ALHAMBRA
UNIFIED SCHOOL DISTRICT

ADDENDUM TO BID/RFP NO. 1208-18/19

Date: 9/18/2018

Project: DISTRICT NOC UPS REPLACEMENT PROJECT

From: Vivien Watts, Director of Business Services

Addendum Number: 1

THIS ADDENDUM IS ISSUED AS PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT AND AMENDS ONLY THOSE ITEMS SPECIFICALLY DEFINED HEREIN. THIS ADDENDUM MUST BE ACKNOWLEDGED ON THE BID/PROPOSAL FORM. YOUR FAILURE TO DO SO MAY RENDER YOUR BID/PROPOSAL NON-RESPONSIVE.

Revisions: These revisions are for bidding purposes only.

A. ADDED SPECIFICATIONS

Item	Section	Description
1.	262200	Low-Voltage Transformers
2.	262416	Panelboards and Signal Terminal Cabinets

B. OTHER

Item	RFI #	Description
1.	1-3	Pre-Bid – Request for Clarification No's. 1-3 (one page) – First Electric Systems, Inc.
2.	1-6	Pre-Bid – Request for Clarification No's. 1-6 (one page) – VectorUSA

C. ADDITIONAL NOTES

Item	Impact	Description
1.	Working Hours	Working hours have been extended from 5:00 pm to 1:30 am Monday through Friday. (Bid documents working hours stipulated 5:00 pm to 11:30 pm). District will incur additional costs for overtime hours for security as a direct result of the extended working hours. Bid documents indicate a two-week construction schedule. District will be responsible for ten (10) overtime shifts (i.e., 5:00 – 1:30 am) for security. Contractor is responsible for all shifts that exceed the ten (10) working days that require overtime shifts for security at a cost of $150/per overtime shift. Project schedule cannot be extended.

E. AUTHORIZED ADDENDUM ONLY: Clarification or any other notice of a change in the Bidding Documents will be issued only by the District's Purchasing Department and only in a written Addendum on this Form,

transmitted by fax or e-mail to all who are known bythe issuing office to have received a complete set of Bidding Documents. **Any other purported Addenda are void and unenforceable.**

F. ATTACHMENTS:

1. Specification Section 262200 - Low-Voltage Transformers – dated 9/17/18
2. Specification Section 262416 - Panelboards and Signal Terminal Cabinets – dated 9/17/18
3. Pre-Bid Clarification No.'s 1-3 – First Electric Systems, Inc. (one page)
4. Pre-Bid Clarification No.'s 1-6 – VectorUSA (one page)

End of Addendum No. 1

SECTION 26 2200

LOW-VOLTAGE TRANSFORMERS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: This specification covers single-phase and three-phase general purpose individually mounted dry-type transformers, 600 V maximum, for power and lighting applications. It includes transformers as specified and as indicated on Drawings.

B. Work, material or equipment shall comply with the codes, ordinances and regulations of the local government having jurisdiction, including the regulations of serving utilities and any participating government agencies having jurisdiction.

C. Related Requirements:

1. Division 01 - General Requirements.
2. Section 26 0500: Common Work Results for Electrical.
3. Section 26 0513: Basic Electrical Materials and Methods.
4. Section 26 0526: Grounding and Bonding.
5. Section 26 0519: Low-Voltage Wires (600 Volts AC)
6. Section 26 0533: Raceways and Boxes, Fittings and Supports.
7. Section 26 2600: Power Distribution Units.
8. Division 27: Communications.

D. Codes and Applicable standards: Products and installation shall meet or exceed the latest edition of the following standards.

1. ANSI/IEEE C57.96, Distribution and Power Transformers, Guide for Loading Dry-Type Transformers; Appendix to ANSI C57.12 Standards.
2. Department of Energy, Energy Act of 2005.
3. International Electrical Code adopted by the State of California.
4. ANSI/NEMA 250 Enclosure for Electrical Equipment (1000 Volts Maximum)
5. IEEE C57.12.91, Test Code for Dry-Type Distribution and Power Transformers.

6. IEEE C57.110 – IEEE Recommended Practice for establishing liquid-filled and dry-type power and distribution transformer capability when supplying nonsinusoidal load currents.

7. 1100-IEEE Recommended Practice for Powering and Grounding Sensitive Electronic Equipment.

8. NEMA standard 20, Dry-Type Transformers for General applications.

9. UL 506, Specialty Transformers.

10. UL 1561, Dry-Type General Purpose and Power Transformers.

11. NEMA TP-1, Guide for Determining Energy Efficiency for Distribution Transformers.

12. NEMA TP-2, Standard Test Method for Measuring the Energy Consumption of Distribution Transformers.

13. NEMA TP-3, Standard for the Labeling of Distribution Transformer Efficiency.

14. CSA 802.2-00 Minimum Efficiency Values for Dry Type Transformers

15. California Building Code (CBC)

16. Tri-axial shake test results conducted in accordance with AC156 test protocol.

17. NFPA 70 National Electric Code

E. No requirement of these drawings and specifications shall be construed to void any of the provisions of the above standards. Any conflicts or changes required to the contract documents in order to obtain compliance with applicable codes shall be brought to the immediate attention of the Owner Authorized Representative by the CONTRACTOR.

F. ACRONYMS

ANSI	American National Standards Institute
AOR	Architect of Record
CEC	California Electrical Code
EOR	Engineer of Record
IBC	International Building Code
IEEE	Institute of Electrical and Electronics Engineers

NEC National Electrical Code

NEMA National Electrical manufacturers Association

1.02 DESIGN REQUIREMENTS

A. Premium Efficiency transformers with internal losses at 35 percent loading reduced by 30 percent when using temperature and material correction factor to 75 degrees C per NEMA Standard TP1

B. Load Mix: Transformer shall be UL 1561 listed to feed a mix of equipment load profiles such as computer without detracting or significant degradation of efficiency.

C. The transformer shall be labeled with a K-9 Rating in accordance with UL 1561 35.21 and 34.2.

D. K-7 rating is not allowed.

E. Construction: Windings shall be continuous wound copper with brazed or welded terminations.

1. Insulation and Varnish Systems: Epoxy Polyester impregnation

2. Terminals, including those for changing taps must be readily accessible by removing a front cover plate.

F. Performance of transformers shall meet or exceed the requirements of applicable codes and standards, the DOE Energy Policy Act of 2005 - Public Law 109-58 and the latest requirements of the California Energy Commission Appliance Efficiency Regulations. In addition; transformers shall be designed to an efficiency standard higher than the lowest legal standard for the purpose of contributing to LEED Energy and Atmosphere (Optimized Energy Performance) and Utility Rebates.

G. Transformers shall be self-cooled type with 220 degrees C. insulation and a maximum temperature rise of 130 degrees C. under continuous full load conditions with an ambient of 40 degrees C.

H. Transformers shall be furnished with four 2.50 percent (two above and two below normal voltage) taps. Windings shall be of fire-resistant type, designed for natural convection cooling through normal air circulation.

I. Core mounting frames and enclosures shall be of welded and bolted construction with sufficient mechanical strength and rigidity to withstand shipping, installation, and short circuit stresses.

J. Enclosure cover plates shall be sheet steel, captive bolted to enclosure framework. Enclosure shall provide suitable ventilating openings with rodent-proof screens, NEMA 1 enclosure. Enclosure shall be provided with lifting lugs and jacking plates as required. Transformers installed outdoors shall be provided with weatherproof NEMA 3R enclosure and weather proof kit.

1. Submit rodent-proof screen sample for OWNER's approval.

K. Transformers shall be furnished complete with mounting channels and mounting bolts. Metal parts, excepting cores and core mounting frames shall be furnished clean, rust-proofed, and provided with a coat of an inert primer.

L. Transformers up to 35 KVA shall not exceed 40 decibels. Transformers 36 KVA or more shall be a minimum of 5 decibels below NEMA standards per unit. Transformers shall be provided with vibration dampers consisting of California Dynamic, Mason Industries, Korfund or equal neoprene mounting pad and Elastorib sheeting. Size and number of shock mounts shall be in accordance with manufacturer's recommendations.

M. Transformers shall be UL listed.

N. Each transformer to be installed under this section shall be sound tested at the factory. CONTRACTOR shall provide two copies of transformers tests reports for EOR's review.

O. Equipment shown on drawings to scale is approximate only and based upon a general class of equipment specified. The CONTRACTOR shall verify dimensions and clearances prior to commencement of work.

P. Verify points of connection with the manufacturer's requirements, instructions, or recommendations prior to installation. Actual dimensions, weights, clearances and installation requirements shall be verified and coordinated by the CONTRACTOR.

EDIT NOTE: EXPECTED HARMONICS CONTENT IN THE ELECTRICAL DISTRIBUTION SYSTEM MUST BE CALCULATED PRIOR TO DESIGNING A SYSTEM THAT USES K-RATED TRANSFORMERS.

Q. Provide transformers with a K rating as indicated on drawings. K-rated transformers shall be type NL-UL or NLP-UL as indicated on drawings and be equipped with the following features:

1. Electrostatic shield.
2. NLP series shall have a maximum sound level of 3 dB below NEMA standards.
3. Double-size neutral terminal.
4. Additional coil capacity to compensate for higher non-linear load loss.
5. Heavy-gage ventilated indoor enclosures (provide weather shields where installed indoors).
6. K-rated transformers shall meet other requirements of this section.

1.03 SUBMITTALS

A. Provide in accordance with Division 01.

B. Shop Drawings: Include make, catalog number, dimensions, weight, KVA Rating, Percent Impedance, finish, type, insulation class, design temperature, sound levels, efficiency and taps provided. Include regulation at 80 percent and 100 percent of full load, no-load loss, full-load loss, percent efficiency, percent impedance, noise level and continuous capacity rating.

C. Provide manufacturers data and inspection report that confirms transformers to be UL 1561 listed with K rating equal to that indicated on drawings.

D. Provide a connection schematic diagram.

E. Provide the following tests reports: Project Inspector will review the reports for conformance with specified criteria, and compliance with the applicable standards. Submit one copy for each set of shop drawings being submitted.

1. Load Losses: Measurements shall be taken at multiple load levels and plotted to show compliance with specifications and correlated to efficiency curve for the transformer size and type.
2. Provide No-Load and Total Losses report.
3. Applied Voltage.
4. Temperature Rise.
5. Induced Voltage.
6. Sound Level.
7. Impulse Test.
8. Manufacturer's nonlinear load test representing real world load mix. Transformers not meeting this requirement shall not be installed.

F. Submit harmonics test plan as follows:

1. NEMA ST-20.
    a. Open Circuit Test (no load losses):
        1) Use for both Linear and non-Linear.
        2) Measure Power.
    b. Short Circuit Test (load losses):
        1) Short Primary Winding.
            a) Linear Test – complete with linear profile through secondary winding.
    c. Non-Linear Test.

Harmonic Profile (K-7 Load)				
Harmonic Number	Rated % Current	Phase Shift		
		A	B	C
1	100.0	0	120	240
3	81.0	0	0	0
5	60.6	0	240	120
7	37.0	0	120	240
9	15.7	0	0	0
11	2.4	0	240	120
13	6.3	0	120	240
15	7.9	0	0	0

1) Complete with non-linear profile through secondary windings.

2) Measure Power.

2. Take data and graph efficiency per NEMA ST-20.

a. Graph-1 – Linear Loads 0 to 100 Percent Loads.

b. Graph 2 – Non-Linear Profile K-9 0 to 100 Percent loads.

3. Test Plans measuring Power IN and Power Out will not be accepted since procedures are not covered by any standard.

1.04 WARRANTY

A. Transformers shall be warranted to be free from defects in materials, fabrication and execution for a period of three years from the date of substantial completion.

PART 2 - PRODUCTS

2.01 EQUIPMENT

A. Transformers manufactured by Siemens, Square D, General Electric, PowerSmiths, MGM, and Cutler Hammer or equal.

B. There shall be no openings through which foreign objects such as sticks, rods, wires, or the like might enter and contact live parts. Provide means for padlocking compartment doors.

a. Connection terminal points shall be bottom fed and located as far as possible below vent openings, or below top connections.

b. Terminals shall be protected from external/foreign objects contact.

PART 3 - EXECUTION

3.01 DELIVERY AND STORAGE

A. Deliver, storage, protect and handle products in accordance with the manufacturer's recommendations.

3.02 INSTALLATION

A. Transformer core frame shall be installed level on shock absorbing pads within enclosure. Comply with seismic requirements of CBC.

B. Mounting bolts on floor mounted transformers shall be extended into pads only and shall not be in direct contact with building structural members.

C. Flexible jumpers shall be installed for grounding continuity from enclosure to conduits or bus ducts where required.

D. Transformers installed outdoors or below grade shall be mounted on concrete pads as specified in Section 03 3000: Cast-In-Place Concrete.

E. Install transformer ventilation openings not closer than 6 inches from wall surfaces.

F. Do not install transformers in corrosive environments such as swimming pool pump and boiler rooms, or similar areas.

3.03 VOLTAGE CHECK

A. Set taps on transformers to provide satisfactory operating voltages with present loads energized, including new loads and existing loads. A check shall be performed in the presence of the Project Inspector at a panel fed from each transformer, which is farthest from transformer. Voltages at transformers ranging from 118 to 122 volts inclusive, for 120 volt systems and proportionately equivalent for higher voltage systems are permitted.

B. Provide instruments and accessories required to perform checks. Voltmeters shall be accurate within .075 percent or one percent and shall have scales permitting voltage readings to be performed on upper half of scale. Calibration of the meters shall be observed by the Project Inspector.

C. Adjust transformer taps under full load operating conditions, to provide normal operating voltages at the loads.

3.04 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.05 CLEANUP

A. Remove rubbish, debris and waste materials and legally dispose of off Project site.

B. Repair scratched or marred surfaces affected during the execution of work. Repair surfaces shall match original finish.

END OF SECTION

SECTION 26 2416

PANELBOARDS AND SIGNAL TERMINAL CABINETS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Lighting and power distribution facilities, including panelboards.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 26 0500: Common Work Results for Electrical.
3. Section 26 0513: Basic Electrical Materials and Methods.
4. Section 26 2600: Power Distribution Units.
5. Section 26 5000: Lighting.
6. Division 27: Communications.
7. Division 28: Electronic Safety and Security.

1.02 SUBMITTALS

A. Provide in accordance with Division 01.

B. Shop Drawings: Include a front elevation indicating cabinet dimensions, make, location and capacity of equipment, size of gutters, type of mounting, finish, and catalog number of locks. General layout of internal devices, wiring drawings with wire numbers and device connections, vendor cut sheets of devices in enclosure and bill of materials listing description, manufacturer, part number, and quantity of items shall be included.

C. Installation Instructions: Submit manufacturer's written installation instructions.

1.03 DESIGN REQUIREMENTS

A. Panelboards:

1. Panelboards shall be wall-mounted, enclosed safety type with 120/240 volt, three-wire solid neutral 277/480 volt, four-wire or 120/208 volt, four-wire solid neutral mains as indicated on Drawings or specified. First panelboard of each building shall be provided with main or sub-feeder circuit breakers where so indicated.

2. Single pole branches shall be molded case, thermal magnetic circuit breakers with inverse time delay, trip free, quick-make, quick-break mechanism and silver alloy contacts. Circuit breakers shall be fully rated, with ampere rating marked on handle and shall indicate on/off and tripped positions. Ground fault interrupters shall be incorporated into circuit breakers where indicated. They shall be listed by UL, or other NRTL as ground fault devices. Provide appropriate lug kit of sufficient size to accommodate the feeders.

3. Two- and three-pole branches shall be enclosed, and shall be thermal magnetic circuit breakers with inverse time delay, tamper-proof, ambient compensated, single handle, internal common trip, and quick-make, quick-break mechanism with silver alloy contacts. Circuit breakers shall be fully rated or as otherwise indicated on the Drawings.

4. Main and subfeeder circuit breakers shall be enclosed, thermal magnetic type with inverse time delay, single handle common trip, quick-make, quick-break mechanism, corrosion-resistant bearings and silver alloy contacts. Ampere frame size and trip rating shall be as indicated on Drawings. Breakers over 225 amperes shall be furnished with interchangeable trip units. Handles of main and subfeeder circuit breakers shall be provided cabinet door. Voltage rating shall be as indicated on Drawings.

5. Circuit breakers shall be fully rated and of one-piece, bolt-on type and shall meet short-circuit interrupting capacity requirements indicated on Drawings. Series rated circuit breaker combinations are not acceptable.

6. Internal connections shall be fabricated with plated copper bus bars and the busses shall extend for full length of space available for branch circuit breakers. Feeder cable connectors shall be installed at point of feeder entrance. Terminals shall be furnished with copper conductors. Panelboards fed by conductors having over-current protection greater than 200 amperes shall be protected on supply side by over-current devices having a rating not greater than that of panelboards. Copper bussing shall be fully rated. Heat rated bussing is not acceptable.

7. Except where otherwise indicated, circuit breakers shall be in two vertical rows connected to bus bars in a distributed phase arrangement. Two-pole branches shall be balanced on busses. Single pole branches shall be numbered adjacent to its circuit breaker, with odd numbers on left and even numbers on right.

8. Specified circuit breaker spaces shall be furnished with hardware required for future installation of circuit breakers.

9. Provide locking devices for individual circuit breakers. Padlocking devices shall be secured to circuit breakers and by panel dead front plates.

B. Surge Suppressors: Where indicated on Drawings, provide transient voltage surge suppressors as an integral part of panelboards. Panelboards shall be complete with 200

percent rated copper neutral bus, ground bus and isolated ground bus in addition to requirements of this section. Surge suppressors shall be as follows:

1. Surge Capacity:

   a. Line-to-neutral for wye systems: 80 KA.

   b. Line-to-ground: 80 KA.

   c. Neutral-to-ground: 80 KA, three-phase wye.

   d. Line-to-neutral plus line-to-ground: 160 KA.

2. UL 1449 2nd Edition Suppressed Voltage Rating for 208/120 Wye System:

   a. Line-to-neutral: 400 volts.

   b. Line-to-ground: 400 volts.

   c. Neutral-to-ground: 400 volts.

   d. Maximum continuous over-voltage: 150 volts.

3. EMI/RFI High-Frequency Noise Power Filter (Characteristics):

   a. 100 KHz at 444 dB.

   b. 100 MHz at 44 dB.

   c. 10 MHz at 44 dB.

   d. 100 MHz at 444 dB.

4. MOVs shall be thermally protected for low current faults and shall be fused with surge-rated fuses. The surge-rated surge current passes and clears the circuit safely if the surge capacity is exceeded. Enhanced diagnostics shall continuously monitor the unit's status and shall include LEDs to signal a reduction in surge capacity or the loss of a suppression circuit. An audible alarm, with test and silence features, shall be furnished in diagnostic package.

5. Each phase or the entire unit shall be replaceable and have bolted-on, tin-plated copper connections. Unit to have UL witnessed fault current rating of 65,000 symmetrical amperes.

6. Surge suppression units shall comply with the following:

   a. UL certified.

   b. UL 1283.

c. UL 1449.

d. IEEE C 62.45.

e. IEEE C 62.41.

f. Nationally Recognized Testing Laboratory (NRTL) or equal.

C. Panelboard Cabinets:

1. Panelboard cabinets shall be code gage galvanized steel or blue steel; fronts, doors, and trims shall be code gage furniture steel. Cabinets shall be furnished with at least six-inch high gutters at top and bottom where feeder cable size exceeds four gage or where feeder cable passes through cabinet vertically. Cabinets shall be furnished with top and bottom gutters sized as required by inspection department having jurisdiction, but never less than six inches where more than one feeder enters top or bottom of cabinets. Side gutters shall not be less than four inches wide. Width of cabinets shall be 20 inches, unless otherwise indicated on Drawings.

2. Doors shall be cut true, shall accurately fit opening and finish smooth across joints. Rabbets shall be inside. Hinges shall be entirely concealed except for barrels and pins. Hinge flanges shall be welded to door and trim. Doors shall be equipped with flush type, spring-latching, Corbin locks for metal doors, keyed to Corbin No. 60 keys.

3. Where contactors, time switches, and control devices are specified or indicated to be installed within panelboard cabinets, a separate compartment and door shall be provided at top of cabinet for such devices. Door shall be sized as required to permit removal of contactor and other devices intact. Gutters shall be provided at sides and top of compartment. Doors shall be equipped with flush type, spring-latching, Corbin locks for metal doors keyed to Corbin No. 60 keys.

4. Provide and install panelboard manufacturer's permanent circuit number kit option.

5. Panelboards with control devices in compartment shall arrive at the Project site completely assembled with control devices installed and wired.

6. Outdoor cabinets shall be NEMA Type 3R. Construction shall be formed from code gage galvanized steel with ANSI No. 61 gray enamel finish. Provide heavy-duty, three point latching, vault type door handles with padlocking provisions. Provide stainless steel or galvanized butt hinges on doors. Padlocks shall be furnished, keyed to Corbin No. 60 keys.

7. Self-tapping screws and bolts not permitted.

D. Panelboard Schedule: Provide a neatly typewritten schedule with number or name of room or area, or load served by each panelboard circuit. Room numbers or names shall be determined at the Project site and shall not necessarily be those indicated on the Drawings. Schedule shall also indicate panel designation, voltage and phase, building and distribution panel or switchboard from which it is fed. Schedule shall be installed in a frame under transparent plastic 1/32 inch thick on inside of each panelboard cabinet door.

E. Panelboard nameplate: Provide a nameplate identifying panelboard. Plates shall be black and white plastic nameplate stock, with character cut through black exposing white and shall bare designation of service. Name plate shall be mechanically fastened to switchboard.

F. Provide additional labeling on dead-front of panelboard. Label shall be a P-Touch or equal with a minimum width of 3/8 inch with black letters on white background. Label shall re-identify panelboard and also identify name and location of power source feeding this panel. Location information shall include building name if located in different building and name or room location. If power source is installed in same room, label should indicate source name and "In this Room"

G. Panelboard Standards: Panelboards shall be UL, or other NRTL listed and labeled. Panelboards shall meet latest revisions of following standards:

1. California Electric Code, Article 384.

2. UL 67, Panelboards.

3. UL 50, Cabinets and Boxes.

4. UL 943, GFCI.

5. UL 489, Molded Case Circuit Breakers.

6. NEMA PB1.

7. Federal Specifications W-P- 115C and WC-375B.

H. Signal Terminal Cabinets:

1. Signal terminal cabinets shall conform to the Specifications for panelboard cabinets, except as modified herein.

2. Terminal cabinets shall be flush type, with two-inch trim or surface mounted type, as indicated on Drawings. Terminal cabinets shall be furnished with sections and barriers to separate each system. Sections over 24 inches in width shall be provided with double doors and locks. Terminal cabinets, or sections of terminals housing separate systems, shall measure 12 inches long by 18 inches

high by 5 ¾-inch deep, unless otherwise indicated on Drawings. Trims for sectional cabinets shall be of one-piece construction.

3. Terminal cabinets shall be furnished with ¾ inch thick plywood. Plywood shall be fastened in place with machine screws or factory installed mounting screws.

4. Flush-mounted terminal cabinets shall be finished as specified for flush-mounted panelboard cabinets. Surface and semi-flush mounted terminal cabinets shall be finished as specified for surface-mounted panelboard cabinets.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Panelboards shall be manufactured by Siemens, W.A. Benjamin, General Electric, Cutler Hammer, Square D or equal.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Panelboards shall be located so they are readily accessible and not exposed to physical damage.

B. Panelboards installed outdoors shall be specifically listed for wet locations and shall be weatherproof in NEMA Type 3R cabinets.

C. Panelboard locations shall provide sufficient working space around panels to comply with the California Electrical Code.

D. Panelboards shall be securely fastened to structure and mounted on surface by at least four points.

E. Unused openings in cabinets shall be effectively closed as required by the manufacturer.

F. Cabinets shall be grounded as specified in Article 250 of the California Electrical Code.

G. Conduits shall be installed so as to prevent moisture or water from entering and accumulating within the enclosure.

H. Lugs shall be suitable and listed for installation with the conductor being connected.

I. Conductor lengths shall be maintained to a minimum within the wiring gutter space. Conductors shall be long enough to reach the terminal location in a manner that avoids strain on the connecting lugs.

J. Maintain the required bending radius of conductors inside the cabinet.

K. Clean the cabinet of foreign material such as cement, plaster, and paint.

L. Distribute and arrange conductors neatly in the wiring gutters.

M. Use the manufacturer's torque values to tighten lugs.

N. Before energizing panelboards, the following steps shall be taken:

1. Retighten connections to the manufacturer's torque specifications. Verify that required connections have been provided.

2. Remove shipping blocks from component devices and panelboard interiors.

3. Manually exercise circuit breakers to verify they operate freely.

4. Remove debris from panelboard interior.

O. Follow manufacturer's instructions for installation.

P. Do not install in highly corrosive environments, unless rated for the application.

3.02 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.03 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

ALHAMBRA UNIFIED SCHOOL DISTRICT

PreBid - Request for Clarification

Alhambra Unified School District
15 West Alhambra Road
Alhambra, CA 91801
626.943.6600 phone

Client:	Alhambra Unified School District
Program:	
Project:	District NOC UPS Replacement Project
Project Manager:	Vivien Watts
Requester's RFI No.:	#1~#4
Date:	9/11/2018

To:	Vivien Watts
From:	Seong Jeong
Company:	First Electric Systems, Inc.
Email:	SeongJeong@fesysinc.com

Date Response Is Requested:

Please provide clarification and/or additional information for the issue(s) itemized below:

No.	Question / Clarification Required	Spec. Section	Drawing No.
#1	Please. provide electrical spec. for Electrical equipment.		E1.1
#2	Does contractor needs to submit Short Circuit, Coordination & Arc-Flash Analysis for the new electrical equipment?		E1.1
#3	Does contractor provide temporary back-up generator?		

Response

No.	Response / Clarification	Spec. Section	Drawing No.
	#1 see attached additional Specs.		
	#2 Contractor to provide Short circuit and arc-flash analysis to provide new arc-flash label for new equipment.		
	#3 No back-up power require, contractor to install new UPS before disconnecting existing UPS. Contractor to coordinate with the district and plan to disconnect existing and connect new on a weekend previously coordinated with the district IT department.		

[ ] The above response is considered a change. The following document will be used for processing: _____

[ ] The above is consistent with the intent of and reasonably inferable from the Contract Documents, or makes minor changes in the work without change in the contract sum or contract time. If you do not agree, submit written notification substantiating claim in accordance to the Contract Documents for approval **PRIOR** to proceeding.

Response by Architect: ENGINEER (BUDONG) _____ _____ _____
Signature Name (Printed) Date

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

ALHAMBRA UNIFIED SCHOOL DISTRICT

PreBid - Request for Clarification

Alhambra Unified School District
15 West Alhambra Road
Alhambra, CA 91801
626.943.6600 phone

Client:	**Alhambra Unified School District**
Program:	
Project:	Bid No.1208-18/19District NOC UPS Repayment
Project Manager:	
Requester's RFI No.:	1
Date:	9/14/18

To:	Vivien Watts
From:	Ryan Stachowiak
Company:	Vector Resources, Inc. dba VectorUSA
Email:	rstachowiak@vectorusa.com

Date Response Is Requested:

Please provide clarification and/or additional information for the issue(s) itemized below:

No.	Question / Clarification Required	Spec. Section	Drawing No.
1	The prints show a dual input feed to the UPS, but APC does not have any dual feed UPS solutions, how do we proceed?		
2	Are we responsible for patching and painting especially after demolition of old UPS and infrastructure?		
3	RFP stipulates that the City of Alhambra will be the inspector. Is this correct, and if so do we need a permit?		
4	Existing Panel TR-1 is full and has more than the 2 circuits indicated on the drawings. Are we responsible for providing power to every existing circuitin the new Panel TR-1 even though it's not shown on print?		
5	Existing room has shelves and racks where the new UPS will be located. Are we responsible for removal of all shelves and racks?		
6	Prints show existing BDS1 has enough room for new 225 amp breaker to feed new UPS, but the actual switchgear appears to not have enough room for new 225 amp breaker. Is this correct?		

Response

No.	Response / Clarification	Spec. Section	Drawing No.
	#1 Proceed with Single Input.		
	#2 Contractor is responsible for patching. Painting is by District.		
	#3 City of Alhambra is Inspecting the project. Contractor is responsible for paying for and pulling the permit.		
	#4 Drawings show panel TR-1 to be demo & replace with new in same location, contractor to reconnect existing circuits.		
	#5 District will remove all shelves and racks.		
	#6 Remove exist CB feeding exist transf. and replace with a new 225A CB to feed the new 150kva transf.		

[ ] The above response is considered a change. The following document will be used for processing: _____

[ ] The above is consistent with the intent of and reasonably inferable from the Contract Documents, or makes minor changes in the work without change in the contract sum or contract time. If you do not agree, submit written notification substantiating claim in accordance to the Contract Documents for approval **PRIOR** to proceeding.

Response by Architect: BUDLONG _____ (Signature) _____ (Name (Printed)) _____ (Date)

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT