QA/QC Checklist

PENNSTATE 1855 Construction Services

DIVISION 26 – Electrical
26 05 73 – Engineering Power Studies

	General Information	Programming/ Design	Bidding/ Preconstruction	Installation/ Construction	Closeout/ Warranty
01 General					
1. Studies shall be performed by the distribution equipment manufacturer or an independent, 3rd party organization that is experienced with high and low voltage power systems evaluations. The studies shall be performed, stamped, and signed by a Professional Engineer registered in PA.	☐	☒	☐	☒	☐
2. The studies shall be completed using software available from SKM Systems Analysis (preferred vendor), Inc, EDSA Micro Corporation, or ESA, Inc.	☐	☒	☐	☒	☐
3. An electronic version of the final copy of the studies shall be submitted to Engineering Services in its native software format, as well as an electronic copy converted to the SKM format. Contact Chuck Dobbins (ccd10@psu.edu; (814) 777-1583), OPP Senior Electrical Engineer.	☐	☒	☐	☒	☐
02 Coordination Study					
1. The coordination study shall be completed at the time of the gear/panelboard submittal and prior to release of the equipment for manufacture.	☐	☒	☒	☐	☐
2. The study shall demonstrate that the selected protective devices/sizes (transformer ratios, relays, fuses, circuit breakers, etc.) will ensure that the electrical system's minimum unfaulted load is interrupted when those protective devices trip. The study shall include the protective devices' sizes, settings, and calculations used to determine those settings.	☐	☒	☒	☐	☐
03 Fault Current (Short-Circuit) Study					
1. The fault current, or short-circuit study shall be completed at the time of the gear/panelboard submittal and prior to release of the equipment for manufacture. Engineering Services will forward to the design Professional the short-circuit current available on the primary feeder.	☐	☒	☒	☐	☐
2. The study shall determine the short-circuit current (in rms symmetrical amps) available at each component of the electrical system and the ability of that component to withstand and/or interrupt the current.	☐	☒	☒	☐	☐
04 Arc Flash Hazard Analysis					
1. The arc flash hazard analysis shall be completed at the time of the gear/panelboard submittal and prior to release of the equipment for manufacture.	☐	☒	☒	☐	☐
2. The analysis shall provide a detailed engineering assessment to determine the worst case arc flash hazards and associated incident conditions on all major	☐	☒	☒	☐	☐

	electrical distribution equipment.					
3.	The study provider must visit the site and install the proper, “orange” warning labeling (per NFPA 70E) on all noted equipment from the analysis, including hinged doors on rear-accessible equipment. The study provider must submit a letter confirming this work was completed.	☐	☒	☐	☒	☐
4.	If the system has “arc flash reduction”, confirm that there are two (2) sets of stickers. One set shows the basic arc flash level and is “orange” in color. The other set shows the reduced arc flash level and is “blue” in color.	☐	☒	☐	☒	☐
5.						