PURCHASING DEPARTMENT

Newport News Public Schools

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12465 WARWICK BOULEVARD • NEWPORT NEWS, VIRGINIA 23606-3041

April 25, 2025
Addendum #2
FOR IMMEDIATE ATTENTION

ADDENDUM NO. 2 TO ALL BIDDERS:

Reference – Invitation for Bid:	IFB #018-0-2025/SB Heritage High School Main Distribution Switchboards Replacement
For Delivery To:	Newport News Public Schools
Bids Due:	May 8, 2025 at 2:00 PM EST

The above is hereby changed to read:

1. **Bid Due Date Extended:** The Bid Due Date is hereby changed from May 5, 2025 at 2:00 P.M. EST to "**May 8, 2025 at 2:00 pm EST."**

2. **Public Bid Opening Zoom Link:** The Zoom link for virtual participants remains unchanged.

   Topic: Bid Opening - Heritage HS Switchboard Replacement
   Time: May 8, 2025 02:00 PM Eastern Time (US and Canada)
   https://nn-k12-va-us.zoom.us/j/83916330464?pwd=Xn6w8yAsqZmyV8UZCTDxMoYRZPzg9q.1
   Meeting ID: 839 1633 0464
   Passcode: 524507

3. **Pre-Bid Questions and Responses**: See the following.

4. **Heritage High School Solar Photovoltaics (PV) Interconnection Specification:** See the following.

5. **Existing Main Distribution Switchboard #1 and #2:** See the following.

All other provisions of the IFB shall remain unchanged.

Sincerely,
Shannon Bailey, VCCO, VCO
Director of Procurement
shannon.bailey1@nn.k12.va.us
757-591-4560 x10752

_____
Name of Firm

_____
Signature/Title

_____
Date

THOMPSON
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April 25, 2025

ADDENDUM NO. 02

Heritage HS Switchboard Replacement
Newport News Public Schools
IFB Project No. 018-0-2025SB
Newport News, Virginia
TCE # 21-163

Except as may be otherwise described, bidding requirements, materials, and workmanship for the work described herein shall conform to all requirements of the original Contract Documents dated March 26,2025. The following Addendum to the specifications and drawings are made a part of the project and take precedence over the section of the specifications, in part, as originally written and over the drawings, in part, as originally drawn and/or written.

Each Bidder must acknowledge receipt of the Addendum in the space provided on the BID FORM of the Specifications. Failure to do so may subject the Bidder to disqualification.

Questions and Responses

Question 1 Some portions of the walls that enclose the switchgear room are going to be removed to allow for the removal and the installation of the new switchgear. This is going to involve removal of the doors and a substantial portion of the cinderblock for this task. Has there been any review of load bearing aspects associated with the removal of the wall? **Answer:** The existing wall is not considered to be load bearing.

Question 2 Can the overhead structural support be utilized to mount a chain fall to which will allow for rigging and setting of switchgear. Please provide a load rating for overhead beams. **Answer:** This is a means and methods. If the contractor wants to use the existing overhead structure, it will be the contractor's responsibility to hire a structural engineer to make sure the existing overhead structural integrity is maintained.

Question 3 Can the new gear be stored in the boiler room area during this task? **Answer:** The contractor shall coordinate with Newport News public schools (NNPS), for the location within the existing boiler room for the staging of the switchboards.

Question 4 Portable power will be required during the replacement of the gear from the contractor furnished Generator. Can the temporary cabling be run under the roll up door or will separate penetration be required to get into the room?**Answer:** The cabling

may run under the roll up door. The contractor shall ensure the gap under the door is sealed to eliminate the possibility of rodents entering space.

Question 5 Please provide the load on the emergency panels for sizing temporary generator. **Answer:** Per note 9 on drawing E0.1, the contractor shall provide temporary power to serve panel "E" in the main electrical room during the period of the power outage. Panel "E" is a 250-amp 480/277-volt 3 phase 4 wire panel, as indicated on drawing E0.1 Main Distribution Switchboard (MDS1).

Question 6 Who is responsible for securing systems at each school location? **Answer:** It will be the contractor's responsibility to disarm and arm the security system at the beginning and end of each workday. Coordinate this with the NNPS

Question 7 Can removal of the block wall and door begin prior to the start date of this project? This is needed to allow total completion of the contractual documents. **Answer:** The contractor shall coordinate this with the NNPS. A two (2) week notice shall be provided to NNPS prior to work starting.

Question 8 Please provide as built drawings that show existing branch circuit breakers conduits and wire sizes for determinations and new breaker terminations. **Answer:** See attached copies of existing switchboards schedules.

Question 9 According to Dominion Energy's Blue book section 760.8. Connection of customer generation is not allowed on the line side of metering equipment and will not register correctly. This connection is not available from the manufacturer of the new switchboards within the Dominion Energy section. Therefore, is it the responsibility of others to provide a means to and reconnect the photovoltaic system to the NEW switchboard? **Answer:** Per Sun Tribe, the termination will be on the load side of the CT compartment directly to the bussing. The contractor shall refer to the specifications provided by Sun Tribe. Contact Taylor Brown at 423-987-2210 for coordination and questions.

Question 10 The new Switchboards' Dominion Energy approved Incoming & CT compartments are manufactured to Dominion Energy's standards and have received prior approval. In accordance with Dominion Energy's blue book section 680.2 & 680.17 this section is not to be used for customer auxiliary, or are any modifications permitted. Therefore, there is no place for connection to existing photovoltaic system available from the switchboard manufacturer within a Dominion Energy approved incoming & CT compartment. Is it acceptable to provide a Dominion approved section with the responsibility for reconnecting the solar to be by others? **Answer:** The contractor shall refer to the specifications provided by Sun Tribe for the required number of lugs needed for the termination of the photovoltaic system. The required termination quantity and size shall be coordinated with the distribution manufacturer so that Sun Tribe can terminate the bussing.

Question 11 The above-referenced project will require the removal of a portion of an interior wall to install the new switchboards. The existing doorway is not large enough to allow for the passage of the new equipment into the electrical room. Are

guidelines going to be issued on how this work is to be performed? There is no mention within the electrical drawings and current scope of this work having to take place. Will new door frames and hardware also need to be provided? I am sure this work will also require additional permitting.

Answer: Drawing E1.1 (partial Demo Plan):

1. Existing door located plan north, next to "MDS2" section 1.
    - Remove the existing door and door jamb.
    - Turn over the existing door and door hardware to the owner.
    - Remove a portion of the existing CMU wall and existing MDS2 housekeeping pad located on the left side of MDS2 section 1, to allow for the installation of a new 48"x 80" hollow metal door. Provide a new 48"x 80" hollow metal door with new panic hardware on the electrical room side and locking handle on the boiler room side.
        - Provide a new lock cylinder manufactured by Russwin, Model D2. The lock will be keyed by NNPS to meet their specific keys.
        - The contractor shall ensure all work performed meets all code requirements.

2. Existing door located plan south near existing panel "LE1":
    - Remove the existing door hardware and turn it over to the owner. Existing wood door to remain.
    - Provide new panic hardware on the electrical room side and locking handle on the boiler room side.
    - Provide a new lock cylinder manufactured by Russwin, Model D2. The lock will be keyed by NNPS to meet their specific keys.
    - The contractor shall ensure all work performed meets all code requirements.

Question 12 Will there be any plans, specifications, details, etc. provided regarding the reconstruction of the doorways/walls that will require modification to get the old equipment out and the new equipment into the electrical room(s)? Specifically, to ensure the work is done to meet current life safety and building codes. **Answer:** Response to question eleven (11) also applies here.

Question 13 The existing door to the electrical rooms is 30" wide by 70" tall, in order to get the new gear in the space. Demo of the existing CMU walls will be required to open the space up in order to fit the new gear in the room. Can you confirm this is the preferred way to gain access, if so, will we go back with a different size door and can you provide specifications on the type of door and door hardware required. Will any structural calcs on the wall be required if CMU blocks are to be demo-ed out to remove/re-install the gear. **Answer:** Response to question eleven (11) also applies here.

Question 14 Drawing E0.1 not #4 under the switchboard section stated, "provide bus bar extensions on the line side of the CT compartment for the PV system" From taking with the switchboard manufactures this would have to be completed in

the field, the switchboard would not be manufactured this way. If the connection is on the line side of the CT cabinet is the intent to put the stored electricity back on the grid? **Answer:** Response to question ten (10) applies here.

Question 15 The drawings call for panelboard E to remain in service during the shutdown, it looks like panelboard E is already on back power via a generator, can we utilize the existing generator, or should we account for a new generator to power up panelboard E? **Answer:** Contractor shall provide a generator of adequate size per note 9 on drawing E0.1. The current generator is 150 KW.

Question 16 Lead time on larger switchgears could be up to or more than 365 days, if there are issues with getting the switchboard by the time identified in the bid documents, what would be the solution if there are issues with lead time, would the project then turn into weekend work? Or would we wait until a school break. **Answer:** The project shall be completed as indicated in the project documents.

Question 17 Is the wall with the doors to the Electrical Room Structural? **Answer:** No.

Question 18 What are actual loads on Panel E that need to be backed up by generator, and is there a calculated load for those circuits? **Answer:** Response to question five (5) will apply here.

Question 19 While reviewing the drawings and specifications, we observed that provision was **not made** for Surge Protective Device (SPD) in the new MDS#2. Is this omission intentional? **Answer:** Circuit breaker #1 feeds the new SPD and new work #7 provides the new SPD.

Question 20 We appreciate the deliberate intention to minimize the cost of this project by re-using most if not all of the cabling existing on site to connect the new MDSs. But from experience, we have to start planning for that right from now. The critical issue is to get the new Breakers in positions of center-line alignment so that the existing cables will just fit in. Any deviation will require us installing new cables at high cost accompanied with time delays. This is a critical Project objective that we need to work towards from now. It is mandatory to get the new Breakers in the new MDSs in as close a position as possible to the positioning of the old breakers. We need to work with the factory for this condition to be met if we are favored with an award. But in the meantime, we need to start by having photos of the frontage of the existing Switchboards to help in planning the locations of breakers on the new switchboards. Please provide clear Photos of the frontages of existing switchboards. If favored with an award, we will need to come out to site and take exact measurements to give to the factory to try and match at fabrication stage. Our objective here is to aim for not less than 80% re-use of cables especially high-capacity cables for breakers rated over 400A. **Answer:** Contractor shall refer to the photos on the drawings. Cables not of adequate length shall be extended using compression connectors as indicated by new work note 3 on drawing E1.1. The contractor shall verify existing feeder wire conditions prior to start of work. See attached record drawings schedules for MDS1 and MDS2.

Question 21 Can the authority please consider the extension of time for submission of proposals by about ten (10) days to allow us meet all requirements?
Answer: The bid due date is hereby extended to May 8, 2025 at 2:00 PM EST.

END OF ADDENDUM NO. 2

Heritage High School PV Interconnection Specification

Project: Heritage High School Solar

Prepared for: Building Owner / Switchboard Manufacturer
Date: 4.24.25

Summary

The 720kW PV system at Heritage High School terminates in the bussed pull section of the 4000A switchboard on the supply side of the main breaker. For the replacement of the switchboard, it is recommended that this supply-side interconnection method be maintained to ensure compatibility with existing PV conductors, cable limiters, and system layout. There are two 600A PV system disconnects and one Power Quality Meter circuit on the exterior of the building that are fed into the electrical room. Refer to As-Built electrical set for full system details.

Conductor Termination Requirements

PV PHASE CONDUCTORS

- (4) sets of 350 kcmil CU THWN-2
- Each terminated with cable limiter
  - Includes NEMA 2-hole tongue for connection to copper bus
- Bolt stack shall include:
  - Grade 5 hex bolt
  - One flat washer (hardened steel or tin-plated copper) and one Belleville washer (spring washer, high-carbon steel alloy AISI 1074 or equivalent) per bolt
- Conductors shall be reused and re-terminated in the new switchboard as shown in the existing configuration

PV NEUTRAL CONDUCTORS

- (4) 350 kcmil CU THWN-2 conductors
- Terminated with UL-listed compression lugs (2-hole NEMA pattern)
- Connected to the neutral bus using grade 5 hardware with flat washers
- Conductors shall be reused and re-terminated in the new switchboard as shown in the existing configuration

PV GROUNDING ELECTRODE CONDUCTORS

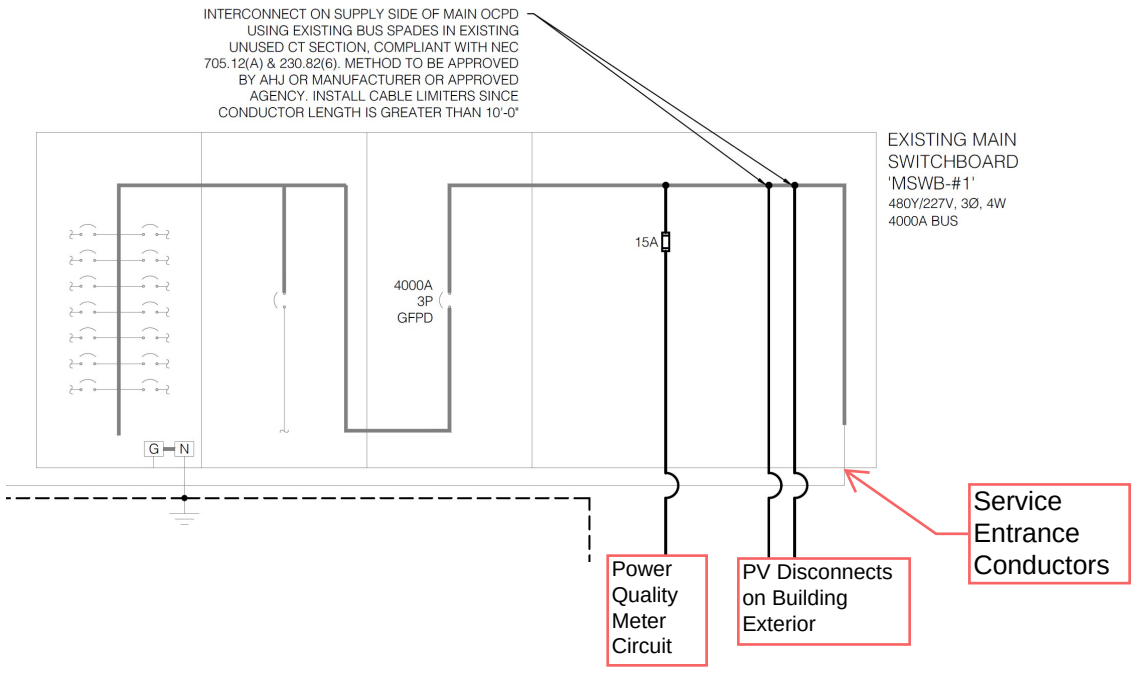
- (2) 2/0 CU THWN-2 conductors
- Terminated to the ground bus using UL-listed compression lugs with 1-hole tongue
- Each secured with a flat washer and torque-marked bolt to ensure proper mechanical and electrical contact

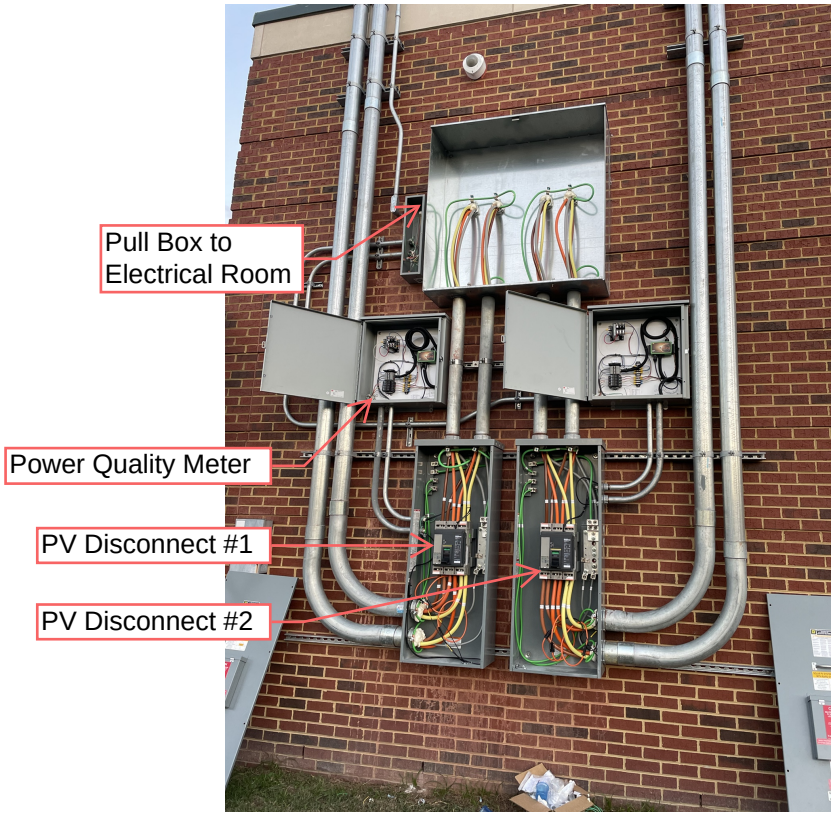
- Conductors shall be reused and re-terminated in the new switchboard as shown in the existing configuration

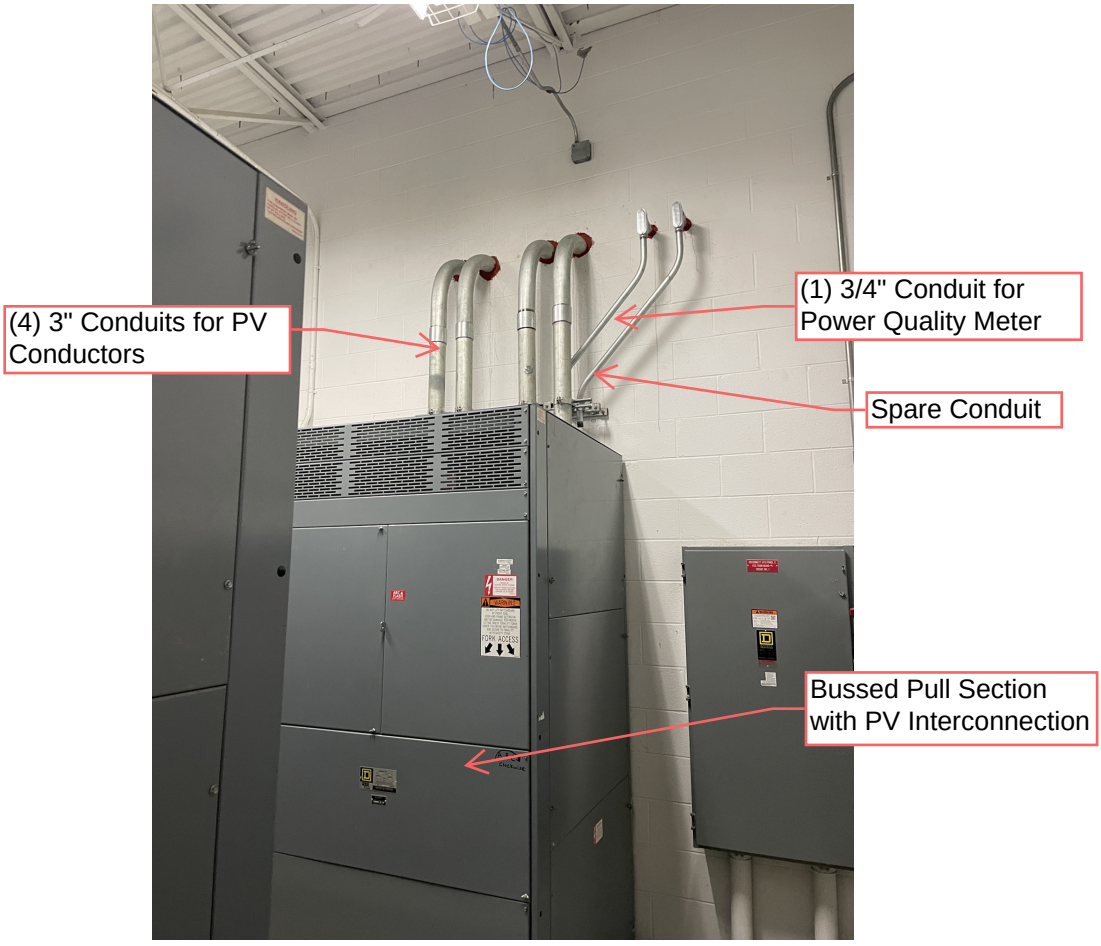
POWER QUALITY METER CIRCUIT

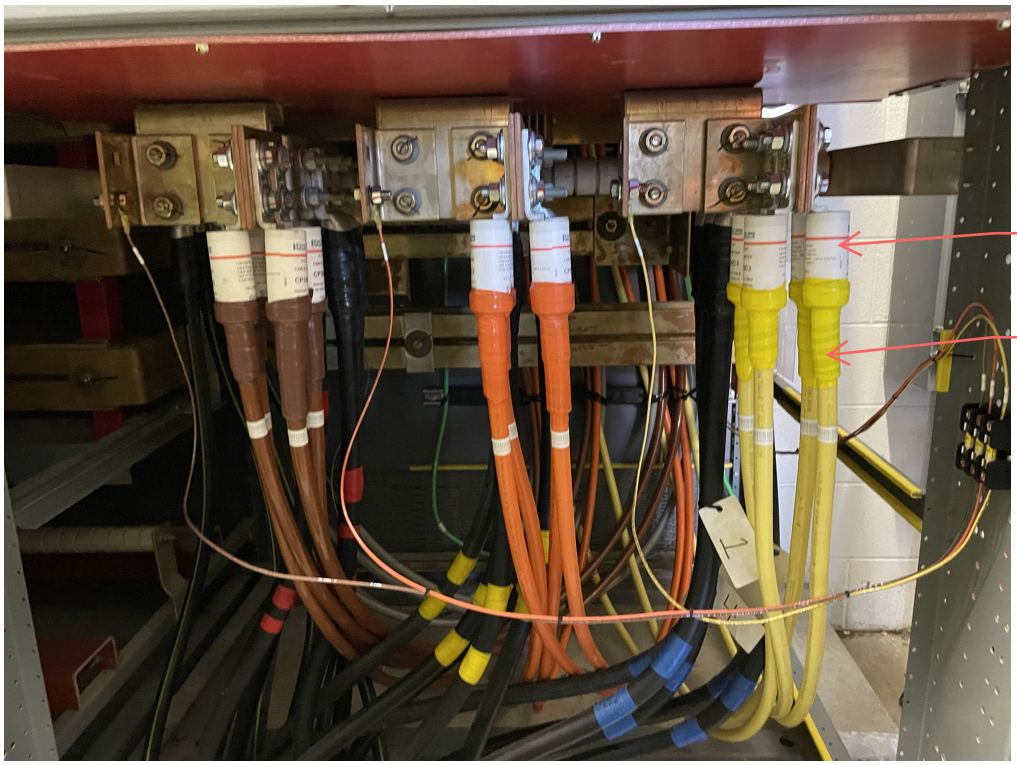
- Phase Conductors - (3) #12 CU THWN-2
- Neutral Conductor - (1) #12 CU THWN-2
- EGC – (1) #12 CU THWN-2
- Fusing:
  - (3) Class CC, 600V, 15A time-delay fuses
  - DIN-rail-mounted touch-safe fuse holders in switchboard bus section
- Wiring:
  - Reuse existing #12 CU THWN-2 conductors
  - Provide terminal blocks or wire lugs as needed to support termination of control and voltage sensing conductors within the switchboard interior
  - Maintain existing wire routing, labeling, and segregation from power conductors
- These components support the voltage sensing and operational integrity of the revenue-grade Power Quality Meter and must be fully replicated in the new switchboard assembly.

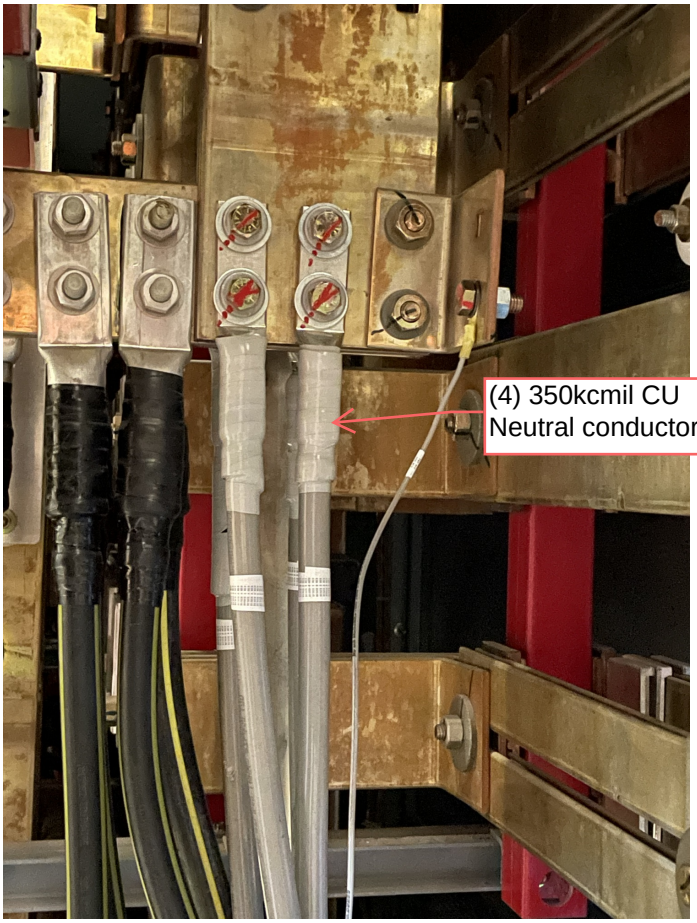
Photos

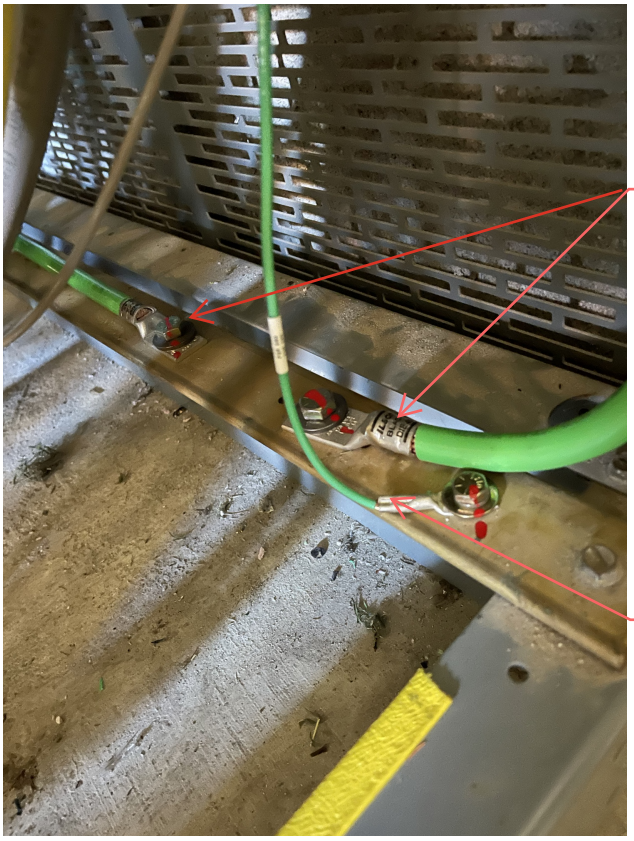


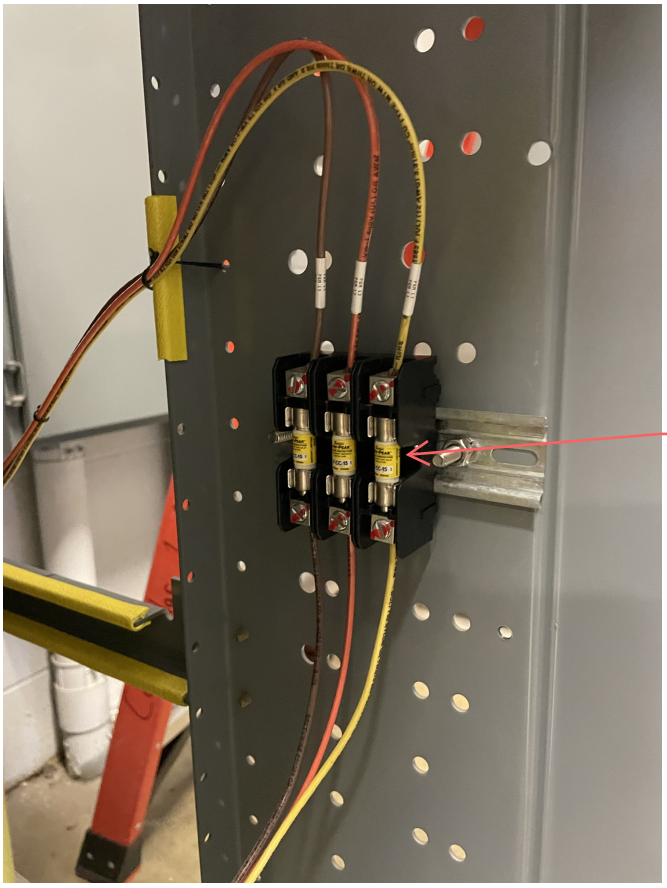

Pull Box to Electrical Room
Power Quality Meter
PV Disconnect #1
PV Disconnect #2


(4) 3" Conduits for PV Conductors
(1) 3/4" Conduit for Power Quality Meter
Spare Conduit
Bussed Pull Section with PV Interconnection


Cable Limiters
(4) 350kcmil CU
per phase


(4) 350kcmil CU
Neutral conductors


(2) GEC connections - 1 for each PV disconnect.
Power Quality Meter Grounding Conductor


15A Fuses - DIN rail mounted for Power Quality Meter Circuit

MAIN DISTRIBUTION SWITCHBOARD (MSWB #1)

4000 AMP – 480/277 VOLT – 3ø – 4W UL SERV. ENT. RATED PROVIDE WITH 4000 AMP 100% FULLY RATED CIRCUIT BREAKER WITH SHORT CIRCUIT CURRENT RATING OF 100 KAIC. EACH DISTRIBUTION SECTION SHALL BE FULLY BUSSED.

CKT. No.	TO FEED	BREAKER RATING	BREAKER FRAME	FEEDER		
				CONDUIT	WIRE	GROUND
1	PANEL "E" VIA ATS	250	400	1–3"	4 #250	1 #4
2	PANEL "K1"	225	225	1–3"	4 #300	1 #2
3	PANEL "HE1"	225	225	1–3"	4 #300	1 #2
4	PANEL "HM"	225	225	1–3"	4 #300	1 #2
5	PNL'S "K3" & "K4" VIA XFMR "TK1"	175	225	1–2 1/2"	4 #4/0	1 #2
6	PANEL "HE2"	600	600	2–3 1/2"	2–4#500MCM	2 #2/0
7	SSWB A **	2500	2500	10–5"	10–4#750MCM	10#600MCM
8	PANEL "K2" *	400	400	1–4"	4 #750MCM	1 #1
9	VOLTAGE SUPPRESSION PANEL ***	30	100	1–3/4"	4 #10	1 #12
10						

* PROVIDE WITH SHUNT TRIP TYPE CIRCUIT BREAKER.

** PROVIDE 100% RATED CIRCUIT BREAKER.

*** PROVIDE LEVITON PANEL MOUNTED TRANSIENT SUPPRESSION CAT. #57277–M3 OR APPROVED EQUAL.

MAIN DISTRIBUTION SWITCHBOARD (MSWB #2)

4000 AMP – 480/277 VOLT – 3ø – 4W UL SERV. ENT. RATED PROVIDE WITH 4000 AMP 100% FULLY RATED CIRCUIT BREAKER WITH SHORT CIRCUIT CURRENT RATING OF 100 KAIC. EACH DISTRIBUTION SECTION SHALL BE FULLY BUSSED.

CKT. No.	TO FEED	BREAKER RATING	BREAKER FRAME	FEEDER		
				CONDUIT	WIRE	GROUND
1	SSWBB	2000	2000	12–5"	12–4#750MCM	400MCM
2	SSWBC	2000	2000	12–5"	12–4#750MCM	400MCM
3	PANEL "HF1"	1200	1200	4–5"	4–4#750MCM	250MCM
4	VOLTAGE SUPPRESSION PANEL *	30	100	1–3/4"	4 #10	1 #12
5						

* PROVIDE LEVITON PANEL MOUNTED TRANSIENT SUPPRESSION CAT. #57277–M3 OR APPROVED EQUAL.