systems.

Delivery: One (1) hard copy and one (1) electronic copy will be delivered to the State of Connecticut Point of Contact within fifteen (15) working days following project completion.

Content: The startup and test results of the electrical and mechanical systems will be in Original File Format and hardcopy format and consist of the following as appropriate:

- Electrical
- Mechanical
- Fire detection and suppression

A - 7: Record Set Drawings

Purpose: IBM will provide Record Drawings as defined in this Statement of Work.

Delivery: One (1) hard copy and one (1) electronic copy will be delivered to the State of Connecticut Point of Contact within five (5) working days following project completion.

Content: The Record Set Drawings will consist of the following, as appropriate:

- Architectural
- Electrical
- Mechanical
- Fire detection and suppression
- IBM's Design Package

Appendix B: Project Procedures

B - 1: Project Change Control Procedure

The following process will be followed if a change to this SOW is required.

- A Project Change Request ("PCR") will be the vehicle for communicating change. The PCR must describe the change, the rationale for the change and the effect the change will have on the Services.
- The requesting party will review the proposed change and submit the request to the other party.
- Both parties will review the proposed change and agree to implement it, recommend it for further investigation, or reject it. A PCR must be signed by authorized representatives from both parties to authorize investigation of the recommended changes. The investigation will determine the effect that the implementation of the PCR will have on price, schedule and other terms and conditions of the SOW.
- A written Change Authorization and/or PCR must be signed by authorized representatives from both parties to authorize implementation of any agreed changes to this SOW and the Agreement. Until a change is agreed in writing, both parties will continue to act in accordance with the latest agreed version of the SOW.

B - 2: Deliverable Materials Acceptance Procedure

Except for Status Reports and Project Plans which are considered accepted upon delivery, each deliverable Material defined in Appendix A, "Deliverable Materials Guidelines" will be reviewed and accepted in accordance with the following procedure:

- One electronic copy of the deliverable Material will be submitted to State of Connecticut Point of Contact. It is the responsibility of State of Connecticut Point of Contact to make and distribute additional copies to any other reviewers.
- Within five business days of receipt, State of Connecticut Point of Contact will either accept the deliverable Material or provide IBM with a written list of requested revisions. If IBM receives no response from State of Connecticut Point of Contact within five business days, then the deliverable Material will be deemed accepted.
- IBM will consider State of Connecticut Point of Contact's timely request for revisions, if any, within the context of IBM's obligations as stated in Appendix A - Deliverable Materials Guidelines.
- The revisions recommended by State of Connecticut Point of Contact and agreed to by IBM will be made and the deliverable Material will be resubmitted to State of Connecticut Point of Contact, at which time the deliverable Material will be deemed accepted.
- The revisions recommended by State of Connecticut Point of Contact not agreed to by IBM will be managed in accordance with the Project Change Control Procedure, if necessary.
- Any conflict arising from this Deliverable Materials Acceptance Procedure will be addressed as specified in the Escalation Procedure below.

B - 3: Escalation Procedure

The following procedure will be followed if resolution is required to a conflict arising during the performance of the Services.

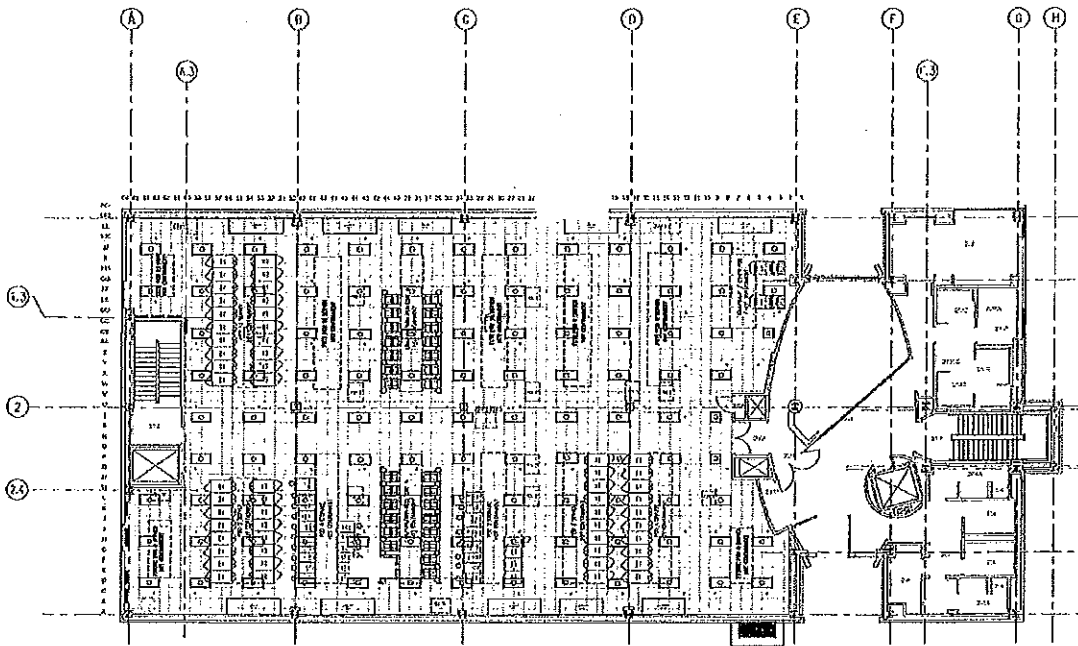
When a conflict arises between State of Connecticut Point of Contact and IBM, the project team member(s) will first strive to work out the problem internally.

- Level 1: If the project team cannot resolve the conflict within two business days, State of Connecticut Point of Contact and IBM will meet to resolve the issue.
- Level 2: If the conflict is not resolved within three business days after being escalated to Level 1, your executive sponsor will meet with IBM to resolve the issue.
- If the conflict is resolved by either Level 1 or Level 2 intervention, the resolution will be addressed in accordance with the Project Change Control Procedure, if applicable.
- If the conflict remains unresolved after Level 2 intervention, then either party may terminate the applicable Service. If the conflict is addressed by termination, unless termination is due to IBM's failure to perform the Services, State of Connecticut agrees to pay IBM for a) all Services IBM

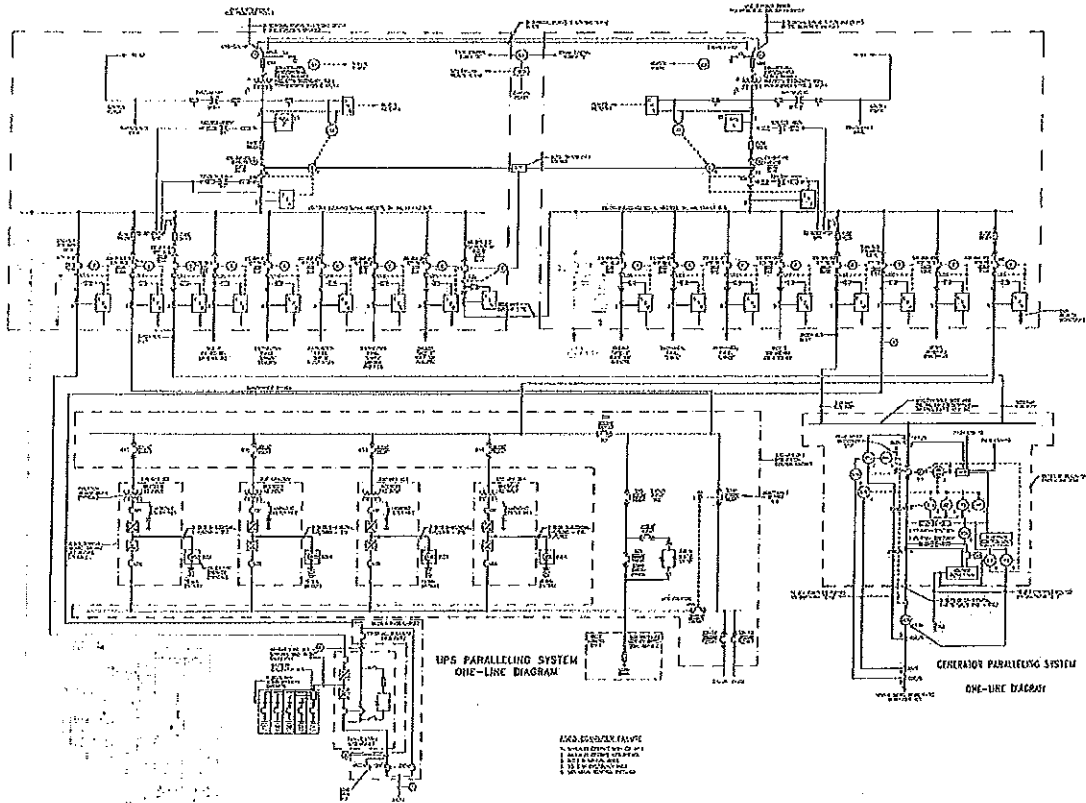
provides and any products and Materials IBM delivers through termination, b) all expenses IBM incurs through termination, and c) any charges IBM incurs in terminating the Services. IBM will provide to Customer an electronic copy of all deliverable Materials in process and will return to Customer all Customer data.

- During any conflict resolution, IBM agrees to provide Services relating to items not in dispute, to the extent practicable pending resolution of the conflict. State of Connecticut agrees to pay invoices per this SOW.

Appendix C: Proposed Data Center Design



Appendix D: Proposed Data Center Electrical Single Line Design



Appendix E: Proposed Data Center Mechanical Single Line – Base Scope

