



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
600 Fifth Street, NW, Washington, DC 20001-2651

AMENDMENT OF SOLICITATION / MODIFICATION OF CONTRACT

1. AMENDMENT/MODIFICATION AM 05	2. EFFECTIVE DATE
3. ISSUED BY PURCHASING SECTION Office of Procurement and Materials	4. ADMINISTERED BY (If other than block 3) Benjamin T. Kpadeh
5. CONTRACTOR NAME AND ADDRESS <small>(Street, city, county, state, and Zip Code)</small>	6. FORM TYPE (Check only one) <input checked="" type="checkbox"/> AMENDMENT OF SOLICITATION NO. FQ15188 DATE <u>June 24, 2015</u> (See block 7) <input type="checkbox"/> MODIFICATION OF CONTRACT/ORDER NO. _____

7. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in block 10. The hour and date specified for receipt of Offers is extended, is not extended. Offerors must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation, or as amended, by one of the following methods; (a) By signing and returning _____ copies of this amendment; (b) by acknowledging receipt of this amendment on each copy of the offer submitted; or (c) by separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE ISSUING OFFICE PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If, by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided such telegram makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

8. ACCOUNTING AND APPROPRIATION DATA (If required)

9. THIS BLOCK APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS

- (a) This Change Order is issued pursuant to _____
The Changes set forth in block 10 are made to the above numbered contract/order.
- (b) The above numbered contract/order is modified to reflect the administrative changes (such as changes in paying office, appropriation data, etc.) set forth in block 10.
- (c) This Supplemental Agreement is entered into pursuant to authority of _____
It modifies the above numbered contract as set forth in block 10.

10. DESCRIPTION OF AMENDMENT/MODIFICATION

- Attached to Amendment AM05 are the following documents:
 1. Answers to bidder questions.
 2. Revised scope of work (SOW).
 3. Revised single line drawing.
- All bids are due July 1, 2015 at 2:00 pm EST (US & Canada).

END OF AMENDMENT A04

Except as provided herein, all terms and conditions of the document referenced in block 6, as heretofore changed, remain unchanged and in full force and effect.

11. <input checked="" type="checkbox"/> CONTRACTOR/OFFEROR IS REQUIRED TO SIGN THIS MODIFICATION AND RETURN _____ COPIES TO ISSUING OFFICE.	<input type="checkbox"/> CONTRACTOR/OFFEROR IS NOT REQUIRED TO SIGN THIS DOCUMENT		
12. NAME OF CONTRACTOR/OFFICE BY _____ <small>(Signature of person authorized to sign)</small>	15. WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY BY <small>(Signature of Contracting Officer)</small>		
13. NAME AND TITLE OF SIGNER (Type or print)	14. DATE SIGNED	16. NAME OF CONTRACTING OFFICER (Type or print) Benjamin T. Kpadeh	17. DATE SIGNED

QUESTIONS AND ANSWERS
OF
IFB No. FQ15188 – Power Distribution Unit for the Data Center

June 24, 2015

Per the instructions in the WMATA IFB Number FQ15188, Power Distribution Unit – Data Center, the following questions and comments were submitted by Offerors with regard to the WMATA IFB No. FQ15188. Each of these items is shown verbatim as it was received. A WMATA response to each of these items is shown in **bold font** under the section, WMATA Answer on the right of the submitted item.

Line #	Prospective Offerors' Question	WMATA Answer
1	It appears the Single Line diagram (E-102a) is bolded to provide additional equipment not identified in the RFP. For example, the 300A step down transformer and the 500Kva UPS. Please confirm WMATA only wants what equipment is identified on the price list. Does labor stop at providing .	<i>Provide only item identified in the RFP and the revised scope of work and drawing. See attached revised drawing.</i>
2	Pricing Schedule does not identify the provision of installation of the 500kVA UPS Cabinet with (13) 25kw power modules on the B1 Level. However, Note 2 of drawing provided 06/19 indicates there is a 500kva UPS cabinet to be provided. Please clarify if this is intended and if so, where it is to be placed and where the provision to price this is on the Price Schedule.	<i>Please provide what is required in the IFB including the revision that have be made, see attached documents.</i>
3	Drawing E-102a is bolded to indicate per Note 3 there are new batteries to be provided and configure. Please confirm if this is correct and identify on the price schedule where this is to be priced for equipment and labor.	<i>Please provide what is required in the IFB including the revision that have be made, see attached documents.</i>
4	During the site visit walk through of 6/19, the existing trough for the new feeds (per note 7 of drawing E-102a) was not identified. Please provide more information on this.	<i>Please provide what is required in the IFB including the revision that have be made, see attached documents.</i>
5	Please identify if there are existing conduits that can be utilized to run from the MBDP panels per Note 4 on drawing E-102a, or if new conduits and wiring (plus labor) must be priced. Can you confirm there are existing conduit and wires the Contractor can use? If not, where on the price schedule should the additional labor and material be accounted for?	<i>Provide price for new conduit and wiring. See attached revised drawing.</i>
6	Note 6 of Drawing E-102a indicates a 200A, 3phase 4wire MCB panel with (2) 100A 3phase circuit breakers are to be provided. This comes off a 150kva, 3phase step down transformer feed from a 300A disconnect switch. Does the Contractor provide this? If so, where	<i>Please provide what is required in the IFB including the revision that have be made, see attached revised documents.</i>

QUESTIONS AND ANSWERS
OF
IFB No. FQ15188 – Power Distribution Unit for the Data Center

	is the provision for the equipment and labor on the price schedule?	
7	Drawing E-102a shows additional wiring from a MCB panel (Note 6). Please confirm this is required and if so, where this is accounted for on the price schedule for equipment and labor.	<i>Please provide what is required in the IFB including the revision that have be made, see attached revised documents.</i>
8	Will WMATA be issuing out an amended Statement of Work to accompany the details brought out in today's walk through?	<i>See attached revised scope of work that is attached to this amendment.</i>
9	Please provide an electronic file of the One Line Drawing that was presented to us at the site visit today.	<i>We can only provide pdf file. See attached revised drawing.</i>
10	Please provide an electronic file of the Building Floor Drawing so we can determine distance from the Electrical room in the basement to the Data Center.	<i>Drawing will be provided to the contractor that will be awarded the contract.</i>
11	Please provide us with a scope sheet as to what exactly we are suppose to provide for this project as for as electrical connections. a) Example: From Panel ??? provide (1) 2 ½" conduit with (3) # 250 MCM & (1) # 4 Ground to PDU # 1. b) Example: Furnish and install (1) 225 Amp breaker in existing panel ???.	<i>Refer to revised drawing that is attached.</i>
12	Please provide us with a new Acknowledgement of Amendments form since the current one will only allow up to 4 addendums to be listed.	<i>Check on www.mata.com for all amendments related to this IFB. Website address: http://wmata.com/business/procurement_and_contracting/solicitations/view.cfm?solicitation_id=3323</i>
13	Please describe how we are to protect floors, wall and access flooring during the installation and transportation inside the building for the PDU.	<i>Contractors' ways and means. Proposed plan provided to WMATA 3 days prior to the installation for approval.</i>
14	Will coring thru the floor or walls be needed?	<i>Yes</i>
15	If so when will this work be allowed to be done?	<i>The work can only be done at night; work cannot be done during normal working hours Monday – Friday.</i>
16	Is the contractor to install fire caulk once all conduit system are install in all fire rated floors and walls	<i>Yes</i>
17	Are we to use EMT conduit or Rigid conduit?	<i>EMT conduit</i>
18	If EMT are we to use set screw fittings or compression fittings?	<i>The work can only be done at night; work cannot be done during normal working hours Monday – Friday.</i>

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IFB No. FQ15188 – Power Distribution Unit for the Data Center

19	What are the working hours the contractor is allowed to do this work during?	<i>The work can only be done at night; work cannot be done during normal working hours Monday – Friday.</i>
20	Does IFB FQ15188 include the New UPS system & wiring?	No.
21	Does IFB FQ15188 include the New B3-ACU PANEL & wiring?	No.
22	Does WMATA have a floor plan available for estimating conduit, etc.	No, but can provide distance, 150ft
23	Please verify that contractor to supply PDU's to line side only and energize. No other wiring is needed at this time?	<i>Contractor shall provide PDUs and energize line side. No other extra wiring is required except the one required in the IFB.</i>
24	Will work be allowed in Data room during normal hours Mon-Fri. Installing conduits, racks, supports, etc. (except core drilling and PDU install)	<i>No, no will be done in the Data Center during normal working hours, Monday – Friday.</i>
25	Will contractor be allowed to have a service truck in WMATA's B-2 or B-3 parking garage?	<i>Yes, but only during at night.</i>
26	Will core drilling be allowed in Data room to drill down or from below up?	<i>Yes if required. Proposed drilling plan provided to WMATA's Structural/Architectural engineers 3 days prior to the work for approval.</i>
27	Does WMATA have a layout of where to route NEW PDU conduits from B-3 to Data room, if so, can WMATA provide maximum distance?	150ft.
28	Verify that the PDU units have no branch circuits or feeds from them.	No, they will not.
29	Verify conduit routing within Garage area.	Yes.
30	Verify that UPS system is installed by others on another contract.	<i>Yes, it will be installed by another contractor. UPS purchase and installation is not required and not part of the requirement in solicitation, IFB No. FQ15188.</i>
31	Verify the work shown for the ATS connection is not required under this contract.	<i>Not applicable to this contract.</i>
32	What requirements are for core drilling within the building?	<i>Contractors' ways and means. Proposed plan for drilling provided to WMATA 5 days prior to the work for approval.</i>
33	Does this project have any specifications?	<i>Please refer to the revised scope of work that is attached to Amendment, A05.</i>
34	Is this project Davis Bacon wage requirements.	<i>This is not requirement for construction contract.</i>
35	Is low smoke cable required for this project?	No.
36	There appears to be a difference related to the Commercial GL Insurance and the Business Automobile	<i>All insurance requirements in this solicitation, IFB No. FQ15188 are required and need to be provided with your bid.</i>

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	Liability coverage requirements (reference RFP pages 90 and 95). Please clarify	
37	We had one question that didn't seem to be addressed and would like to bring that to your attention for your response. In the IFB, unless I am mistaken, basically we are asked to provide the PDU's, provide primary power and test the units but no whips or breakers were to be provided. During the walk-through it was mentioned that your IT group was also expecting the whips to be provided to each of the server cabinets (2 per cabinet, one from each power source). Can you clarify if this is required or not. If so, can you provide specifications on wire types, conduit, breakers, color coding etc. so that we can price accordingly. Also, if this is a requirement we will need to know if space is available for the whips under the raised floor space (This could be reviewed and verified during the next walk-through if needed).	<i>This IFB is for a contractor to provide the PDUs, Installs, power up and test the PDUs.</i>
38	Will there be an updated scope sent out for the PDU RFP? Also, I would like to request a cleaner copy of the one line drawing that was sent. The one that was sent wasn't very good quality and no matter how much you blow it up it is largely illegible with none of the specifics needed being clear enough to read.	<i>Please refer to revised scope of work (SOW) that is attached.</i>
39	Recently my firm received an RFQ to bid on a pair of PDUs for one of your facilities. From all of the information I gathered from the documents we received, the only named approved manufacturer for this hardware was MGE. I did not see a sole source provision anywhere, which is why I'm requesting that my company be approved as an alternate bidder. We represent Eaton Powerware UPS, PDUs, and Switchgear in the Washington, DC metro area. 3a. I've attached some comparison information regarding Eaton PDUs vs. MGE. I can provide whatever technical information you require as well. Please let me know the process of getting Eaton approved as an alternative bidder.	<i>This project consist of several phases. In order to maintain consistency and for integration purpose it is critical to provide equipment as specified.</i>

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Eaton PDU vs. MGE PMM



Differentiators

Eaton PDU

- 98% efficiency
- 400A panel main breaker option
- 100 kAIC breakers available
- Up to 12 subfeed breakers available, more in sidecars
- Branch circuit monitoring for subfeeds

MGE PMM

- Optional seismic bracing
- Harmonic canceling transformer option
- Bolt-on or snap-on breakers
- Up to 3 sidecars can be used with a single main cabinet

How to sell against the competition

- 400A panel main breakers handles newer, high-density data centers (doesn't waste panel space)
- More subfeeds available for Eaton, 12 vs. 8 in main cabinet, allowing PDU to service more IT loads
- Save power and cooling cost with 1% higher efficiency — calculate efficiency at www.pqcalc.eaton.com
- Brazed transformer connections mean less maintenance cost and more installation flexibility

		Eaton	MGE
		PDU	PMM
General	Voltage	208V, 400V, 480V, 600V	208V, 380V, 480V, 600V
	Size (kVA)	15, 30, 50, 75, 100, 125, 150, 200, 225, 300, *500	30, 50, 75, 100, 125, 150, 200, 225, 300
Installation flexibility	42-Pole Panels	1 to 6	1 to 6, SquareD bolt-on/snap-on
	Panel Main Breaker	225 or 400A	225A, high kAIC option
	Sub-Feed Capacity	1-14, depending on panel size in main cabinet & up to 8 more in sidecars	1-8 in main unit, 1-8 per sidecar
	Scalability	Sidecars (both side and front-facing)	Sidecars, front- or side-facing, 3 max per system
Access Provisions	Front/1 side, or front/rear, captive hardware, convection cooling, front access only requires all panels to be in sidecars	Front only (side for sidecars)	
Efficiency	TP-1	98%	97%
Monitoring	Main Input	Available	Available
	Branch Circuit	Available	Available
	Sub-Feed	Available	Not available
Available accessories	Specialty Items	Dual input, high kAIC main and subfeed	Harmonic cancellation, seismic bracing
	Key Accessories	Surge, LV & HV junction box, network card, BCMS, shunt trip breakers, plexi doors	Surge, high kAIC input breaker, junction box
Commercial position	Price Strategy	Avg	Mid
	Strengths	Efficiency, lowest TCO, ease of management, *customizable	APC name recognition, lead times
	Weaknesses	Product awareness in the channel	Limited BCMS capabilities

REVISED SCOPE OF WORK

JACKSON GRAHAM BUILDING (JGB)

PDU – DATA CENTER

CHIEF ENGINEER INFRASTRUCTURE (CENI)

POWER

June 23, 2015

1. Summary:

- A. The scope includes all work required to furnish, install, connect, test and energize PDUs and appurtenances to ensure safe, complete, workable and operational electrical system. Most of the work will be conducted in the Data Center and B3 UPS room.
- B. The contractor shall be responsible for furnishing, installing, connecting, testing and energizing PDUs. The contractor shall be responsible for all materials, labor, transportation and handling, construction equipment, tools and all other incidentals necessary for the completion of the work.
- C. The work shall be in accordance with the attached drawing and comply with manufacturer's drawings and instructions and as well as all pertinent local and jurisdictional codes and regulations.
- D. Equipment and Material to be provided shall include but not be limited to:
 - i. PDUs
 - ii. Disconnect Switches
 - iii. Circuit Breakers
 - iv. Cables
 - v. Conduit
 - vi. Support hardware
 - vii. Grounding and bonding as shown and specified
 - viii. Core drilling
 - ix. As-built drawings

2. References:

Contractor shall refer to WMATA's drawings and shall be knowledgeable of the necessary national and jurisdictional codes and regulations as it pertains to this type of work. Codes shall include but not be limited to NEC, IEEE, ASTM, etc.

3. Work Tasks:

Electrical

- a. Furnish and install (2) 150kVA, 480/277V-208Y/120V PDUs with (6) 42 circuit, 4W panels and associated conduits and cables. PDUs type shall be APC/MGE-PMM, single main. Refer to attachment for the electrical characteristics.
- b. Furnish and install Disconnect Switches, Breakers, cables and conduits as per contract Single line drawing.

4. Deliverables:

1. Site Specific Work Plan (SSWP) that includes jobsite hazard analysis
2. Lock out tag out (LOTO) procedure and equipment to be used
3. Work schedule
4. Work Sequencing Plan
5. Communication Plan (Data Center, OCC and all occupants of affected area shall be notified of outages)
6. Submittals (WMATA approval is required before installation):
 - i. PDUs drawings and specifications
 - ii. Panelboards drawings and specifications
 - iii. Cables and conduits information
7. Testing plans
8. Testing results
9. Asbuilt drawings including all new panelboard schedules for all newly installed panels.

5. Schedule of Services:

The contractor shall submit a detailed schedule for activities for approval within 15 days after receipt of Task Order NTP. This schedule shall be reviewed and approved by WMATA. After approval by WMATA, it will serve as the baseline schedule for the services.

6. Performance Standard and Quality Measurement:

The contractor shall within 15 days of the NTP submit an approved Quality Assurance/Quality Control (QA/QC) Plan to address the electrical design and installation processes that will be a part of this scope of work.

7. Authority Furnished Data and Information:

WMATA will furnish a single line drawing and related documents.

8. Responsibilities:

Management of the project will be conducted in accordance with the WMATA Project Management Plan. The role of the each participant in the Project effort is as follows:

- a. WMATA is the Owner and overall Program Manager responsible for project oversight, cost control, schedule and contracting authority. WMATA will coordinate operational planning, internal WMATA coordination, and assurance that the project is implemented in accordance with current WMATA design criteria and standards.
- b. The contractor shall be responsible for day-to-day management of the task order requirements and the assurance that the project is implemented in accordance with current WMATA standards.
- c. The contractor shall provide the full resources necessary to complete the managerial, technical, administrative, audit and quality assurance/quality control tasks associated with the scope of work.

9. Reporting and Communication:

The contractor shall provide information on an as needed basis to answer questions concerning interpretation of contract documents, operational departmental concerns and in-house training during the contract execution phase.

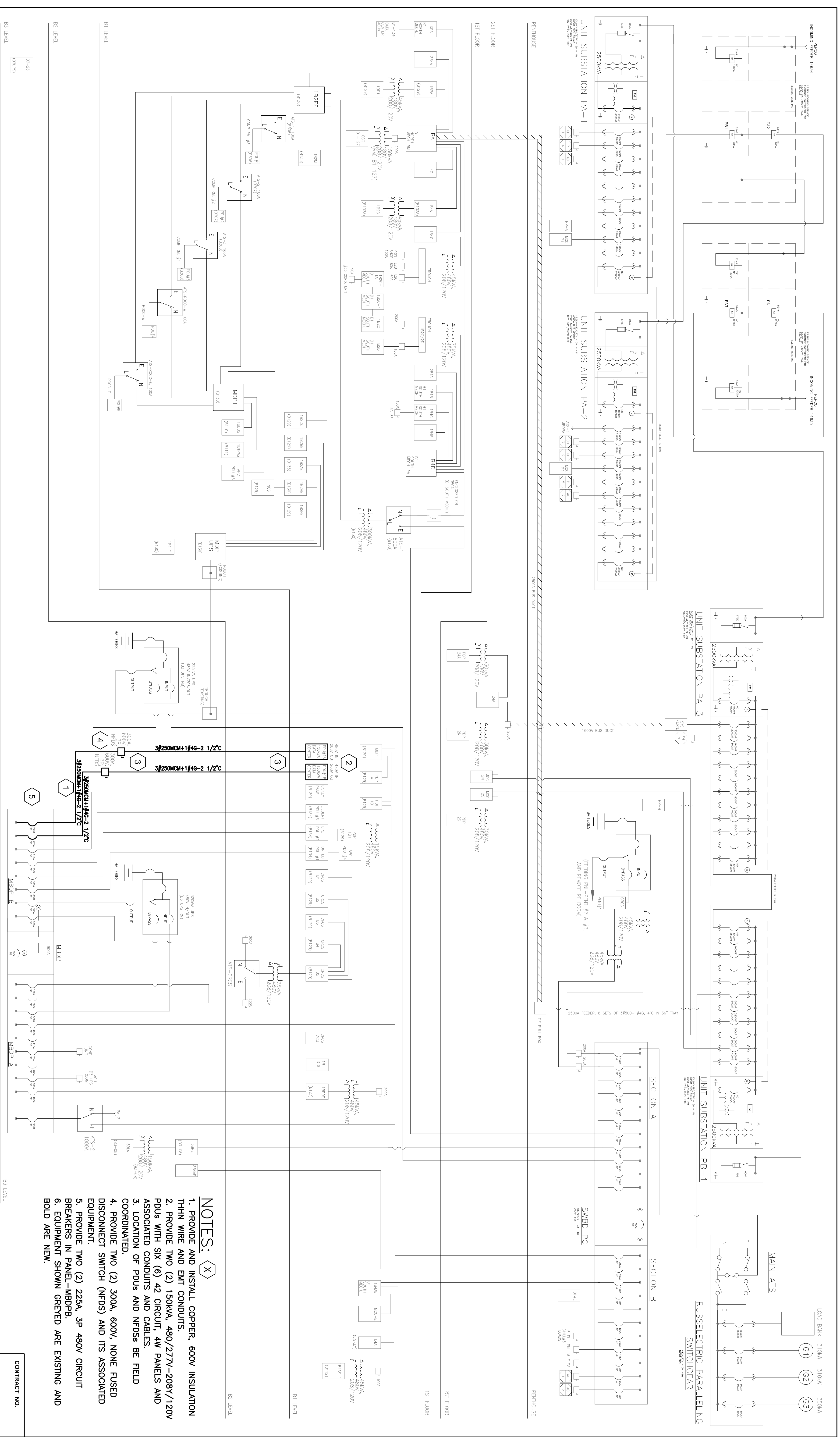
10. Security Requirement:

The use of WMATA documents shall not be disclosed without express written approval of the General Manager of the Authority.

11. Work Location:

The work location for this scope is at the Jackson Graham Building, located at 600 Fifth Street, NW, Washington DC 20001.

End



- NOTES:** (X)
1. PROVIDE AND INSTALL COPPER, 600V INSULATION THIN WIRE AND EMT CONDUITS.
 2. PROVIDE TWO (2) 150KVA, 480/277V-208Y/120V PDUS WITH SIX (6) 42 CIRCUIT, 4W PANELS AND ASSOCIATED CONDUITS AND CABLES.
 3. LOCATION OF PDUS AND NFDSS BE FIELD COORDINATED.
 4. PROVIDE TWO (2) 300A, 600V, NONE FUSED DISCONNECT SWITCH (NFDs) AND ITS ASSOCIATED EQUIPMENT.
 5. PROVIDE TWO (2) 225A, 3P 480V CIRCUIT BREAKERS IN PANEL-MBDPB.
 6. EQUIPMENT SHOWN GREYED ARE EXISTING AND BOLD ARE NEW.

REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
 DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
 OFFICE OF THE CHIEF ENGINEERING, INFRASTRUCTURE

JACKSON GRAHAM BUILDING
 ADDITIONAL PDUS TO DATA CENTER
 SINGLE LINE DIAGRAM-EXISTING WITH NEW PDUS

DESIGNED BY VT DATE 06/23/15
 DRAWN BY VT DATE 06/23/15
 CHECKED BY DAK DATE 06/23/15
 APPROVED BY DAK DATE 06/23/15

APPROVED *Dwayne A. Kerr* DATE _____

CONTRACT NO. _____

SCALE AS NOTED

DRAWING NO. E-102b SHEET NO. 1 OF 1

ATTENDANCE SHEET

SITE VISIT – CONTRACT # FQ15188

NAME: POWER DISTRIBUTION UNIT (PDU) – DATA CENTER

DATE: FRIDAY, JUNE 19, 2015 @10:00 – 11:00 AM EST (US & CANADA)






NAME	AGENCY/COMPANY	TELEPHONE #	EMAIL ADDRESS	SIGNATURE
Benjamin Kpadeh	PRMT – WMATA	202-962-2478	bkpadeh@wmata.com	
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Varughese Thomas Terrell Bridges	Engineering – WMATA	202-962-6251 <i>x25684</i>	vthomas@wmata.com tbridges@wmata.com	
Zafar Chaundhry	IT – WMATA	202-962-2484	zchaundhry@wmata.com	
Benjamin M. Theis	ICS Nett	703-663-6550	btheis@ics-nett.com	
William (Bill) R. Mitchell	ICS Nett	703-342-6620	bmitchell@ics-nett.com	
Kirk J. Knott	Nationwide Electrical Service	202-636-3800	kknott@n-e-s.net	
Scott Patrick Waters	Orion Management	703-321-2190 ext.232	s.waters@orionmngt.com	
Kevin Zubroski	Orion Management	703-321-2190	k.zubroski@orionmngt.com	
Joseph M. Varona	E-TEC Inc.	703-961-8830	varonaj@etecinc.org	
Zach Spees	Capitol Power	703-489-3778	Zach.spees@capitolpower.com	
Charles Brissey, Jr.	Jaxson Point Electric	540-645-8948	ted@jaxsonpoint.com	
Charles Brissey III	Jaxson Point Electric	540-645-8947	chad@jaxsonpoint.com	

ATTENDANCE SHEET

SITE VISIT – CONTRACT # FQ15188

NAME: POWER DISTRIBUTION UNIT (PDU) – DATA CENTER

DATE: FRIDAY, JUNE 19, 2015 @10:00 – 11:00 AM EST (US & CANADA)

NAME	AGENCY/COMPANY	TELEPHONE #	EMAIL ADDRESS	SIGNATURE
Michael R. Reynolds	FLBE, Inc.	703-481-8306	<u>Mike.reynolds@flbeinc.com</u>	
Robert Mark Phil	RJA Electrical Services LLC	410-414-7500		
Ralph J. Almaraz	RJA Electrical Services LLC	410-414-7500		
<i>NICK BRUNO</i>	<i>NICK@ELECTRICALPOWERGROUP.COM</i>	<i>540 326-2300</i>		
<i>REN CLARK</i>	<i>ICS-NETT (DBE)</i>	<i>703-967-7194</i>	<i>rclark@ics-nett.com</i>	
<i>Troy Wright</i>	<i>POWER / HV-TT</i>	<i>301-955-4249</i>	<i>Twright@wmata.com</i>	