

Power System Study
for the
Clark County School District
East Career and Technical Academy
Las Vegas, Nevada

Resubmittal
Based on Print Revision 9

Power Quality Technical Services, Inc.
683 Scenic Tierra Ln
Henderson, NV 89015

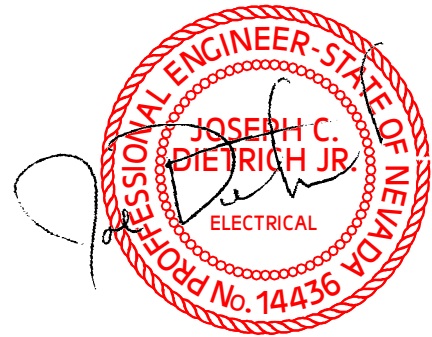
Engineering Services

Prepared by:
Joe Dietrich, Jr., P.E. (NV - 014436)
702-204-5211

October 4, 2007

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RECOMMENDATIONS

EXECUTIVE SUMMARY

Each aspect of the study, its pertinent results, and recommendations are summarized below. Detailed discussions appear later in each respective section of this report.

1. The main purpose of the **Short-Circuit Study** was to determine if each protective device was rated to handle the maximum fault current that it may be subjected to during a fault condition. This was done by comparing the device's published short-circuit current rating to its calculated fault current duty.
 - The Short Circuit Study indicates that all devices and panels are appropriately rated.

2. The **Coordination Study** found that the majority of the adjustable protective devices could be set to provide the greatest selectivity and minimize overall system impact in the event of a fault. As a result, it is recommended that all adjustable low voltage (277/480V through 120/208V) breakers be set and tested at the recommended settings.
 - A complete listing of all breaker settings can be found in the *Appendix / Coordination Study - Analysis/Tables* section of this report.

INTRODUCTORY SECTION

Study Objective

Power Quality Technical Services, Inc. was contracted to perform a short-circuit and protective device evaluation / coordination Power System Study for the *CCSD – East Career and Technical Academy* project located in *Las Vegas, Nevada*. The scope of the short-circuit study included the electrical system from the incoming 480V utility service interface to two separate switchboards (MSA & MDB), several sub-panels, several step-down transformers and several 120/208 panelboards.

Engineering Qualifications

The Electrical Engineer performing this Power System Study has performed over 50 significantly sized Power System Studies using ESA's EasyPower software during past employment with General Electric's I&FS Engineering Services. Studies include projects ranging in size from the Oakland International Airport's Terminal 2 Expansion, Kaiser Hospital, Mesa Cap Water Treatment Plant (Mesa, AZ), City of Albuquerque Water Treatment Plant, and Nellis Air Force Base. The software used for this study is industry recognized, used by Power System Engineers including those from General Electric, Siemens Automation, and CH2MHill. A full description of the software's capabilities can be found at <http://www.easypower.com>.

The purpose of a **Short-Circuit Study** is to determine if each protective device, within the scope of this study, is rated to handle the maximum fault current that it may be subjected to in the event of a fault. This is done by comparing each device's published short-circuit current rating to its individually calculated fault current duty. The calculated short-circuit current values are also used in selecting protective device settings in the Coordination Study. A discussion of the method of calculation is contained in the *Short-Circuit Study - Introduction* section of this report. The results are discussed in the *Short-Circuit Study – Analysis* section of this report. The report also contains documentation of the system components in the *Appendix / Short-Circuit Study - Analysis* section, including information on each transformer and motor, utility fault current contributions, installed feeder conductors and their respective conduits.

The **Coordination Study** work scope includes the determination of recommended settings for all adjustable protective devices down to low voltage 120/208V distribution panel main breakers. The settings recommended in this study provide a reasonable compromise between the often-conflicting goals of service continuity and equipment protection. The nature of the load and its tolerance to service interruptions must be considered as well as the consequences of delays in clearing a fault. Where possible, the minimum amount of equipment is removed from service when a system protective device operates to clear a fault or system abnormality. This is known as selectivity. The recommended settings, tabulated according to the device location, are located in the *Appendix / Coordination Study - Analysis* section of this report.

A high degree of selectivity was achieved for the majority of the studied electrical system. The section entitled *Coordination Study - Analysis* should be referenced for identifying and setting breakers to achieve the highest level of protection and selectivity. The time current curves found in the *Appendix / Coordination Study - Curve/Graphics* section of the report were generated using recognized industry software.

The methods used in the course of these studies conform to NEC 2002, ANSI, NFPA-70E and other applicable standards and accepted industry practices.

All insulated cables within the scope of the study have been checked for protection to insure compliance with the National Electrical Code standard for over-current-protection.

Primary transformer protection was examined to ensure avoidance of nuisance outages from inrush currents, as well as providing over-current protection as required by the 1999 National Electrical Code, and fault protection as provided by the American National Standards Institute (ANSI). Coordination with secondary protective equipment was also an objective. This protection was examined by means of time current curves.

Compliance with the 1999 National Electric Code (NEC) sections pertaining to system protection was evaluated. Motor starting was also examined to identify the impact of starting each of the larger motors within the system (assuring breaker settings were sufficient to allow proper starting). Motor curves are found on several of the Time Current Curves located in this report.

Motor starting was also examined to identify the impact of starting each of the larger motors within the system (assuring breaker settings were sufficient to allow proper starting). Motor curves are found on several of the Time Current Curves located in this report.

Description of the Electrical System

A one-line diagram was entered into the EasyPower 7.0 Software to accurately model the electrical system from the utility source through the metering switchboard, the main switchboard, several 277V/480V panelboards and stepdown transformers, and several 120/208V sub-panels. The one-line diagram provides a complete picture of the electrical system described above, and is representative of the Single Line Diagram and Equipment Layouts provided by the design Engineer of Record for this project.

Study Approach

When performing the power system study, the equipment Bill of Material and Engineering / Contractor supplied information was reviewed and entered into the analysis software. By using this information, it was possible to evaluate the system in its truest terms and recommend optimum engineering changes, when necessary.

Before a study of any system can begin, all system data must be collected and entered in the analysis software. All protective and impedance elements must be closely inspected to determine their true arrangement sufficient for construction of a one-line diagram model. This includes the circuit arrangements including all breaker types and ratings, and their interrupting capacities. Additional information is required on cable sizes, types, and lengths; transformer sizes and impedances; and utility related data.

When all necessary data relating to the system has been gathered from the field, the information is entered into computer databases for short-circuit, protective device evaluation, and coordination analysis. The short-circuit program determines the maximum fault current available at each of the pre-selected fault buses as identified on the one-line diagram. The program output shows both the first cycle of fault duty (as needed for momentary evaluations, fuse and low-voltage breaker interrupting capacity), and interrupting duties for the slower, five-cycle, medium voltage breakers.

The Short-Circuit Device Evaluation Report, found in the *Appendix / Short-Circuit Study - Analysis* section of this report, compares the interrupting capacities of each device with the interrupting duty calculated from this study.

These fault levels are equally important for proper coordination, and it will be noted that each time-current coordination plot uses these values. Advantage is taken of the various line and transformer impedances to set primary instantaneous devices above the level of a secondary transformer fault. For example, it is desired that the secondary instantaneous device operate first to clear the fault without primary interruption. Also, transformer inrush current varies with circuit impedance, and is considered in the calculations to select smaller than normally required fuse or relay setting.

Coordination in practice is generally a compromise between the mutually desirable but somewhat inconsistent goals of maximum protection and maximum service continuity. For this reason, and because of factors such as established system design, there may be combinations of device settings that are classified as acceptable. The settings suggested in this study are based on an exercise of judgment as to the best balance between competing objectives.

Arrangement of the Report

This report has been divided into sections that serve to separate areas of major interest.

Immediately following this introductory section, all recommended changes have been summarized in tabular form in addition to a discussion of various problems encountered and possible solutions.

Next, a discussion of the Short Circuit Analysis procedure is outlined, and then the results are summarized in the Short Circuit Analysis Section of the report. Momentary, interrupting,

and equipment duties are listed in the Appendix - Short Circuit Analysis section. The Coordination Study Introduction follows, then the Coordination Study Analysis. All the breaker settings along with time current curve graphs are located in the Appendix – Coordination TCCs, and Breaker Settings Table.

The Appendix includes each of the Single Line Diagrams used to model the electrical systems in this project.

SHORT-CIRCUIT STUDY INTRODUCTION

Introduction

A power system short-circuit study is used to check or determine:

1. The calculated fault duty against the rating of circuit interrupting devices, such as circuit breakers and fuses.
2. The selection and rating or setting of short-circuit protective devices such as direct-acting trips, fuses and relays.
3. The calculated fault duty against the short-circuit ratings of non-interrupting equipment such as busway, motor control centers, switchgear, and distribution panels.

General Discussion

The study procedure consists of representing the electrical power system in a software based modeling program. Each of the power system components (utility sources, generators, motors, transformers, cables, etc.) are represented by a resistance value and a reactance value.

The short-circuit study one-line diagram was used as a guide for "building" the database model. This model, found in the *Appendix* of this report, shows the bus IDs used in the study to identify generation, distribution and load buses within the electrical distribution system.

Bus IDs are used to assign short-circuit sources, base voltages, and per-unit impedance values to the correct locations in the modeled system. The output data is referenced to these Bus IDs. These buses, however, do not necessarily represent real buses or readily accessible connection points in the actual electrical system. They may identify hypothetical buses that are the junction points of impedance elements in the real system, such as cable and busway with transformers or reactors. A separate Bus ID facilitates data collection and organization with the operation of the software.

The software places a fault on each bus location in the system, and a set of short-circuit currents is calculated that can be compared with the published short-circuit rating of the power system equipment. Any interrupting device must be able to withstand and interrupt the most severe short-circuit current available. Generally, three-phase bolted faults and the maximum utility short-circuit duty result in the greatest required equipment duty ratings.

The calculation techniques used are in accordance with American National Standards C37.13-1981 for low-voltage breakers: C37.010-1979 and C37.5-1979 for medium and high-voltage breakers.

System Impedance Data

The one-line diagram included in this report represents the modeled electrical power distribution system. Impedance values used in this study are listed in the Database Report found in the *Appendix / Database Report* section of this report. The Database Report is a tabulation of all system components relative to the scope of this study. This includes Utility Sources, Generators, Motors, Transformers, Circuit Breakers, Switches, Fuses, Cables, and Busways.

The voltage bases used in the impedance network generally are those associated with the rated winding voltages of the main transformers and the load-centers on their "flat-tap" positions. Therefore, the system study results are typically based on 12470, 4160, 2400, 480 and 208 Volts as the "system" voltage bases.

The **utility system** is represented as an infinite bus connected to a line whose impedance equals the utility's equivalent source impedance at the facility's incoming service. The other end of this line is connected to the incoming service point. The utility impedance is typically given on the one-line diagram on a 10 or 100 MVA base.

Transformer impedances, usually given on the nameplate in per unit based on the self-cooled kVA rating of the transformer, are given in percent on the transformer's base. Normally, the X/R ratios of the transformers are derived from the "medium-typical" curves in ANSI C37.010 although specific X/R ratios may also be used for particular applications. Transformer parameters used include its type, such as oil, gas, and dry, silicone or vapor, and its class that can include various combinations of forced air, water and forced oil. Examples are shown below.

<u>Type</u>	<u>Class</u>
Oil	- OA, OA/FA, FOA, OW, OW/A, FOW, OA/FA/FA, OA/FA/FOA, OA/FOA/FOA
Gas	- VA, VA/FA
Silicon	- SA, SA/FA
VP Dry	- AA, AFA, AAFA
Cast Coil	- AA, AFA, AAFA

Other transformer parameters are its connection (delta, wye-ungrounded or wye-grounded), its ground impedance (if wye-grounded) and its ANSI temperature rating, shown below.

<u>ANSI Temperature Ratings</u>		
45°C	65°C	80/110°C
55°C	65/80°C	150°C
55/65°C	80°C	150/180°C

A transformer's Load Tap Changer data is also used in the model. Its step size may be defined as either 5/8 or 10/8 percentage steps along with its minimum and maximum tap

values. Its control type may be either voltage or MVAR controlled for load-flow analysis.

The system's **cable** and **busway** impedances are represented in per unit on the study-base impedance, using typical impedance values for such equipment available in standard references, such as the IEEE "Red Book".

Cables may be defined as one of five different types, 1/C-one conductor, 3/C-three conductor, IAA-interlocked armor aluminum, IAS-interlocked armor steel or MAC-messenger aerial cable. Other variables include material (copper or aluminum), size, length, number of conductors per phase temperature (25°C to 250°C) and insulation. Some common insulation abbreviations are shown below:

Low voltage Insulation (1000 volts or less):

THHN	- Heat Resistant Thermoplastic
THWN	- Moisture and Heat Resistant Thermoplastic
THW	- Moisture and Heat Resistant Thermoplastic
RHH	- Heat Resistant Rubber
RHW	- Moisture and Heat Resistant Rubber
XHHW	- Moisture and Heat Resistant Crosslinked Synthetic Polymer (480V equivalent of XLPE)

High Voltage Insulation (Over 1000 volts):

XLPE	- Crosslinked Polyethylene
XLPE-133%	- Crosslinked Polyethylene with 133% insulation
XLPE-NJ	- Non-Jacketed Crosslinked Polyethylene
XLPE-NJ-133%	- Non-Jacketed Crosslinked Polyethylene with 133% insulation
XLPE-S	- Shielded Crosslinked Polyethylene
XLPE-S-133%	- Shielded Crosslinked Polyethylene with 133% insulation
EPR	- Ethylene Propylene Rubber
EPR-133%	- Ethylene Propylene Rubber with 133% insulation
EPR-NJ	- Non-Jacketed Ethylene Propylene Rubber
EPR-NJ-133%	- Non-Jacketed Ethylene Propylene Rubber with 133% insulation
EPRS	- Shielded Ethylene Propylene Rubber
EPRS-133%	- Shielded Ethylene Propylene Rubber with 133% insulation
PILC	- Paper Insulated Lead Sheath
PILC-133%	- Paper Insulated Lead Sheath with 133% insulation

Busways are defined by manufacturer, material (copper or aluminum) and length.

The software used sometimes requires a zero-impedance branch. Cables with 10 - 500MCM conductors per phase or a 5000A Copper bus-duct with a length of ten feet is used to represent this requirement. This is used mainly with bifurcated feeder breakers where two conductors are connected to the load terminals of the breaker. A zero-impedance branch is connected through the breaker between its line-side connection to the bus and its load-side cable connections.

The **motors** in each unit substation are grouped (lumped) and a single impedance is determined based on the total connected motor kVA. Typical sub-transient reactance (X''_d) or locked rotor (X_{lr}) for each motor within the group is determined and averaged. The total equivalent kVA and impedance is based on the following assumptions when exact motor impedances are not known.

Table SCI-1

Induction motor	1 hp = 1 kVA
Synchronous motor, 0.8 PF	1 hp = 1 kVA
Synchronous motor, 1.0 PF	1 hp = 0.8 kVA
Induction motor not greater than 600V	$X_{lr} = 0.25$ per unit
Induction motors greater than 600V	$X_{lr} = 0.17$ per unit
Synchronous motors not less than 1200 rpm	$X''_d = 0.15$ per unit
Synchronous motors less than 1200 rpm	$X''_d = 0.20$ per unit
(The motor impedances are in per unit on the motor kVA rating. These reactances and motor base kVA ratings listed above were taken from data and assumptions in IEEE Publication No. 141, Fourteenth Edition, "IEEE Red Book".)	

The sub-transient reactance (X''_d) values listed in the Table SCI-2 are used in first-cycle (momentary) current calculations while a modified sub-transient reactance is used for the interrupting duties for the medium and high-voltage breakers. These values are in accordance with the pertinent circuit breaker application standards.

The ANSI standards for calculating short-circuit duties require that the actual motor or generator reactances be modified under certain conditions. The modification factors are listed in the following table for both momentary (close and latch) and interrupting-duty calculations. Low-Voltage Duty is calculated per ANSI C37.13-1981 while Momentary and Interrupting Duty is calculated per ANSI C37.010-1979 and C37.5-1979.

Table SCI-2

Motor Code	Motor Type	First Cycle - Low Voltage	First Cycle - Momentary Duty for Medium & High Voltage Breakers	1.5-4 Cycles - Interrupting Duty for Medium & High Voltage Breakers
1	Synchronous	$1.0 X''_d$	$1.0 X''_d$	$1.5 X''_d$
2	Induction > 1000HP or > 250HP @3600 RPM	$1.0 X''_d$	$1.0 X''_d$	$1.5 X''_d$
3	Induction Motor Group ≥ 50 HP	$1.2 X''_d$	$1.2 X''_d$	$3.0 X''_d$
4	Induction Motor Group < 50 HP	$1.67 X''_d$	$1.67 X''_d$	Neglect
5	Lumped Induction Motor Group	$1.0 X''_d$	$1.0 X''_d$ *	$3.0 X''_d$

Note- X''_d for induction motor groups are assumed equal to 0.167. This corresponds to an equivalent motor contribution of 3.6 to 4.8 times the full load current.

* = X''_d assumed equal to 0.25.

When exact data is not known, the X/R ratios of induction motors and transformers are determined by using the "medium typical" curves from ANSI C37.010-1979. For

synchronous motors less than 1000 horsepower, an X/R ratio from the curve of induction motor X/R ratios is determined.

When hand calculations are performed, the above approximations may be used along with the X/R ratios, provided in the next table, unless more accurate calculations are required. Motor code letters are usually listed on the nameplate, and correspond to kilovolt-amperes per horsepower with locked rotor in accordance with Section 430 of the National Electrical Code. The reciprocal of this kVA/horsepower value may be used as the motor impedance on its own kVA base. This is especially desirable for low-voltage motors with two pole or ratings over 250 HP.

Table SCI-3
Table of Typical Induction Motor Short-Circuit X/R Ratios

Nameplate Horsepower	X/R Ratio	Nameplate Horsepower	X/R Ratio	Nameplate Horsepower	X/R Ratio
5	2.5	50	5.7	300	15.0
7.5	2.7	60	6.3	350	16.3
10	3.2	75	7.0	400	17.4
15	3.6	100	8.2	450	18.5
20	3.9	125	9.0	500	19.4
25	4.3	150	10.0	600	20.7
30	4.5	200	11.7	700	22.1
40	5.1	250	13.4	800	23.4

Short-Circuit Calculations

There are four possibilities for a fault in a three-phase distribution system:

1. Three-phase fault - the three-phase conductors are shorted together.
2. Line-to-line fault - any two phase conductors are shorted together.
3. Double line-to-ground fault - any two phase conductors are shorted together and simultaneously to ground.
4. Line-to-ground fault - one phase conductor is shorted to ground.

For a particular location in a power system, the magnitude of fault current is generally the greatest for three-phase faults and least for phase-to-ground faults. However, ground-fault current magnitude can exceed the three-phase fault current, under certain conditions. This can occur near (1) solidly grounded synchronous machines, (2) the solidly grounded wye connection of a delta-wye transformer of the three-phase core (three leg) design, (3) grounded wye-delta "tertiary" auto-transformers, or (4) grounded wye-grounded wye-delta tertiary three-winding transformers.

The short-circuit study does not include pre-fault steady-state load currents. The effect of system load currents is usually negligible in short-circuit studies for industrial and commercial power distribution systems.

Bus IDs used on the one-line diagrams are assigned to establish the locations to be faulted, and typically match the system nomenclature on the Design / Construction Drawings. Contributions from sources of short-circuit current such as the electric utility system, generators, and motors are indicated on the computer printout.

Switchgear Ratings

The short-circuit rating assigned to a power circuit breaker design by the manufacturer is significant in two ways. First, the rating represents a conservative statement of the actual capability of the breaker design to close against, to withstand, and to interrupt short-circuit currents. Thus, the rating is the maximum condition under which the breaker design may be safely applied. Secondly, the rating is the maximum condition of application for which the manufacturer guarantees that the breaker will perform satisfactorily. It is essential, then, that a circuit breaker be applied within the rating assigned to its design if the installation is to be safe and if it is to be covered to the full extent of the manufacturer's warranty. One purpose of a short-circuit study is to determine the conditions under which switchgear will be applied in a specific system.

From a series of laboratory tests, the manufacturer determines the actual breaker capability. Then a rating is selected and assigned to the breaker. In the United States the procedures for testing breakers the rating structure, and the listing of preferred ratings are industry standards dictated by the Sectional Committee on Power Switchgear (C37) of the American National Standards Institute.

The short-circuit rating of a circuit breaker is its capability at the maximum voltage at which the breaker may be applied. Therefore, there is a distinction that must be made between the rating of the breaker and its capability in a specific application.

Prior to 1964, breakers were assigned a short-circuit interrupting capacity in asymmetrical MVA, and it was stated that the interrupting capacity was a constant over a defined range of voltages. An equivalent interrupting capacity in amperes could be calculated at each voltage level. This is called a total-current basis for rating breakers. Since 1964, however, breakers have been assigned an interrupting capacity in symmetrical RMS amperes at a specified maximum voltage, and the capacity is said to increase in inverse proportion to voltage up to a specified maximum current. This is the so-called symmetrical current basis of rating. Under the new rating structure, an MVA rating is still assigned to breakers for class distinction, but it is not the interrupting capability of the device in most cases.

Under the symmetrical current basis of rating switchgear, the factor k defines the permissible range of voltage and fault current. The interrupting capabilities of the breaker then fall into one of three categories:

1. Voltage is greater than the rated maximum voltage; the breaker may not be applied.
2. Voltage is between the rated maximum voltage and $1/k$ times the rated voltage; the interrupting capacity is:

$$\frac{\text{(Interrupting capacity at rated voltage)} \quad \text{(Rated voltage)}}{\text{(Actual Voltage)}}$$

3. Voltage is less than $1/k$ times the rated voltage; the interrupting capacity is k times the interrupting capacity at the rated voltage.

The momentary current capability, defined as the fully offset RMS fault current against which the breaker must be able to close and latch its contacts, is $1.5k$ times the symmetrical RMS interrupting capacity of the breaker at rated maximum voltage and is not a function of the actual voltage of application.

Under the total-current basis of rating switchgear, the breaker is assigned an interrupting MVA and rated voltage from which an interrupting capacity in amperes at rated voltage can be calculated. The breaker is also assigned a range of voltages over which the interrupting MVA is a constant number. If the upper limit of voltage can be exceeded in application, the application is not proper. Below the lower limit, the interrupting capability is not proper. Below the lower limit, the interrupting capacity in amperes is constant at a value calculated from the interrupting MVA at the lower-limit voltage. Momentary (or first-cycle) current capability is defined as the maximum fully offset

RMS current the breaker can withstand for one second and is assigned by the manufacturer.

Low-voltage breakers are tested and applied in accordance with ANSI C37.13. Low-voltage breakers of present and recent manufacture have symmetrical current interrupting ratings. For low-voltage breakers, calculated first-cycle symmetrical short-circuit currents are compared with the manufacturer's symmetrical ratings since these breakers may be operated rapidly enough to part their contacts during the first-cycle of short-circuit current. Low-voltage breakers manufactured prior to 1957 had average symmetrical short-circuit interrupting current ratings which were compared with 1.25 times calculated first-cycle symmetrical short-circuit currents.

Fuses are fast-acting protective devices that operate in the first-cycle of fault and are rated on a total symmetrical or asymmetrical fault current, depending on the fuse type and voltage rating.

Standards for Short-Circuit Duty Calculations

Electrical power system operating conditions change constantly with system loading and operating procedures. The available short-circuit current also changes with system operating conditions. For any operating condition, the short-circuit current decreases from a maximum value at the inception of a fault until the fault is removed. The rate of this short-circuit current decay depends on many factors.

The American National Standards Institute (ANSI) has developed standards to be used by the electrical industry for calculating short-circuit currents to be compared with short-circuit ratings or capabilities of electrical equipment. Industrial and commercial power system studies are made by calculating short-circuit current values in accordance with these standards.

Duty and Relay Short-Circuit Current Calculations

The following gives a brief description of the type of calculations that can be made:

1. First-Cycle Duty per ANSI C37.13-1981 (similar to ASA C37.5-1953)

The momentary duty calculated by following ANSI C37.13-1981 is used to compare with the interrupting rating for low-voltage breakers and fuses since their interrupting time is within the first-cycle.

Impedances represent the utility source, generators, motors, transformers and lines. Sub-transient impedances are used for the utility sources, generators, and synchronous motors. Locked rotor impedances are used for induction motors. For a simplified and more conservative answer only reactances need be used.

Present-day, low-voltage breaker ratings are compared to the symmetrical current obtained by an E/A calculation at the fault point, while some older low-voltage ratings are compared to an average asymmetrical current 1.25 times the symmetrical current. For symmetrically rated low-voltage circuit breakers, when the X/R ratio is greater than 6.6, the calculated duty is multiplied by a number greater than 1.00 as listed in Table 3 of ANSI C37.13-1981 for comparison with breaker rating. If the X/R ratio is not known, the multiplier should be 1.15. Fuse rating are compared to an asymmetrical current equal to 1.6 times the symmetrical currents in some cases. For low-voltage current-limiting fuses the multiplier is 1.0.

2. First-Cycle Duty per ANSI C37.010-1979 and C37.5-1979

Momentary duty calculated by following ANSI C37.010-1979 and C37.5-1979 is compared with the closing and latching capability of medium and high-voltage circuit breakers. Total impedances, or reactance portions of the utility source impedance, generator, motor, transformer and line impedances are used for the momentary current calculations. The reactances used for the utility source, generator, and synchronous machines are sub-transient reactances. The reactances of the induction motors are entered per Table SCI-3. The circuit E/X current at the fault point is the symmetrical momentary (short time) duty for the breakers. The close-and-latch duty is found by multiplying the symmetrical duty by 1.6 or by using the actual X/R ratio multiplier.

The superseded ASA 37.5-1953 calculating procedure or the procedure given in C37.13-1981 for low-voltage breakers is sometimes used to evaluate the medium and high-voltage breaker first-cycle duties, along with fuses and low-voltage breaker duties. Using either of the above procedures will yield a slightly higher calculated duty (usually 2%-5%) for medium and high-voltage breakers than ANSI C37.010-1979 because all induction motors are included at their locked rotor impedance.

3. Interrupting Duty per ANSI C37.010-1979 and C37.5-1981

The interrupting duty calculated by following ANSI C37.010-1979 for symmetrical-current-rated breakers and ANSI C37.5-1979 for total current rated circuit breakers is compared with the medium and high-voltage breaker interrupting ratings.

The interrupting current is lower than the momentary current because it takes into account the short-circuit decrement with respect to time while the power circuit breaker is opening. The interrupting duty is calculated by using the reactances given in Table SCI-3 of this introductory section.

The interrupting duty is found by calculating the short-circuit current (E/X) from the reactance network only and then finding the equivalent resistance for the circuit at the fault point, using a resistance-only network reduction. The breaker interrupting time, electrical distance away from generators (measured by the number of intervening

transformers) and X/R ratio at the fault are used to determine a multiplying factor to be applied to the symmetrical current to take into account the appropriate direct-current decrements for breakers rated from two- to eight-cycles interrupting time. The multipliers are taken from curves given in ANSI Standard C37.5-1979 for total-current-rated breakers.

Frequently, interrupting current calculations are made using IEEE Transactions Paper 60TP146-IGA Sept/Oct 1969, "Interpretation of New American National Standards for Power Circuit Breaker Application" (GER-2550) as a guide. The principal extension of the ANSI standards is that a ratio of remote-generator fault current to the sum of the local-generator fault current and remote-generator fault current is used as a measure of the electrical distance from the fault to the generation. The resulting fault-current multiplier takes into account reactors and line impedances that may be equivalent to transformer impedances, as well as variations in the size of transformers.

4. Short-Circuit Relay Currents

Short-circuit studies are also made to determine the branch current required to determine settings for relays and protective devices in coordination studies. The impedances of generators and motors depend on the time of interest subsequent to the fault. For long time periods after the fault, the utility source and transient impedance of the generators may be the only short-circuit sources in the network.

One-Line Diagram Discussion

It will be noted that all impedance elements consisting of motors, transformers, cables and busways are identified on this diagram in agreement with the database report. Also, all faulted buses are identified by Bus ID on the short-circuit printout. All switching devices shown on the one-line are assumed closed unless designated as "open".

All protective devices are shown with the existing type and size or setting, and may be changed after the recommended type and size or settings have been effected.

SHORT CIRCUIT ANALYSIS

Utility Short-Circuit Impedance

The Utility short-circuit contributions used in this study are shown below on a 100 MVA, 480kV base. The System Protection Department of Nevada Power provided these values and is documented in the Appendix. The X/R values were chosen as typical values for a delivery system of this size. A sensitivity analysis was performed to verify these X/R values as reasonable by running the Short Circuit Analysis at X/R = 1 and X/R = 100. No equipment was found to fail equipment duty ratings within this range of X/R.

At the Utility Service Entrance (@480V):

	NPC
Three Phase Fault	53.484kA
Three Phase X/R	7
Ground Fault	56.432
Ground Fault X/R	7

Equipment Database Printout

The first computerized printout represents the database that includes all system components used in generating this report. The utility, generator and motor contributions are detailed first, then transformers, cables, and panels. The output is generally self-explanatory.

Cable sizes were determined from Single Line Diagrams and Tables submitted by the Engineer of Record. Additional information regarding cable lengths was also determined from the Single Line Diagrams. When cable lengths were not provided, a value of 10' is used. Low-voltage motor speeds were assumed as 1800 RPM.

Short-Circuit Program Output Explanation

ESA's EasyPower Version 7.0 was used to calculate the fault current duties using a nodal admittance network. Pre-fault steady-state load currents are omitted since the effects of system load current through a device during a fault is usually negligible in typical industrial and commercial electrical distribution systems.

This short-circuit program provides full implementation of ANSI Standards C37.010-1979, C37.5-1979 and C37.13-1981.

For **momentary duty** (1/2 cycle) fault calculations, the positive sequence impedance is assumed equal to the negative sequence impedance. X/R ratios are derived from the complex network.

For **interrupting duty** fault calculations, rotating machine subtransient impedances are modified by multipliers as outlined in ANSI Standards C37.010-1979, and C37.5-1979.

Negative sequence impedances are modeled using the rotating machine subtransient impedances with no multipliers. A separate "R" (resistance) network is formed for the calculation of the fault point X/R ratio. The X/R ratio used for the calculation of the interrupting duty multipliers is then found from the relationship Z/R. This method fully complies with the ANSI standard and has the advantage of accurate currents and voltages and increased accuracy of a separate X separate R solution technique. NACD (No AC Decrement) ratios are calculated with consideration of generator "Local" and "Remote" contributions as outlined in ANSI Standard C37.010-1979 and Reference 4. Medium and high-voltage interrupting multipliers are also derived from Reference 4.

The **Equipment Duty Report** for each fault type displays a comparison of each piece of equipment’s listed duty rating with respect to the calculated fault current at that equipment’s particular location in the distribution system. A sample section of the report is shown below:

```

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
Driving Point Voltage (P.U.) = 1.00000

*****

Equipment Duty Comparison Report For Bus:
H4          Area: 1 Zone: 1 Bus kV: 0.48 kV

-----
Equipment                               Ratings                               Duties                               Comments
-----
ID      Manufacturer / Style              Test Standard  1/2 Cycle Interrupting  1/2 Cycle Interrupting
                                         (kA)          (kA) Cyc              kA ( % )          kA ( % )
-----
B H4-BR      GE /SEL              ANSI-SYM      65.00          9.65 ( -85.2%)
B TX T4      GE /SEL              ANSI-SYM      65.00          9.65 ( -85.2%)
H4           /                    ANSI-SYM      65.00          9.65 ( -85.2%)
*****
    
```

The first column under Equipment, **ID**, identifies each *Breaker* in the panel or switchboard (each starting with the letter “B”) and finally on the last line in the first column, the *panel* or *switchboard* itself. The second and third column under Equipment identifies the *manufacturer* and *Style* (in this case a GE Spectra series SEL breaker). The first column under **Ratings** indicates the Breaker or Panel’s *kAIC rating* (in this case, 65kAIC for the SEL breaker). The first column under **Duties** indicates the ½ cycle calculated fault current at the location of the equipment within the distribution system (in this case, 9.65kAIC). The result of this comparison (between the manufacturer’s listed rating and the subjected duty) indicates the required fault duty is 85% less than the listed value of the equipment. A *Warning* or *Violation* comment in the **Comments** column indicates when an evaluated piece of equipment is not capable of safely interrupting the available fault current.

Devices that are calculated as over-dutied (VIOLATION) should be replaced as indicated in the *Results - Discussion* found at the end of this section. The devices shown with a "WARNING" comment should be replaced if further motor loading or increased incoming

capacity is foreseen. A "WARNING" indicates that a device's calculated fault current is within 10% of its rating. The result of a device applied in excess of its rating may be the destruction of the device as well as the load it was supposed to protect in the event of a major fault.

Molded-Case Circuit Breakers

An important consideration in the application of molded-case and insulated case circuit breakers is that often the interrupting rating given to the equipment is higher than its tested interrupting capacity. In testing circuit breakers for short circuit interrupting ratings, Underwriter's Laboratories (UL) uses an additional four feet, ten inches of cable sized to 125% of the trip setting of the breaker. Thus a 15 amp trip circuit breaker is tested with 4'10" of 14 AWG wire between it and the fault point. This added impedance can severely limit the test current actually applied to the device. The above breaker may have an interrupting rating of 14,000 amps symmetrical short-circuit current at 50% power factor but is only tested at 7,353 amps at 77% power factor at the line connections of the breaker. This discrepancy is most significant at lower trip sizes and at higher interrupting ratings. This may mean that the application of a circuit breaker whose interrupting capacity is less than the available fault current is a violation of the NEC even though the interrupting rating is sufficient. Similar testing procedures and ratings differences also exist for motor starters, enclosures, distribution panels and motor control centers.

Table SCA-1 lists some common interrupting ratings and capacities for smaller breaker sizes at 480 Volts.

Table SCA-1⁶

Interrupting Rating	Trip Size	Tested Int. Capacity	Interrupting Rating	Trip Size	Tested Int. Capacity
10,000 A	15 A	7,353 A	14,000 A	15 A	9,772 A
10,000 A	20 A	8,203 A	14,000 A	20 A	11,226 A
10,000 A	25&30A	8,882 A	14,000 A	25&30A	12,354 A
10,000 A	40&50A	9,249 A	14,000 A	40&50A	12,926 A
25,000 A	15 A	13,530 A	42,000 A	15 A	15,714 A
25,000 A	20 A	17,037 A	42,000 A	20 A	21,526 A
25,000 A	25&30A	20,248 A	42,000 A	25&30A	28,352 A
25,000 A	40&50A	21,948 A			
25,000 A	60 A	23,104 A			

The next printout from the Short-Circuit Program is the *Low Voltage Momentary (First Cycle) Breaker Duties Using Momentary Impedance Circuit*.

Calculated first-cycle (momentary) short-circuit currents are used to evaluate interrupting duty for fast-operating interrupters such as fuses and low-voltage circuit breakers, and to calculate relay currents used in protective-device coordination studies. First-cycle duty currents are calculated using subtransient or modified subtransient reactance (X"d) for all

sources of short-circuit current as specified in the appropriate ANSI calculating procedures.^{1,2,3,4,5}

As indicated, this printout shows the symmetrical amps and the fault X/R ratio as well as asymmetrical amps for each faulted bus in the system. X/R ratios are derived from the complex network. Contributions from adjacent buses are also shown. The "duty" affecting a protective device is normally defined as the contribution from buses "upstream" of the device in the electrical system.

Power Circuit Breaker Duty is shown under the heading "Symmetrical Amps", while Molded-Case Breakers may be shown with multiple duties. This is because molded-case breakers have different Test Power Factors. If the actual fault PF is less than that at which the device was tested (fault X/R ratio greater than test X/R ratio), the device must be derated or a multiplier applied to its duty before comparing the duty with the device's rating for interrupting evaluation.

The Test Power Factors for the above devices are listed here at their worst-case, highest values. This means that for a fault PF less than this, a multiplier is applied to the calculated fault current before it is compared to the device's rating.

- Breakers with interrupting ratings 10kA or less have a Test Power Factor of 0.50.
- Breakers with interrupting ratings from 10kA to 20kA have a Test Power Factor of 0.30.
- Breakers with interrupting ratings of 20kA, or greater, have a Test Power Factor of 0.20.
- Power Circuit Breakers have a Test Power Factor of 0.15.

Similarly, Low-Voltage Fuses have Test PF associated with them as well. There are two different Test PFs, 0.20 and 0.50. The multiplier used to increase the calculated fault current so it may be compared to the device's nameplate interrupting rating may be calculated by equation SC-E1.

Equation SC-E1.

$$\text{Multiplier} = \frac{1 + \epsilon^{\frac{-\pi}{(X/R)}}}{1 + \epsilon^{\frac{-\pi}{K}}}$$

where X/R= Fault X/R ratio
K = $\tan \{ \cos^{-1}(\text{PF}) \}$
and PF= Test Power Factor (device dependent)

The multiplier to change the calculated symmetrical amperes to asymmetrical amperes is shown in the right half of Equation SC-E2.

Equation SC-E2.

$$\text{Asym} = \text{Sym} * \sqrt{1 + 2 \epsilon^{\frac{-2\pi}{(X/R)}}$$

where Sym = symmetrical amperes calculated
and Asym = asymmetrical amperes

References

1. "Application Guide for AC High-Voltage Breakers Rated on a Symmetrical Current Basis," ANSI Standard C37.010-1979.
2. "Calculation of Fault Currents for Application of Power Circuit Breakers Rated on a Total-Current Basis," ANSI Standard C37.5-1979.
3. "American National Standard for Low-Voltage AC Power Circuit Breakers Used in Enclosures," ANSI Standard C37.13-1981.
4. "Interpretation of New American National Standard for Power Circuit Breakers Applications," W.C. Huening Jr., IEEE Transaction on Industry and General Applications, Vol. IGA-5, No. 5, Sept./Oct. 1969.
5. "Calculating Short-Circuit Currents With Contributions From Induction Motors," W.C. Huening, Jr., Conference Record Industry Applications Society, IAS-1981: 21A, 81CH1678-2, page 427-33.
6. "Short Circuit Ratings, Labels, and Fault Withstandability of Molded-case and Insulated-case Circuit Breakers and Combination Motor Starters," Arthur J. Smith, Conference Record of the 1989 IEEE Industry Applications Society Annual Meeting, 89CH2792-0.

Results - Discussion

The Equipment Duty Rating printouts indicate that all of the protective devices or panels in the scope of this study are appropriately rated (and are not within 90% of their rating).

New protective devices added to the system should be checked per the short circuit levels given in the program to ensure adequate interrupting ratings are provided. Any major change or addition to the power system can significantly change the short circuit levels. The program should particularly be re-examined in the event of a change in the utility service, a change of one of the principal transformers, or a significant addition of motor load to the studied electrical system.

COORDINATION STUDY INTRODUCTION

Introduction

The purpose of a coordination study is to properly select the circuit protective devices and to provide coordinated settings for adjustable protection devices in the facility that are within the scope of the study. The scope of this study includes the 480V utility service interface to two separate switchboards (MSA & MDB), several sub-panels, several step-down transformers and several 120/208 panelboards. This study includes a tabulation of all appropriate feeder breaker settings.

The protective device ratings and settings were chosen to provide a reasonable compromise, based on a thorough engineering evaluation, between the often-conflicting goals of maximum protection and greatest service continuity. Judgments were made as to the best balance between these factors. When a balance is attained, the protective system is described as being "coordinated". It is not always possible to obtain the desired degree of system and equipment protection in a selective fashion. Selectivity means that for a fault at a given location, only the protective device nearest the fault will operate to isolate the fault from the circuit. Other "upstream" devices see the fault but allow the "downstream" device to operate first.

The Coordination Study's methods and recommendations are in conformance with the National Electrical Code (NEC), ANSI/IEEE Standard 242-1986 (IEEE Buff Book), and accepted industry practice. A general explanation of the methods used for this study is found under this tab in a section entitled *Procedures*.

The Coordination Study section of the report is organized as follows, *Compliance with Codes and Standards*, *Procedures*, and *General Discussion of Protective Devices*. The next section is titled *Coordination Study - Analysis* and includes the specific discussion and recommendations for the *CCSD – East Career and Technical Academy* project. Time Current Curves used during the evaluation of this particular electrical distribution system are included in the *Appendix*.

Compliance with Codes and Standards

The following discussion addresses the study's compliance with the National Electric Code and ANSI/IEEE Standards.

Lack of selectivity normally occurs with the **use of molded-case circuit breakers and fuses** for both feeder protection and branch circuit protection. Underwriter's Laboratory standard (UL489) requires that the molded-case circuit breakers incorporate an instantaneous trip. This provides self-protection for the molded-case breaker. At high levels of fault current, the instantaneous trip sensor of both the upstream substation feeder breaker and the downstream molded-case breaker or fuse will sense the fault current. Either or both may trip. This lack of selectivity occurs under severe fault

conditions when molded-case breakers or fuses are applied as feeder protective devices. It should also be noted that utilizing series rated combinations of circuit breakers would also compromise selectivity.

The electrical system is examined to find areas that do not conform to the current (2002) version of the **National Electric Code (NEC)**. The NEC is not necessarily enforced retroactively and it is not possible to determine the provisions of the NEC that were in force at the time that a particular installation was made. However, since the NEC provisions cited pertain to basic electrical system protection concepts, facility management should be cognizant of them and initiate corrective action when necessary.

Cable Ampacity - The ratings of all protective devices within the scope of this study were examined to see if they conformed to the requirements of NEC Article 240.4 which states that *"Conductors, . . . , shall be protected against overcurrent in accordance with their ampacities . . . "*

Ampacity values for wires with either a 60°C or 75°C thermal rating were used for this evaluation because these wire thermal ratings are stipulated in the UL listing instructions for the terminations of distribution equipment. The termination provisions are based on the use of 60°C rated wire for wire sizes #14 to #1 AWG and 75°C rated wire for wire sizes Nos. 1/0 and greater. Wire with a higher thermal rating may be used but this wire must have a cross-sectional area not less than that of the 60°C or 75°C rated wire in order to comply with the listing instructions. These listing instructions must be followed as required by NEC Article 110.3(B).

The next higher device rating is allowed in the code if the standard ampere rating of the fuse or circuit breaker doesn't correspond to the cable ampacity and if this rating does not exceed 800 amperes. The NEC contains tables of ampacities, which provide standard values for various cable types and voltage ranges. Adjustable trip circuit breaker settings can be considered acceptable if the minimum setting is within the limit imposed by the next largest standard device ampacity. The National Electric Code defines standard ampere ratings for fuses and inverse time circuit breakers in section 240-6 as ". . . 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250, 300, 350, 400, 450, 500, 600, 700, 800, 1000, 1200, 1600, 2000, 2500, 3000, 4000, 5000, and 6000 amperes".

The protective device that protects each of the non conforming circuits should be replaced with one having a rating not greater than that indicated as the maximum device rating or the wire should be replaced with a quantity and size which will provide an ampacity not less than that indicated for the minimum wire size.

The National Electric Code Table 310-16 provides the ampacity of the system's 480V cables.

SIZE	AMPACITY
1/0	150
2/0	175
3/0	200
4/0	230
250	255
300	285
350	310
400	335
500	380
600	420
700	460
750	475
800	490
900	520
1000	545
1250	590
1500	625
1750	650
2000	665

Cable Ampacity for Capacitors is addressed in NEC article 460.8, which states, *"The ampacity of capacitor circuit conductors shall not be less than 135 percent of the rated current of the capacitor."*

Ground fault protection is examined on the 480V system pursuant to NEC articles 230.95 and 215.10. Equipment ground fault protection is required on service and feeder disconnecting means rated 1,000A or more in solidly grounded wye systems with greater than 150V to ground, but not exceeding 600 volts phase-to-phase. Feeder ground fault protection is not required if ground fault protection is installed on the supply side of the feeder, for example, at a main circuit breaker.

The inability of phase overcurrent devices to protect equipment from the damage caused by arcing ground faults is well documented. The arc is resistive and can limit the fault current to levels below the pickup settings of short-time and instantaneous devices. The ground fault may only be isolated through the action of an overload device, which allows the fault to continue for an extended period of time before tripping occurs. This extended time will result in greater damage to equipment than had the ground fault been isolated rapidly. Many instances have been recorded where equipment was literally consumed by an arcing ground fault.

While ground fault protection will greatly reduce the extent of damage that a ground fault arc can cause, the ground fault device may not necessarily operate selectively with phase overcurrent devices downstream. For this reason, ground fault protection

on both main and feeder circuit breakers should be contemplated in order to improve selectivity for feeder ground faults. The decision to install ground fault protection on feeder circuit breakers as well as main circuit breakers should consider the following issues:

1. Presence of critical loads on the feeders. Will critical loads experience an outage due to ground faults on other feeders?
2. Rating and type of downstream overcurrent devices. Are downstream phase overcurrent devices capable of sensing ground fault currents within their zone of protection? Is the degree of protection provided by these devices adequate to limit the extent of potential damage to a tolerable level?
3. Main ground fault protection sensitivity. Can the main ground fault device pickup and/or delay be set high enough to allow downstream overcurrent devices to isolate ground fault currents within their protective zone?

The analysis outlined above is beyond the scope of this study. A minimum recommendation would be to have ground fault protection at the main circuit breakers.

Transformer overcurrent protective devices applied at the primary and secondary of transformers were evaluated for compliance with NEC section 450.3. NEC Article 450-3(b)(2) permits the secondary protective device to be set no greater than 125 percent of the transformer rated secondary current when the primary device is not greater than 250 percent of the transformer rated primary current. Note that this article of the NEC *does not* permit the next highest rated device to be applied for the secondary protection when 125% of the rated current does not correspond to a standard rating.

**Maximum Continuous Ratings of Fuses and Circuit Breakers
Permitted For Various Transformer Voltage Levels and Impedances**

NEC Table 450.3(A)

Transformers with Primaries Over 600V

Location Limitations	Transformer Rated Impedance	Primary Protection		Secondary Side Protection *N2		
		Maximum Breaker Rating	Maximum Fuse Rating	Over 600V		600V or Below
				Maximum Breaker Rating *N4	Maximum Fuse Rating	Maximum Circuit Breaker or Fuse Rating
Any Location	6% & Below	600% *N1	300% *N1	300% *N1	250% *N1	125% *N1
	More than 6% & not more than 10%	400% *N1	300% *N1	250% *N1	225% *N1	125% *N1
Supervised Locations Only *N3	Any	300% *N1	250% *N1	Not Req'd	Not Req'd	Not Req'd
	6% & Below	600%	300%	300% *N5	250% *N5	250% *N5
	More than 6% & not more than 10%	400%	300%	250% *N5	225% *N5	250% *N5

*N = Notes for Table 450.3(A)

1. Where the required fuse rating or circuit breaker setting does not correspond to a standard rating or setting, a higher rating or setting that does not exceed the next higher standard rating or setting shall be permitted.
2. Where secondary overcurrent protection is required, the secondary overcurrent device shall be permitted to consist of not more than six circuit breakers or six sets of fuses grouped in one location. Where multiple overcurrent devices are utilized, the total of all the device ratings shall not exceed the allowed value of a single overcurrent device. If both circuit breakers and fuses are used as the overcurrent device, the total of the device ratings shall not exceed that allowed for fuses.
3. A supervised location is a location where conditions of maintenance and supervision ensure that only qualified persons will monitor and service the transformer installation.
4. Electronically actuated fuses that may be set to open at a specific current shall be set in accordance with settings for circuit breakers.
5. A transformer equipped with a coordinated thermal overload protection by the manufacturer shall be permitted to have separate secondary protection omitted.

NEC Table 450.3(B)

Transformers with Primaries 600V and Below

Protection Method	Primary Protection			Secondary Protection *N2	
	Currents of 9 Amperes or More	Currents Less than 9 Amperes	Currents Less than 2 Amperes	Currents of 9 Amperes or More	Currents Less than 9 Amperes
Primary Only	125% *N1	167%	300%	Not Req'd	Not Req'd
Primary & Secondary	250% *N3	250% *N3	250% *N3	125% *N3	167%

*N = Notes for Table 450.3(B)

1. Where 125 percent of this current does not correspond to a standard rating of a fuse or nonadjustable circuit breaker, a higher rating that does not exceed the next higher standard rating shall be permitted.
2. Where secondary overcurrent protection is required, the secondary overcurrent device shall be permitted to consist of not more than six circuit breakers or six sets of fuses grouped in one location. Where multiple overcurrent devices are utilized, the total of all the device ratings shall not exceed the allowed value of a single overcurrent device. If both breakers and fuses are utilized as the overcurrent device, the total of the device ratings shall not exceed that allowed for fuses.
3. A transformer equipped with coordinated thermal overload protection by the manufacturer and arranged to interrupt the primary current, shall be permitted to have primary overcurrent protection rated or set at a current value that is not more than six times the rated current of the transformer for transformers having not more than 6 percent and not more than four times the rated current of the transformer for transformers having more than 6 percent but not more than 10 percent impedance.

Conductors that supply motor loads are subject to special requirements found in Article 430 of the NEC. First, it should be noted that NEC Table 430.150 shall be utilized for the full load current values applied to cable ampacity calculations for three-phase motors as specified in Article 430.6. The table supplies full load current values for motors rated up to 200HP. Current values for motors rated greater than 200HP can be interpolated from the table data.

References to motor full load current ratings in this report, when related to conductor ampacity, pertain to the values found in the NEC tables. Motor branch conductors supplying a single motor must have an ampacity greater or equal to 125 percent of the motor full load current rating (Article 430.24). The ampacity of both branch and feeder conductors which supply several motors must have a minimum ampacity greater or equal to the sum of the full load currents of the connected motors plus 25 percent of the full load current rating of the highest rated motor. These requirements must be applied when motors are operated simultaneously and continuously. However, special consideration can be granted from the authority having jurisdiction to these requirements when it can be shown that on-duty cycle, demand factor is less than 100 percent, operational procedures, production demands or nature of the work is such that not all motors are running at the same time and reduce the conductor heating sufficiently to allow use of a smaller conductor size (Article 430.26). In this report, motors are assumed to be run on a continuous basis unless stated otherwise.

Procedures

The coordination study generally began at the Main Utility Service Breaker in MSA or MSB. Settings were chosen with the goal of providing the best coordination that was possible with the largest downstream fixed-setting protective device (transformer breaker). The study then proceeded with coordinating each of the feeder and sub-panel breakers. Time-current curves were used to determine the settings that provided optimum coordination. This report contains those time-current curves that were deemed to contain essential information.

The following is a tested, generally accepted philosophy for selecting and setting protective devices:

1. A feeder "first-line" or "primary" protective device will remove fault current as quickly as possible.
2. If the feeder primary protection fails, a "back-up" protective device will remove the fault. An upstream device that acts as the primary device in its zone usually provides the back-up function. Therefore, time-current coordination is required between the feeder primary and back-up protective devices.

The protective device settings are individually chosen to accommodate circuit parameters. The criteria used in determining the recommended feeder protective device settings are:

1. System or feeder circuit full-load current.
2. Allowance for coordination with the largest downstream protective device set to the highest pickup and time delay including substation secondary circuit protective devices.
3. Transformer protection in compliance with American National Standards Institute (ANSI) and National Electrical Code (NEC) requirements.
4. Avoidance of nuisance tripping due to transformer magnetizing inrush currents or motor inrush currents.
5. Short circuit for faults occurring in the protected zone of the system, including faults on transformer secondaries.
6. Protection of cables per NEC requirements and published heating limits.

Included in the report are protective device one-line diagrams which functionally depict connections of protective devices to instrument transformers (current transformers, potential transformers).

Calibration and Testing of Protective Devices

The time-current relationships between protective devices as established in this report require that the individual relay operating characteristics do not depart appreciably from those shown on the published time-current curves from the manufacturer. The specified settings will provide operation of the devices essentially as shown. However, device tolerance and the

difficulty in obtaining exact field settings may result in deviations from the specified operating times. Therefore, it is recommended that the device settings be calibrated by field tests to insure the desired response.

Satisfactory device coordination depends on operation of the protective devices when required, even though they may be inactive for long periods of time. To assure continued proper device action, it is essential the devices be calibrated and checked at regular intervals.

Low Voltage Cable Protection

Article 240.3 of the National Electric Code states that "*Conductors, . . . , shall be protected against overcurrent in accordance with their ampacities . . .* " The next higher standard overcurrent device rating (above the ampacity of the conductors being protected) is allowed in the code with some conditions if the standard rating of the fuse or circuit breaker doesn't correspond to the cable ampacity (below 800 amperes). NEC section 220.10(B) precludes setting an overcurrent protective device above its ampere rating in most situations.

System Medium Voltage Relay Settings

The medium voltage system relay settings are given in the *Relay Settings Table*.

One protection philosophy followed in this study in most cases is the avoidance of 0.5 relay time dial settings with standard non-static overcurrent relays. This is because experience has shown that nuisance tripping can be caused in this situation due to simple vibration. As much as possible, 0.75 is the lowest time dial setting used.

Low Voltage Circuit Breaker Settings

The low voltage circuit breaker device settings are provided in the *Adjustable Breaker Settings Table*. The protection and coordination for many of these circuit breakers becomes highly redundant, and many settings can be derived from a single curve.

As the table may indicate, some of the long time band settings may be set higher than minimum to allow coordination with downstream circuit breakers or fuses. In most cases the long time pickup is set for cable protection. Short time trip settings are chosen for close coordination with downstream devices, while the instantaneous trip settings are set at their highest value to allow maximum selectivity with upstream coordination. Also taken into account is the fault current available at the end of a feeder. This is to assure that a breaker operates when subjected to fault current levels.

ANSI STANDARD DEVICE FUNCTION NUMBERS

Dev. No.	Function	Dev. No.	Function
1.	Master Element	51.	AC Time Overcurrent Relay
2.	Time-delay Starting or Closing Relay	52.	AC Circuit Breaker
3.	Checking or Interlocking Relay	53.	Exciter of DC Generator Relay
4.	Master Contactor	54.	Reserved for Future Application
5.	Stopping Device	55.	Power Factor Relay
6.	Starting Circuit Breaker	56.	Field-Application Relay
7.	Anode Circuit Breaker	57.	Short-Circuiting or Grounding Device
8.	Control-Power Disconnecting Device	58.	Rectification Failure Relay
9.	Reversing Device	59.	Overvoltage Relay
10.	Unit Sequence Switch	60.	Voltage or Current Balance Relay
11.	Reserved for Future Application	61.	Reserved for Future Application
12.	Over-speed Device	62.	Time-Delay Stopping or Opening Relay
13.	Synchronous-speed Device	63.	Pressure Switch
14.	Under-speed Device	64.	Ground Protective Relay
15.	Speed or Frequency-Matching Device	65.	Governor
16.	Reserved for Future Application	66.	Notching or Jogging Device
17.	Shunting or Discharge Switch	67.	AC Directional Overcurrent Relay
18.	Accelerating or Decelerating Device	68.	Blocking Relay
19.	Starting-to-Running Transition Contactor	69.	Permissive Control Device
20.	Electrically Operated Valve	70.	Rheostat
21.	Distance Relay	71.	Level Switch
22.	Equalizer Circuit Breaker	72.	DC Circuit Breaker
23.	Temperature Control Device	73.	Load-Resistor Contactor
24.	Reserved for Future Application	74.	Alarm Relay
25.	Synchronizing or Synchronism-Check Device	75.	Position Changing Mechanism
26.	Apparatus Thermal Device	76.	DC Overcurrent Relay
27.	Undervoltage Relay	77.	Pulse Transmitter
28.	Flame Detector	78.	Phase Angle Measuring or Out-of-Step Protective Relay
29.	Isolating Contactor	79.	AC Reclosing Relay
30.	Annunciator Relay	80.	Flow Switch
31.	Separate Excitation Device	81.	Frequency Relay
32.	Directional Power Relay	82.	DC Reclosing Relay
33.	Position Switch	83.	Automatic Selective Control or Transfer Relay
34.	Master Sequence Device	84.	Operating Mechanism
35.	Brush-Operating or Slip-Ring Short-Circuiting Device	85.	Carrier or Pilot-Wire Receiver Relay
36.	Polarity or Polarizing Voltage Device	86.	Locking-Out Relay
37.	Undercurrent or Underpower Relay	87.	Differential Protective Relay
38.	Bearing Protective Device	88.	Auxiliary Motor or Motor Generator
39.	Mechanical-Condition Monitor	89.	Line Switch
40.	Field Relay	90.	Regulating Device
41.	Field Circuit Breaker	91.	Voltage Directional Relay
42.	Running Circuit Breaker	92.	Voltage and Power Directional Relay
43.	Manual Transfer or Selector Device	93.	Field-Changing Contactor
44.	Unit Sequence Starting Relay	94.	Tripping or Trip-Free Relay
45.	Atmospheric Condition Monitor	95.)	
46.	Reverse-Phase or Phase-Balance Current Relay	96.)	Used only for specific applications on individual
47.	Phase-Sequence Voltage Relay	97.)	installations where none of the assigned numbered
48.	Incomplete Sequence Relay	98.)	functions from 1 to 94 are suitable.
49.	Machine or Transformer Thermal Relay	99.)	
50.	Instantaneous Overcurrent or Rate-of-Rise Relay		

General Discussion of Protective Devices

The elements that make up a protected system include relays, direct-acting trip devices, and fuses. Low-voltage power circuit breakers and insulated-case circuit breakers can be adjusted within certain limits to meet protection and coordination requirements. In medium and high-voltage systems, relays are used almost exclusively in the design of a flexible and coordinated protective system.

A brief description of some common relay types used in power distribution systems follows. Appropriate instruction books should be consulted to obtain further information concerning equipment details and their application.

Time-Overcurrent Relays (Device 51) - These relays operate on the electromagnetic induction principle and are available with several time-current operating characteristics. This flexibility makes it possible to select operating characteristics in close harmony with the protective requirements of a particular system component. These relays are non-directional in their operation and are used for both phase and ground fault overcurrent protection of transformers and distribution circuits. Special types are available for motor and generator protection.

The theoretical minimum current at which the relay will operate is called the *pickup current*, which is adjustable within a specified range by changing the *ampere tap* plug. Because of extremely low torques at low-current magnitude, electromechanical relays cannot generally be expected to operate predictably for currents less than 1.5 times the ampere tap setting. This accounts for the termination of the published time operating characteristics at this current level.

Generally, the time delay can be changed by means of a continuously adjustable time dial marked 0 to 10 or 0 to 11. Time-dial markings are arbitrary reference points and are not related to the actual time delay in seconds.

On time-current plots, relay operating characteristics are extended to the maximum short-circuit current value to which a relay is expected to respond. If the overcurrent relay is equipped with an instantaneous attachment (Device 50), then the curve will be terminated at the intersection with the instantaneous relay characteristic.

Overcurrent relays intended for phase fault protection are denoted as 51. Residually connected ground fault relays carry the designation 51N while ground fault relays connected to current transformers in the neutral of a transformer or generator are designated as 51G.

Time overcurrent relays employing electronic circuitry are also available. While these relays have different operating principles from their electromechanical counterparts, the general application procedures described still apply.

Instantaneous Overcurrent Relays (Device 50) - Instantaneous relays have extremely fast operating times (about one cycle). They are essential for fast clearing of extremely high fault currents to reduce burning damage and the possibility of unstable operation of rotating machinery.

However, instantaneous relays cannot always be used when selectivity is desired. Since they cannot be made selective with other instantaneous relays, they are generally only used as the last downstream relay of a series of protective devices which respond to essentially the same magnitude of short-circuit current. This may be a branch-circuit protector, such as a motor starter, or a transformer primary protector.

Whenever there is a large impedance in the circuit (such as a current-limiting reactor or a transformer) the fault current level on the load side may differ significantly from that on the source side. In such cases, the instantaneous relay on the source side of the impedance may be able to be set above the current that would flow to a fault on the load side.

Selectivity between instantaneous relays and fuses for fault clearing times of less than 0.1 second cannot be evaluated on a time-current basis. Since sufficient data are not available to verify selectivity, extreme caution should be exercised in predicting coordination on the basis of the time current characteristics of these devices.

Instantaneous relays may be either self-contained or provided as an attachment to a time-overcurrent relay. Many instantaneous relays operate on the electromagnetic attraction principle. These relays will operate equally well on dc and ac currents and the settings determined for them must recognize the possibility of asymmetry in the fault current. Induction cup type instantaneous relays are available for special applications.

Ground instantaneous relays are given designation suffixes in the same manner as ground time overcurrent relays.

Ground Relays (Devices 50GS and 51GS) - A sensitive ground-fault relay is used to take full advantage of a resistance-grounded system. This ground-fault relay is connected to a low-ratio, window-type current transformer encompassing the three-phase conductors. A matched combination is commonly referred to as a ground sensor. Both time-overcurrent and instantaneous ground sensors can be used (Devices 51GS and 50GS, respectively) to obtain selectivity.

The low-burden capability of window-type transformers introduces a ratio error which is taken into account by the use of operating curves applicable to the ground

sensor package being used; that is, the relay-CT combination. These curves may be obtained only by test and are available from the manufacturer. Note that directional ground overcurrent relays should never be connected to low ratio window-type current transformers.

The ground sensor is not responsive to positive and negative sequence load currents but is sensitive to zero sequence (ground fault) currents. Hence, the current transformer ratio is not governed by the anticipated load currents. A 50/5 current transformer ratio is generally used.

Differential Relays (Devices 87G, 87T, 87B and 87L) - Differential relays are employed to permit fast and sensitive protection for phase and ground faults in a bus (87B), a generator (87G), a transformer (87T), or a line (87L). Their use will not only reduce fault point burning damage, but will also improve the ability of rotating machines in the system to return to a stable, steady state mode of operation following a disturbance in the differential zone.

Differential relays are connected to two or more sets of current transformers located at the perimeters of the zone to be protected. Current transformers ideally should have identical characteristics so that through currents will not result in false operation of the differential relays. To allow for normal current transformer tolerances, differential relays are designed to be insensitive to small error currents.

Transformer differential relays are normally designed to provide restraint for harmonic currents predominant in transformer magnetizing inrush currents that are sensed by the transformer source-side current transformers. An adjustable percentage slope adjustment permits de-sensitizing the relay to prevent misoperation for a through fault due to current transformer ratio errors. Ratio tap adjustments are provided to match as nearly as possible the secondary currents in the primary and secondary current transformers.

COORDINATION STUDY ANALYSIS

Discussion and Recommendations

The coordination analysis is provided below.

- All main and feeder breakers should be set and tested at the recommended settings in this report.
- All low-voltage breakers should be set and tested at the recommended settings in this report for proper coordination with upstream breakers and for proper protection of equipment.
- Several 120V / 208V thermal magnetic breakers had overlapping instantaneous trip regions in upstream and downstream panels. This is not uncommon as these breakers typically do not employ adjustable instantaneous pickup capabilities. Some “racing” may occur during fault conditions that would cause an upstream feeder breaker to clear before a downstream panel main breaker on the same branch.

APPENDIX

**Nevada Power
Fault Data**

***FAULT CURRENT FOR 3-PH TRANSFORMERS (12,470 DELTA-WYE) CALCULATED FOR THE EMERGENCY SPARE TRANSFORMER**

SUB IMPEDANCE (%)	SUB MVA	SYSTEM IMPEDANCE	TRANSFORMER KVA - 3 PH	XFER IMPD (%)	LINE TO LINE		LINE TO GRND		CURRENT BASE		3-PH FAULT		LINE TO GRND	
					VOLTAGE	VOLTAGE	VOLTAGE	VOLTAGE	AMPS	AMPS	AMPS	AMPS	AMPS	AMPS
7.05	20	0.00026	75	3.24	208	120	208	11524	11581	208	11524	11581	208	11581
7.05	20	0.00040	150	2.67	208	120	312	11819	11878	416	27281	27599	416	27599
7.05	20	0.00053	225	2.21	208	120	625	27162	27478	833	31859	32295	833	32295
7.05	20	0.00106	500	4.18	208	120	1388	31859	32295	2092	49019	50058	2092	50058
7.05	20	0.00264	1000/1200	5.31	208	120	2776	49019	50058	2776	49019	50058	2776	50058

SEE NOTE BELOW THAT EXPLAINS THE EMERGENCY SPARE TRANSFORMER EXCEPT FOR THE 1000/1200 KVA 3-PH/208V 2500/2800 KVA 3-PH/480V AND 167 KVA 1-PH 120/240V TRANSFORMERS WHICH ARE THE LARGEST NPC CARRIES IN STOCK

1500-2500/2800 KVA TRANSFORMERS NOT AVAILABLE FOR 120/208 VOLTAGE SERIES

SUB IMPEDANCE (%)	SUB MVA	SYSTEM IMPEDANCE	TRANSFORMER KVA - 3 PH	XFER IMPD (%)	LINE TO LINE		LINE TO GRND		CURRENT BASE		3-PH FAULT		LINE TO GRND	
					VOLTAGE	VOLTAGE	VOLTAGE	VOLTAGE	AMPS	AMPS	AMPS	AMPS	AMPS	AMPS
7.05	20	0.00026	75	3.24	480	277	90	5246	5273	90	5246	5273	90	5273
7.05	20	0.00040	150	2.54	480	277	135	5271	5298	135	5271	5298	135	5298
7.05	20	0.00053	225	2.1	480	277	180	12418	12571	180	12418	12571	180	12571
7.05	20	0.00079	300	2.84	480	277	271	12250	12398	271	12250	12398	271	12398
7.05	20	0.00106	500	3.98	480	277	361	14470	14677	361	14470	14677	361	14677
7.05	20	0.00264	750	5.31	480	277	902	21242	21692	902	21242	21692	902	21692
7.05	20	0.00353	1000	5.31	480	277	1203	30901	31863	1203	30901	31863	1203	31863
7.05	20	0.00529	1500	5.31	480	277	1804	39994	41620	1804	39994	41620	1804	41620
7.05	20	0.00705	2000	5.31	480	277	2406	53484	56432	2406	53484	56432	2406	56432
7.05	20	0.00987	2500/2800	5.31	480	277	3368	53484	56432	3368	53484	56432	3368	56432

***FAULT CURRENT FOR 1-PH TRANSFORMERS CALCULATED FOR THE EMERGENCY SPARE TRANSFORMER (ONLY FOR SINGLE PHASE INSTALLATIONS) CALL DISTRIBUTION PLANNING AND ANALYSIS FOR OPEN DELTA**

SUB IMPEDANCE (%)	SUB MVA	SYSTEM IMPEDANCE	TRANSFORMER KVA - 1 PH	XFER IR%	XFER IX%	XFER IZ% + SYSTEM IMPD	LINE TO LINE		LINE TO GRND		240 BOLTED AMPS		120 BOLTED AMPS	
							VOLTAGE	VOLTAGE	VOLTAGE	VOLTAGE	AMPS	AMPS	AMPS	AMPS
7.05	20	0.00009	25	1.30	1.40	1.92%	240	120	0.02583	12280	18970	12280	18970	
NO NEW TRANSFORMERS														
7.05	20	0.00018	50	0.92	1.40	1.70%	240	120	0.02196	21186	32734	21186	32734	
7.05	20	0.00026	75	0.80	1.21	1.48%	240	120	0.01909	25816	40888	25816	40888	
7.05	20	0.00035	100	0.72	1.40	1.61%	240	120	0.02038	43302	67717	43302	67717	
7.05	20	0.00059	167	0.81	1.32	1.61%	240	120	0.02055	43302	67717	43302	67717	

***FAULT CURRENT ON THE 12 KV SYSTEM (FOR CUSTOMER OWNED PRIMARY SWITCHGEAR)**

3-PH FAULT	LINE TO GRND
AMPS	AMPS
12000	12000

***NOTE: THE EMERGENCY SPARE IS THE NEXT LARGEST TRANSFORMER FROM THE ACTUAL INSTALLATION AND USED IF THE SAME SIZE REPLACEMENT TRANSFORMER IS NOT IN STOCK. THE FAULT CURRENT LISTED WILL TAKE THIS INTO ACCOUNT.**

E Sheet 5.01

Database Report

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

Buses

	ID Name	Status	Base kV	Area	Zone	AF Type	AF Option	Comment
1	3DP1	On	0.208	1	1	Other	Specified	
2	3HA1A	On	0.48	1	1	Panelboard	Specified	
3	3HAIB	On	0.48	1	1	Panelboard	Specified	
4	3HAIC	On	0.48	1	1	Panelboard	Specified	
5	3HAID	On	0.48	1	1	Panelboard	Specified	
6	3HDPA	On	0.48	1	1	Switchboard	Specified	
7	3LA1A	On	0.208	1	1	Panelboard	Specified	
8	3LAC1A	On	0.208	1	1	Panelboard	Specified	
9	3LAC1B	On	0.208	1	1	Panelboard	Specified	
10	3LB1A	On	0.208	1	1	Panelboard	Specified	
11	3LB1B	On	0.208	1	1	Panelboard	Specified	
12	3LBC1A	On	0.208	1	1	Panelboard	Specified	
13	3LBC1B	On	0.208	1	1	Panelboard	Specified	
14	3LBC1C	On	0.208	1	1	Panelboard	Specified	
15	3LDPA	On	0.208	1	1	Panelboard	Specified	
16	3LDPB	On	0.208	1	1	Panelboard	Specified	
17	4DP1	On	0.208	1	1	Other	Specified	
18	4HAIA	On	0.48	1	1	Panelboard	Specified	
19	4HAIB	On	0.48	1	1	Panelboard	Specified	
20	4HAIC	On	0.48	1	1	Panelboard	Specified	
21	4HAID	On	0.48	1	1	Panelboard	Specified	
22	4HAIE	On	0.48	1	1	Panelboard	Specified	
23	4HAIF	On	0.48	1	1	Panelboard	Specified	
24	4HAIG	On	0.48	1	1	Panelboard	Specified	
25	4HAIH	On	0.48	1	1	Panelboard	Specified	
26	4HDPA	On	0.48	1	1	Switchboard	Specified	
27	4HDPB	On	0.48	1	1	Switchboard	Specified	
28	4LA1A	On	0.208	1	1	Panelboard	Specified	
29	4LA1C	On	0.208	1	1	Panelboard	Specified	
30	4LAC1A	On	0.208	1	1	Panelboard	Specified	
31	4LAC1B	On	0.208	1	1	Panelboard	Specified	
32	4LA1KA	On	0.208	1	1	Panelboard	Specified	
33	4LA1KB	On	0.208	1	1	Panelboard	Specified	
34	4LA1KC	On	0.208	1	1	Panelboard	Specified	
35	4LA1KD	On	0.208	1	1	Panelboard	Specified	
36	4LA1KE	On	0.208	1	1	Panelboard	Specified	
37	4LA1KF	On	0.208	1	1	Panelboard	Specified	
38	4LBC1B	On	0.208	1	1	Panelboard	Specified	
39	4LB1B	On	0.208	1	1	Panelboard	Specified	
40	4LB1D	On	0.208	1	1	Panelboard	Specified	
41	4LB1E	On	0.208	1	1	Panelboard	Specified	
42	4LDPA	On	0.208	1	1	Switchboard	Specified	
43	4LDPB	On	0.208	1	1	Panelboard	Specified	
44	6HAIA	On	0.48	1	1	Panelboard	Specified	10k to 42k
45	6HAIB	On	0.48	1	1	Panelboard	Specified	10k to 42k
46	6HAIC	On	0.48	1	1	Panelboard	Specified	10k to 42k
47	6HDPA	On	0.48	1	1	Panelboard	Specified	42k to 65k
48	6LAC1A	On	0.208	1	1	Panelboard	Specified	
49	6LAIA	On	0.208	1	1	Panelboard	Specified	
50	8HA2A	On	0.48	1	1	Panelboard	Specified	
51	8HA2B	On	0.48	1	1	Panelboard	Specified	
52	8LA2A	On	0.208	1	1	Panelboard	Specified	
53	8LAC2A	On	0.208	1	1	Panelboard	Specified	
54	8LAC2B	On	0.208	1	1	Panelboard	Specified	
55	8LB2A	On	0.208	1	1	Panelboard	Specified	
56	8LBC2A	On	0.208	1	1	Panelboard	Specified	
57	8LBC2B	On	0.208	1	1	Panelboard	Specified	
58	8LDPA	On	0.208	1	1	Panelboard	Specified	
59	8LDPB	On	0.208	1	1	Panelboard	Specified	
60	BH	On	0.208	1	1	Other	Specified	
61	CA	On	0.48	1	1	Other	Specified	
62	ELEV	On	0.48	1	1	Other	Specified	
63	MDA	On	0.48	1	1	Switchboard	Specified	
64	T3DP1 H	On	0.48	1	1	Other	Specified	
65	T3DP1 L	On	0.208	1	1	Other	Specified	
66	T3LDPA H	On	0.48	1	1	Other	Specified	
67	T3LDPA L	On	0.208	1	1	Other	Specified	
68	T3LDPB H	On	0.48	1	1	Other	Specified	
69	T3LDPB L	On	0.208	1	1	Other	Specified	
70	T4DP1 H	On	0.48	1	1	Other	Specified	
71	T4DP1 L	On	0.208	1	1	Other	Specified	
72	T4LDPA H	On	0.48	1	1	Other	Specified	
73	T4LDPA L	On	0.208	1	1	Other	Specified	
74	T4LDPB H	On	0.48	1	1	Other	Specified	
75	T4LDPB L	On	0.208	1	1	Other	Specified	
76	T8LDPA H	On	0.48	1	1	Other	Specified	
77	T8LDPA L	On	0.208	1	1	Other	Specified	
78	T8LDPB H	On	0.48	1	1	Other	Specified	

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

Buses

	ID Name	Status	Base kV	Area	Zone	AF Type	AF Option	Comment
79	T8LDPB L	On	0.208	1	1	Other	Specified	
80	TX NPC H	Off	12.47	1	1	Other	Specified	
81	TX NPC L	On	0.48	1	1	Other	Specified	
82	TX T6LAC1A H	On	0.48	1	1	Other	Specified	
83	TX T6LAC1A L	On	0.208	1	1	Other	Specified	
84	TX T6LAIA H	On	0.48	1	1	Other	Specified	
85	TX T6LAIA L	On	0.208	1	1	Other	Specified	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

Utilities

	ID Name	Status	To bus	Base kV	Util kV	Fault Unit	3Ph SC1	3Ph SC2	SLG SC1	SLG SC2	Model	MW	MVAR	CTL kV pu	MVAR Min	MVAR Max	kV pu Min	kV pu Max
1	NPC	On	TX NPC L	0.48	0.48	kA	53.484	7	56.432	7	Swing	0	0	1	-100000	100000	0.8	1.2

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

Utilities

	ID Name	Ctl Angle	Ctl Bus	Ctl Base kV	R1 pu	X1 pu	R0 pu	X0 pu	Hrm RC Factor	Hrm RC Value	I Hrm Rating	Comment
1	NPC	0	TX NPC L	0.48	0.31804	2.22631	0.26820	1.87741	R-EXP	0.5	120281.	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

Motors

	ID Name	Status	To Bus	Base kV	Unit	Model	Motor kV	Hp or kW	Type	Load Class	RPM	FLA	Power Factor	Eff	kVA/HP	ANSI Code	Connected
1	M BH E-146	On	BH	0.208	U.S.	Individual	0.2	40	Induction	Non-essential	1800		0.82	0.91		< 50	100
2	M CA	On	CA	0.48	U.S.	Individual	0.46	25	Induction	Non-essential	1800		0.82	0.91		< 50	100
3	M ELEV 360	On	ELEV	0.48	U.S.	Individual	0.46	40	Induction	Non-essential	1800		0.82	0.91		< 50	100

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

Motors

	ID Name	X ^{dv} or Xlr	X/R	Load Model	Motor kVA	Load Type	Load Scaling	SCADA kW	SCADA jkVar	SCADA Type	SCADA Scaling	Hrm RC Value	Hrm RC Factor	R1 pu	X1 pu	Int MF	Hrm R1 pu	Hrm X1 pu
1	M BH E-146	16.7	4.55842	Spec	39.9892	kVA	100	0	0	kVA	100	0.5	R-EXP	138.166	629.819	10000	82.7342	377.137
2	M CA	16.7	3.28834	Spec	24.9933	kVA	100	0	0	kVA	100	0.5	R-EXP	298.166	980.473	10000	178.542	587.109
3	M ELEV 360	16.7	4.55842	Spec	39.9892	kVA	100	0	0	kVA	100	0.5	R-EXP	137.246	625.627	10000	82.1836	374.627

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

Motors

	ID Name	I Hrm Rating	TCC Starter	Plot TCC	Service Factor	Locked Rotor Mult	Asym Offset	Reduced Inrush Mult	Accel Time	Stall Time	Stall Time To	Largest Motor HP	Comment
1	M BH E-146	110.999	Full Volt		1	6	1.6	100	5	6	200	30	
2	M CA	30.0622	Full Volt		1	6	1.6	100	5	6	200	25	
3	M ELEV 360	48.0996	Full Volt		1	6	1.6	100	5	6	200	40	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

2W-Xformers

	ID Name	Status	From bus	From Base kV	From Conn	To Bus	To Base kV	To Conn	Type	Class	Temp	Form	From Nom kV	From Tap kV	From Gnd R	From Gnd jX	To Nom kV
1	T3DP1	On	T3DP1 H	0.48	D	T3DP1 L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
2	T3LDPA	On	T3LDPA H	0.48	D	T3LDPA L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
3	T3LDPB	On	T3LDPB H	0.48	D	T3LDPB L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
4	T4DP1	On	T4DP1 H	0.48	D	T4DP1 L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
5	T4LDPA	On	T4LDPA H	0.48	D	T4LDPA L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
6	T4LDPB	On	T4LDPB H	0.48	D	T4LDPB L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
7	T8LDPA	On	T8LDPA H	0.48	D	T8LDPA L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
8	T8LDPB	On	T8LDPB H	0.48	D	T8LDPB L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
9	TX NPC	Off	TX NPC H	12.47	D	TX NPC L	0.48	YG	Oil	OA	65/80	Core	12.47	12.47	0	0	0.48
10	TX T6LAC1A	On	TX T6LAC1A H	0.48	D	TX T6LAC1A L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
11	TX T6LAIA	On	TX T6LAIA H	0.48	D	TX T6LAIA L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

2W-Xformers

	ID Name	To Tap kV	To Gnd R	To Gnd jX	MVA	MVA O/L	Z	Z0	X/R	LTC Tap	LTC Step	LTC Min Tap	LTC Max Tap	Ctl Type	Ctl Value	Zps R1 pu	Zps X1 pu	Zps R0 pu	Zps X0 pu
1	T3DP1	0.208	0	0	0.075	0.075	5	4.25	1.75974	None	0.625	0.1	1500	V (PU)	1	32.9376	57.9616	10000	1e+007
2	T3LDPA	0.208	0	0	0.1125	0.1125	3	2.55	1.88578	None	0.625	0.1	1500	V (PU)	1	12.4930	23.5591	10000	1e+007
3	T3LDPB	0.208	0	0	0.225	0.225	4.59	3.9015	3.15937	None	0.625	0.1	1500	V (PU)	1	6.15597	19.4490	10000	1e+007
4	T4DP1	0.208	0	0	0.075	0.075	5	4.25	1.75974	None	0.625	0.1	1500	V (PU)	1	32.9376	57.9616	10000	1e+007
5	T4LDPA	0.208	0	0	0.5	0.5	5.8	4.93	4.60511	None	0.625	0.1	1500	V (PU)	1	2.46157	11.3358	10000	1e+007
6	T4LDPB	0.208	0	0	0.225	0.225	4.59	3.9015	3.15937	None	0.625	0.1	1500	V (PU)	1	6.15597	19.4490	10000	1e+007
7	T8LDPA	0.208	0	0	0.1125	0.1125	3	2.55	1.88578	None	0.625	0.1	1500	V (PU)	1	12.4930	23.5591	10000	1e+007
8	T8LDPB	0.208	0	0	0.1125	0.1125	3	2.55	1.88578	None	0.625	0.1	1500	V (PU)	1	12.4930	23.5591	10000	1e+007
9	TX NPC	0.48	0	0	2.5	2.5	5.31	4.5135	7.12772	None	0.625	0.1	1500	V (PU)	1	0.29510	2.1034	10000	1e+007
10	TX T6LAC1A	0.208	0	0	0.075	0.075	5	4.25	1.75974	None	0.625	0.1	1500	V (PU)	1	32.9376	57.9616	10000	1e+007
11	TX T6LAIA	0.208	0	0	0.075	0.075	4.42	3.757	1.75974	None	0.625	0.1	1500	V (PU)	1	29.1168	51.2381	10000	1e+007

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Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

2W-Xformers

	ID Name	Rps0+3Rpsg	Xps0+3Xpsg	From Gnd R1 pu	From Gnd jX pu	To Gnd R1 pu	To Gnd jX pu	TCC Standard	TCC FLA Based On	Freq Fault Curve	TCC Max Plot Time	TCC Inrush FLA Mult	TCC Inrush Cycles	Hrm RC Factor	Hrm RC Value
1	T3DP1	27.99699	49.26742	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
2	T3LDPA	10.6191	20.02529	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
3	T3LDPB	5.23258	16.53166	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
4	T4DP1	27.99699	49.26742	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
5	T4LDPA	2.092337	9.635441	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
6	T4LDPB	5.23258	16.53166	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
7	T8LDPA	10.6191	20.02529	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
8	T8LDPB	10.6191	20.02529	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
9	TX NPC	0.2508362	1.78789	0	0	0	0	ANSI C57.109	MVA O/L	Yes	500	8	6	R-EXP	0
10	TX T6LAC1A	27.99699	49.26742	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
11	TX T6LAIA	24.74934	43.5524	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0

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2W-Xformers

	ID Name	Hrm Pec-r %	Hrm From I Rating	Hrm To I Rating	Comment
1	T3DP1	15	90.2109	208.179	Based PS e-Saver Tx
2	T3LDPA	15	135.316	312.268	Based PS e-Saver Tx
3	T3LDPB	15	270.633	624.537	Based PS e-Saver Tx
4	T4DP1	15	90.2109	208.179	Based PS e-Saver Tx
5	T4LDPA	15	601.406	1387.86	Based PS e-Saver Tx
6	T4LDPB	15	270.633	624.537	Based PS e-Saver Tx
7	T8LDPA	15	135.316	312.268	Based PS e-Saver Tx
8	T8LDPB	15	135.316	312.268	Based PS e-Saver Tx
9	TX NPC	15	115.747	3007.03	
10	TX T6LAC1A	15	90.2109	208.179	Based PS e-Saver Tx
11	TX T6LAIA	15	90.2109	208.179	Based PS e-Saver Tx

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Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

Cables

	ID Name	Status	From Bus ID	From Base kV	To Bus ID	To Base kV	Unit	Type	No/Ph	Size	Length	Temp	Insulation	Rating (A)	Material
1	C 3DP1	On	T3DP1 L	0.208	3DP1	0.208	U.S.	1/C	1	3/0	10	50	THWN	200	Copper
2	C 3HA1A	On	3HDPA	0.48	3HA1A	0.48	U.S.	1/C	1	4/0	20	50	THWN	230	Copper
3	C 3HAIB	On	3HDPA	0.48	3HAIB	0.48	U.S.	1/C	1	500	21	50	THWN	380	Copper
4	C 3HAIC	On	3HDPA	0.48	3HAIC	0.48	U.S.	1/C	1	4/0	21	50	THWN	230	Copper
5	C 3HAID	On	3HDPA	0.48	3HAID	0.48	U.S.	1/C	1	4/0	20	50	THWN	230	Copper
6	C 3HDPA	On	MDA	0.48	3HDPA	0.48	U.S.	1/C	5	500	380	50	THWN	1900	Copper
7	C 3LA1A	On	3LDPA	0.208	3LA1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
8	C 3LAC1A	On	3LDPA	0.208	3LAC1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
9	C 3LAC1B	On	3LDPA	0.208	3LAC1B	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
10	C 3LB1A	On	3LDPB	0.208	3LB1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
11	C 3LB1B	On	3LDPB	0.208	3LB1B	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
12	C 3LBC1A	On	3LDPB	0.208	3LBC1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
13	C 3LBC1B	On	3LDPB	0.208	3LBC1B	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
14	C 3LBC1C	On	3LDPB	0.208	3LBC1C	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
15	C 3LDPA	On	T3LDPA L	0.208	3LDPA	0.208	U.S.	1/C	1	500	10	50	THWN	380	Copper
16	C 3LDPB	On	T3LDPB L	0.208	3LDPB	0.208	U.S.	1/C	2	500	10	50	THWN	760	Copper
17	C 4DP1	On	T4DP1 L	0.208	4DP1	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
18	C 4HAIA	On	4HDPA	0.48	4HAIA	0.48	U.S.	1/C	1	4/0	15	50	THWN	230	Copper
19	C 4HAIB	On	4HDPA	0.48	4HAIB	0.48	U.S.	1/C	1	4/0	16	50	THWN	230	Copper
20	C 4HAIC	On	4HDPA	0.48	4HAIC	0.48	U.S.	1/C	1	4/0	16	50	THWN	230	Copper
21	C 4HAID	On	4HDPA	0.48	4HAID	0.48	U.S.	1/C	1	4/0	17	50	THWN	230	Copper
22	C 4HAIE	On	4HDPA	0.48	4HAIE	0.48	U.S.	1/C	1	4/0	16	50	THWN	230	Copper
23	C 4HAIF	On	4HDPA	0.48	4HAIF	0.48	U.S.	1/C	1	4/0	17	50	THWN	230	Copper
24	C 4HAIG	On	4HDPA	0.48	4HAIG	0.48	U.S.	1/C	1	4/0	17	50	THWN	230	Copper
25	C 4HAIH	On	4HDPA	0.48	4HAIH	0.48	U.S.	1/C	1	4/0	16	50	THWN	230	Copper
26	C 4HDPA	On	MDA	0.48	4HDPA	0.48	U.S.	1/C	5	500	376	50	THWN	1900	Copper
27	C 4LA1A	On	4LDPA	0.208	4LA1A	0.208	U.S.	1/C	1	4/0	11	50	THWN	230	Copper
28	C 4LA1C	On	4LDPA	0.208	4LA1C	0.208	U.S.	1/C	1	4/0	12	50	THWN	230	Copper
29	C 4LAC1A	On	4LDPA	0.208	4LAC1A	0.208	U.S.	1/C	1	4/0	14	50	THWN	230	Copper
30	C 4LAC1B	On	4LDPA	0.208	4LAC1B	0.208	U.S.	1/C	1	4/0	134	50	THWN	230	Copper
31	C 4LAIKA	On	4LDPA	0.208	4LAIKA	0.208	U.S.	1/C	1	4/0	58	50	THWN	230	Copper
32	C 4LAIKB	On	4LDPA	0.208	4LAIKB	0.208	U.S.	1/C	1	4/0	59	50	THWN	230	Copper
33	C 4LAIKC	On	4LDPA	0.208	4LAIKC	0.208	U.S.	1/C	1	4/0	61	50	THWN	230	Copper
34	C 4LAIKD	On	4LDPA	0.208	4LAIKD	0.208	U.S.	1/C	1	4/0	62	50	THWN	230	Copper
35	C 4LAIKE	On	4LDPA	0.208	4LAIKE	0.208	U.S.	1/C	1	2	158	50	THWN	115	Copper
36	C 4LAIKF	On	4LDPA	0.208	4LAIKF	0.208	U.S.	1/C	1	2	196	50	THWN	115	Copper
37	C 4LBCIB	On	4LDPB	0.208	4LBCIB	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
38	C 4LBIB	On	4LDPB	0.208	4LBIB	0.208	U.S.	1/C	1	4/0	36	50	THWN	230	Copper
39	C 4LBID	On	4LDPB	0.208	4LBID	0.208	U.S.	1/C	1	4/0	114	50	THWN	230	Copper
40	C 4LBIE	On	4LDPB	0.208	4LBIE	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
41	C 4LDPA	On	T4LDPA L	0.208	4LDPA	0.208	U.S.	1/C	5	500	10	50	THWN	1900	Copper
42	C 4LDPB	On	T4LDPB L	0.208	4LDPB	0.208	U.S.	1/C	2	500	10	50	THWN	760	Copper
43	C 6HAIA	On	6HDPA	0.48	6HAIA	0.48	U.S.	1/C	1	4/0	16	50	THWN	230	Copper
44	C 6HAIB	On	6HDPA	0.48	6HAIB	0.48	U.S.	1/C	1	4/0	17	50	THWN	230	Copper
45	C 6HAIC	On	6HDPA	0.48	6HAIC	0.48	U.S.	1/C	1	4/0	17	50	THWN	230	Copper
46	C 6HDPA	On	MDA	0.48	6HDPA	0.48	U.S.	1/C	4	250	426	50	THWN	1020	Copper
47	C 6LAC1A	On	TX T6LAC1A L	0.208	6LAC1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
48	C 6LAIA	On	TX T6LAIA L	0.208	6LAIA	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
49	C 8HA2A	On	3HDPA	0.48	8HA2A	0.48	U.S.	1/C	1	500	10	50	THWN	380	Copper
50	C 8HA2B	On	3HDPA	0.48	8HA2B	0.48	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
51	C 8LA2A	On	8LDPA	0.208	8LA2A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
52	C 8LAC2A	On	8LDPA	0.208	8LAC2A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
53	C 8LAC2B	On	8LDPA	0.208	8LAC2B	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
54	C 8LB2A	On	8LDPB	0.208	8LB2A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
55	C 8LBC2A	On	8LDPB	0.208	8LBC2A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
56	C 8LBC2B	On	8LDPB	0.208	8LBC2B	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
57	C 8LDPA	On	T8LDPA L	0.208	8LDPA	0.208	U.S.	1/C	1	500	10	50	THWN	380	Copper
58	C 8LDPB	On	T8LDPB L	0.208	8LDPB	0.208	U.S.	1/C	1	500	10	50	THWN	380	Copper
59	C BH E-146	On	4LDPA	0.208	BH	0.208	U.S.	1/C	1	1	53	50	THWN	130	Copper
60	C CA	On	4HDPA	0.48	CA	0.48	U.S.	1/C	1	4	90	50	THWN	85	Copper
61	C ELEV	On	3HDPA	0.48	ELEV	0.48	U.S.	1/C	1	2	25	50	THWN	115	Copper
62	C MDA	On	TX NPC L	0.48	MDA	0.48	U.S.	1/C	11	500	25	50	THWN	4180	Copper
63	C T3DP1	On	3HA1A	0.48	T3DP1 H	0.48	U.S.	1/C	1	1	75	50	THWN	130	Copper
64	C T3LDPA	On	3HDPA	0.48	T3LDPA H	0.48	U.S.	1/C	1	2/0	10	50	THWN	175	Copper
65	C T3LDPB	On	3HDPA	0.48	T3LDPB H	0.48	U.S.	1/C	1	500	115	50	THWN	380	Copper
66	C T4DP1	On	4HAIH	0.48	T4DP1 H	0.48	U.S.	1/C	1	1	11	50	THWN	130	Copper
67	C T4LDPA	On	4HDPA	0.48	T4LDPA H	0.48	U.S.	1/C	2	500	10	50	THWN	760	Copper
68	C T4LDPB	On	4HDPA	0.48	T4LDPB H	0.48	U.S.	1/C	1	500	10	50	THWN	380	Copper
69	C T8LDPA	On	3HDPA	0.48	T8LDPA H	0.48	U.S.	1/C	1	2/0	10	50	THWN	175	Copper
70	C T8LDPB	On	3HDPA	0.48	T8LDPB H	0.48	U.S.	1/C	1	2/0	120	50	THWN	175	Copper
71	C TX T6LAC1A	On	6HDPA	0.48	TX T6LAC1A H	0.48	U.S.	1/C	1	1	10	50	THWN	130	Copper
72	C TX T6LAIA	On	6HDPA	0.48	TX T6LAIA H	0.48	U.S.	1/C	1	1	10	50	THWN	130	Copper
73	C4HDPB	On	MDA	0.48	4HDPB	0.48	U.S.	1/C	2	500	67	50	THWN	760	Copper

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Comment: Equipment Database

Cables

	ID Name	Raceway Type	Raceway Mtl	R1	X1	R0	X0	Xc	Xc0	Gnd Num	Gnd Size	Gnd Mtl	Gnd Type	Gnd Insul	Neutral Num	Neutral Size	Neutral Rating
1	C 3DP1	Conduit	Steel	0.07046	0.03914	0.28184	0.15658	0.00530	0.00530	1	6	Copper	Separate	Yes	1	3/0	10
2	C 3HA1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
3	C 3HAIB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	1	500	10
4	C 3HAIC	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
5	C 3HAID	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
6	C 3HDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	5	4/0	Copper	Separate	Yes	5	500	10
7	C 3LA1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
8	C 3LAC1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
9	C 3LAC1B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
10	C 3LB1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
11	C 3LB1B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
12	C 3LBC1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
13	C 3LBC1B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
14	C 3LBC1C	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
15	C 3LDBA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	2	500	10
16	C 3LDPB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	2	1/0	Copper	Separate	Yes	4	500	10
17	C 4DP1	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
18	C 4HAIA	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
19	C 4HAIB	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
20	C 4HAIC	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
21	C 4HAID	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
22	C 4HAIE	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
23	C 4HAIF	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
24	C 4HAIG	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
25	C 4HAIH	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
26	C 4HDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	5	4/0	Copper	Separate	Yes	5	500	10
27	C 4LA1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
28	C 4LA1C	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
29	C 4LAC1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
30	C 4LAC1B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
31	C 4LA1KA	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
32	C 4LA1KB	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
33	C 4LA1KC	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
34	C 4LA1KD	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
35	C 4LA1KE	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	1	2	10
36	C 4LA1KF	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	1	2	10
37	C 4LBC1B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
38	C 4LB1B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
39	C 4LB1D	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
40	C 4LBE	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
41	C 4LDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	5	4/0	Copper	Separate	Yes	5	500	10
42	C 4LDPB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	2	1/0	Copper	Separate	Yes	4	500	10
43	C 6HAIA	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
44	C 6HAIB	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
45	C 6HAIC	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
46	C 6HDPA	Conduit	Steel	0.04860	0.03903	0.19442	0.15612	0.00521	0.00521	4	2/0	Copper	Separate	Yes	4	250	10
47	C 6LAC1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
48	C 6LA1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
49	C 8HA2A	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	1	500	10
50	C 8HA2B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
51	C 8LA2A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
52	C 8LAC2A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
53	C 8LAC2B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
54	C 8LB2A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
55	C 8LBC2A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
56	C 8LBC2B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
57	C 8LDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	2	500	10
58	C 8LDPB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	2	500	10
59	C BH E-146	Conduit	Steel	0.14127	0.04157	0.56509	0.16629	0.00723	0.00723	1	6	Copper	Separate	Yes	1	1	10
60	C CA	Conduit	Steel	0.28320	0.04271	1.13283	0.17084	0.00814	0.00814	1	8	Copper	Separate	Yes	1	4	10
61	C ELEV	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	1	2	10
62	C MDA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	11	500	Copper	Separate	Yes	11	500	10
63	C T3DP1	Conduit	Steel	0.14127	0.04157	0.56509	0.16629	0.00723	0.00723	1	1	Copper	Separate	Yes	0	Other	10
64	C T3LDPA	Conduit	Steel	0.08883	0.03987	0.35532	0.15950	0.00588	0.00588	1	6	Copper	Separate	Yes	0	Other	10
65	C T3LDPB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	0	Other	10
66	C T4DP1	Conduit	Steel	0.14127	0.04157	0.56509	0.16629	0.00723	0.00723	1	6	Copper	Separate	Yes	0	Other	10
67	C T4LDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	2	1/0	Copper	Separate	Yes	0	Other	10
68	C T4LDPB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	0	Other	10
69	C T8LDPA	Conduit	Steel	0.08883	0.03987	0.35532	0.15950	0.00588	0.00588	1	6	Copper	Separate	Yes	0	Other	10
70	C T8LDPB	Conduit	Steel	0.08883	0.03987	0.35532	0.15950	0.00588	0.00588	1	6	Copper	Separate	Yes	0	Other	10
71	C TX T6LAC1A	Conduit	Steel	0.14127	0.04157	0.56509	0.16629	0.00723	0.00723	1	6	Copper	Separate	Yes	0	Other	10
72	C TX T6LAIA	Conduit	Steel	0.14127	0.04157	0.56509	0.16629	0.00723	0.00723	1	6	Copper	Separate	Yes	0	Other	10
73	C4HDPB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	2	1/0	Copper	Separate	Yes	2	500	10

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Comment: Equipment Database

Cables

	ID Name	Neutral Mtl	Neutral Insul	Conductor Lay	Conductor Form	Spacing	R1 pu	X1 pu	R0 pu	X0 pu	B1 pu	B0 pu	Hrm RC Factor	Hrm RC Value	I Hrm Rating	Comment
1	C 3DP1	Copper	Yes	Triangle	Round	0	1.62864	0.90483	6.51458	3.61936	8.15634	8.15634	R-EXP	0.5	200	
2	C 3HA1A	Copper	Yes	Triangle	Round	0	0.48501	0.33399	1.94007	1.33597	9.66189	9.66189	R-EXP	0.5	230	
3	C 3HAIB	Copper	Yes	Triangle	Round	0	0.23820	0.33944	0.95282	1.3578	1.27808	1.27808	R-EXP	0.5	380	
4	C 3HAIC	Copper	Yes	Triangle	Round	0	0.50926	0.35069	2.03707	1.40277	1.01449	1.01449	R-EXP	0.5	230	
5	C 3HAID	Copper	Yes	Triangle	Round	0	0.48501	0.33399	1.94007	1.33597	9.66189	9.66189	R-EXP	0.5	230	
6	C 3HDPA	Copper	Yes	Triangle	Round	0	0.86208	1.22848	3.44833	4.91394	1.15636	1.15636	R-EXP	0.5	1900	
7	C 3LA1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
8	C 3LAC1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
9	C 3LAC1B	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
10	C 3LB1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
11	C 3LB1B	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
12	C 3LBC1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
13	C 3LBC1B	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
14	C 3LBC1C	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
15	C 3LDBA	Copper	Yes	Triangle	Round	0	0.60407	0.86081	2.41630	3.44327	1.14283	1.14283	R-EXP	0.5	380	
16	C 3LDPB	Copper	Yes	Triangle	Round	0	0.30203	0.43040	1.20815	1.72163	2.28567	2.28567	R-EXP	0.5	760	
17	C 4DP1	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
18	C 4HAIA	Copper	Yes	Triangle	Round	0	0.36376	0.25049	1.45505	1.00197	7.24642	7.24642	R-EXP	0.5	230	
19	C 4HAIB	Copper	Yes	Triangle	Round	0	0.38801	0.26719	1.55205	1.06877	7.72951	7.72951	R-EXP	0.5	230	
20	C 4HAIC	Copper	Yes	Triangle	Round	0	0.38801	0.26719	1.55205	1.06877	7.72951	7.72951	R-EXP	0.5	230	
21	C 4HAID	Copper	Yes	Triangle	Round	0	0.41226	0.28389	1.64905	1.13557	8.21261	8.21261	R-EXP	0.5	230	
22	C 4HAIE	Copper	Yes	Triangle	Round	0	0.38801	0.26719	1.55205	1.06877	7.72951	7.72951	R-EXP	0.5	230	
23	C 4HAIF	Copper	Yes	Triangle	Round	0	0.41226	0.28389	1.64905	1.13557	8.21261	8.21261	R-EXP	0.5	230	
24	C 4HAIG	Copper	Yes	Triangle	Round	0	0.41226	0.28389	1.64905	1.13557	8.21261	8.21261	R-EXP	0.5	230	
25	C 4HAIH	Copper	Yes	Triangle	Round	0	0.38801	0.26719	1.55205	1.06877	7.72951	7.72951	R-EXP	0.5	230	
26	C 4HDPA	Copper	Yes	Triangle	Round	0	0.85301	1.21555	3.41203	4.86221	1.14418	1.14418	R-EXP	0.5	1900	
27	C 4LA1A	Copper	Yes	Triangle	Round	0	1.42061	0.97826	5.68245	3.91305	9.97859	9.97859	R-EXP	0.5	230	
28	C 4LA1C	Copper	Yes	Triangle	Round	0	1.54976	1.06719	6.19903	4.26878	1.08857	1.08857	R-EXP	0.5	230	
29	C 4LAC1A	Copper	Yes	Triangle	Round	0	1.80805	1.24506	7.23221	4.98025	1.27000	1.27000	R-EXP	0.5	230	
30	C 4LAC1B	Copper	Yes	Triangle	Round	0	17.3056	11.917	69.2226	47.6681	1.21557	1.21557	R-EXP	0.5	230	
31	C 4LAICA	Copper	Yes	Triangle	Round	0	7.49051	5.15810	29.9620	20.6324	5.26144	5.26144	R-EXP	0.5	230	
32	C 4LAIKB	Copper	Yes	Triangle	Round	0	7.61966	5.24703	30.4786	20.9882	5.35215	5.35215	R-EXP	0.5	230	
33	C 4LAIKC	Copper	Yes	Triangle	Round	0	7.87795	5.42490	31.5117	21.6996	5.53358	5.53358	R-EXP	0.5	230	
34	C 4LAIKD	Copper	Yes	Triangle	Round	0	8.00710	5.51383	32.0283	22.0554	5.62429	5.62429	R-EXP	0.5	230	
35	C 4LAIKE	Copper	Yes	Triangle	Round	0	65.0822	14.9164	260.328	59.6656	1.02665	1.02665	R-EXP	0.5	115	
36	C 4LAIKF	Copper	Yes	Triangle	Round	0	80.7349	18.5039	322.938	74.0155	1.27357	1.27357	R-EXP	0.5	115	
37	C 4LBCIB	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
38	C 4LBIB	Copper	Yes	Triangle	Round	0	4.64928	3.20158	18.5971	12.8063	3.26572	3.26572	R-EXP	0.5	230	
39	C 4LBID	Copper	Yes	Triangle	Round	0	14.7227	10.1383	58.8908	40.5534	1.03414	1.03414	R-EXP	0.5	230	
40	C 4LBE	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
41	C 4LDPA	Copper	Yes	Triangle	Round	0	0.12081	0.17216	0.48326	0.68865	5.71418	5.71418	R-EXP	0.5	1900	
42	C 4LDPB	Copper	Yes	Triangle	Round	0	0.30203	0.43040	1.20815	1.72163	2.28567	2.28567	R-EXP	0.5	760	
43	C 6HAIA	Copper	Yes	Triangle	Round	0	0.38801	0.26719	1.55205	1.06877	7.72951	7.72951	R-EXP	0.5	230	
44	C 6HAIB	Copper	Yes	Triangle	Round	0	0.41226	0.28389	1.64905	1.13557	8.21261	8.21261	R-EXP	0.5	230	
45	C 6HAIC	Copper	Yes	Triangle	Round	0	0.41226	0.28389	1.64905	1.13557	8.21261	8.21261	R-EXP	0.5	230	
46	C 6HDPA	Copper	Yes	Triangle	Round	0	2.24681	1.80416	8.98727	7.21667	7.53279	7.53279	R-EXP	0.5	1020	
47	C 6LAC1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
48	C 6LAIA	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
49	C 8HA2A	Copper	Yes	Triangle	Round	0	0.11343	0.16164	0.45372	0.64657	6.08610	6.08610	R-EXP	0.5	380	
50	C 8HA2B	Copper	Yes	Triangle	Round	0	0.24250	0.16699	0.97003	0.66798	4.83094	4.83094	R-EXP	0.5	230	
51	C 8LA2A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
52	C 8LAC2A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
53	C 8LAC2B	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
54	C 8LB2A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
55	C 8LBC2A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
56	C 8LBC2B	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
57	C 8LDBA	Copper	Yes	Triangle	Round	0	0.60407	0.86081	2.41630	3.44327	1.14283	1.14283	R-EXP	0.5	380	
58	C 8LDPB	Copper	Yes	Triangle	Round	0	0.60407	0.86081	2.41630	3.44327	1.14283	1.14283	R-EXP	0.5	380	
59	C BH E-146	Copper	Yes	Triangle	Round	0	17.3065	5.09295	69.2265	20.3717	3.16720	3.16720	R-EXP	0.5	130	
60	C CA	Copper	Yes	Triangle	Round	0	11.0627	1.66839	44.2511	6.67355	2.54537	2.54537	R-EXP	0.5	85	
61	C ELEV	Copper	Yes	Triangle	Round	0	1.93370	0.44319	7.73478	1.77276	8.65097	8.65097	R-EXP	0.5	115	
62	C MDA	Copper	Yes	Triangle	Round	0	0.02578	0.03673	0.10312	0.14694	1.67368	1.67368	R-EXP	0.5	4180	
63	C T3DP1	Copper	Yes	Triangle	Round	0	4.59876	1.35331	18.3951	5.41324	2.38680	2.38680	R-EXP	0.5	130	
64	C T3LDPA	Copper	Yes	Triangle	Round	0	0.38555	0.17307	1.54220	0.69228	3.91481	3.91481	R-EXP	0.5	175	
65	C T3LDPB	Copper	Yes	Triangle	Round	0	1.30447	1.85889	5.21787	7.43556	6.99902	6.99902	R-EXP	0.5	380	
66	C T4DP1	Copper	Yes	Triangle	Round	0	0.67448	0.19848	2.69795	0.79394	3.50064	3.50064	R-EXP	0.5	130	
67	C T4LDPA	Copper	Yes	Triangle	Round	0	0.05671	0.08082	0.22686	0.32328	1.21722	1.21722	R-EXP	0.5	760	
68	C T4LDPB	Copper	Yes	Triangle	Round	0	0.11343	0.16164	0.45372	0.64657	6.08610	6.08610	R-EXP	0.5	380	
69	C T8LDBA	Copper	Yes	Triangle	Round	0	0.38555	0.17307	1.54220	0.69228	3.91481	3.91481	R-EXP	0.5	175	
70	C T8LDPB	Copper	Yes	Triangle	Round	0	4.62660	2.07684	18.5064	8.30739	4.69777	4.69777	R-EXP	0.5	175	
71	C TX T6LAC1A	Copper	Yes	Triangle	Round	0	0.61316	0.18044	2.45268	0.72176	3.18240	3.18240	R-EXP	0.5	130	
72	C TX T6LAIA	Copper	Yes	Triangle	Round	0	0.61316	0.18044	2.45268	0.72176	3.18240	3.18240	R-EXP	0.5	130	
73	C4HDPB	Copper	Yes	Triangle	Round	0	0.37999	0.54150	1.51999	2.16601	8.15538	8.15538	R-EXP	0.5	760	

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Comment: Equipment Database

LV Breakers

	ID Name	Status	On Bus	Base kV	Conn Type	Class	Options	Breaker Mfr	Breaker Type	Breaker Style	Cont Current (A)	SC Int kA	SC Test Std
1	B 3HA1A	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
2	B 3HA1A-BR	On	3HA1A	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
3	B 3HAIB	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	400	65	ANSI-SYM
4	B 3HAIB-BR	On	3HAIB	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	15	65	ANSI-SYM
5	B 3HAIC	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
6	B 3HAIC-BR1	On	3HAIC	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (1Pole)	20	0	ANSI-SYM
7	B 3HAIC-BR2	On	3HAIC	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	15	65	ANSI-SYM
8	B 3HAID	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
9	B 3HAID-BR1	On	3HAID	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (1Pole)	20	0	ANSI-SYM
10	B 3HAID-BR2	On	3HAID	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	35	65	ANSI-SYM
11	B 3HAID-BR3	On	3HAID	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	15	65	ANSI-SYM
12	B 3HDPA	On	MDA	0.48	Feeder	ICCB	Breaker Onl	GE	Power Break II	SS-16	1600	65	ANSI-SYM
13	B 3HDPA-MAIN	On	3HDPA	0.48	Feeder	ICCB	Breaker Onl	GE	Power Break II	SS-16	1600	65	ANSI-SYM
14	B 3HDPA-SPA	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBH	70	100	ANSI-SYM
15	B 3LA1A	On	3LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
16	B 3LA1A-BR	On	3LA1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
17	B 3LAC1A	On	3LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
18	B 3LAC1A-BR	On	3LAC1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
19	B 3LAC1B	On	3LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
20	B 3LAC1B-BR	On	3LAC1B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
21	B 3LB1A	On	3LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
22	B 3LB1A-BR	On	3LB1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
23	B 3LB1B	On	3LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
24	B 3LB1B-BR	On	3LB1B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
25	B 3LBC1A	On	3LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
26	B 3LBC1A-BR	On	3LBC1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
27	B 3LBC1B	On	3LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
28	B 3LBC1B-BR	On	3LBC1B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
29	B 3LBC1C	On	3LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
30	B 3LBC1C-BR	On	3LBC1C	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
31	B 3LDPA-BR	On	3LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	100	65	ANSI-SYM
32	B 3LDPA-MAIN	On	3LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SGD	400	65	ANSI-SYM
33	B 3LDPB-BR	On	3LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	100	65	ANSI-SYM
34	B 3LDPB-MAIN	On	3LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SKH8	800	65	ANSI-SYM
35	B 4HAIA	On	4HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
36	B 4HAIA-BR1	On	4HAIA	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (1Pole)	20	65	ANSI-SYM
37	B 4HAIB	On	4HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
38	B 4HAIB-BR1	On	4HAIB	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (1Pole)	20	65	ANSI-SYM
39	B 4HAIB-BR2	On	4HAIB	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	90	0	ANSI-SYM
40	B 4HAIC	On	4HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
41	B 4HAIC-BR1	On	4HAIC	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	15	65	ANSI-SYM
42	B 4HAIC-BR2	On	4HAIC	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (1Pole)	20	0	ANSI-SYM
43	B 4HAID	On	4HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
44	B 4HAID-BR	On	4HAID	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	15	65	ANSI-SYM
45	B 4HAID-BR2	On	4HAID	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (1Pole)	20	0	ANSI-SYM
46	B 4HAIE	On	4HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
47	B 4HAIE-BR1	On	4HAIE	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	15	65	ANSI-SYM
48	B 4HAIE-BR2	On	4HAIE	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (1Pole)	20	0	ANSI-SYM
49	B 4HAIF	On	4HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
50	B 4HAIF-BR	On	4HAIF	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	15	65	ANSI-SYM
51	B 4HAIF-BR2	On	4HAIF	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (1Pole)	20	0	ANSI-SYM
52	B 4HAIG	On	4HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
53	B 4HAIG-BR	On	4HAIG	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (1Pole)	20	0	ANSI-SYM
54	B 4HAIG-BR2	On	4HAIG	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	15	65	ANSI-SYM
55	B 4HAIG-MAIN	On	4HAIG	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
56	B 4HAIH	On	4HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
57	B 4HAIH-BR	On	4HAIH	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
58	B 4HDPA	On	MDA	0.48	Feeder	ICCB	Breaker Onl	GE	Power Break II	SS-16	1600	65	ANSI-SYM
59	B 4HDPA-MAIN	On	4HDPA	0.48	Feeder	ICCB	Breaker Onl	GE	Power Break II	SS-16	1600	65	ANSI-SYM
60	B 4HDPA-SPA	On	4HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	125	65	ANSI-SYM
61	B 4HDPB	On	MDA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SKL8	800	65	ANSI-SYM
62	B 4HDPB-MAIN	On	4HDPB	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SKL8	800	65	ANSI-SYM
63	B 4LA1A	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
64	B 4LA1A-BR	On	4LA1A	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	20	65	ANSI-SYM
65	B 4LA1C	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
66	B 4LA1C-BR	On	4LA1C	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	20	65	ANSI-SYM
67	B 4LAC1A	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
68	B 4LAC1A-BR	On	4LAC1A	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	20	65	ANSI-SYM
69	B 4LAC1B	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
70	B 4LAC1B-BR	On	4LAC1B	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	20	65	ANSI-SYM
71	B 4LAIKA	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
72	B 4LAIKA-BR	On	4LAIKA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	15	22	ANSI-SYM
73	B 4LAIKB	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
74	B 4LAIKB-BR	On	4LAIKB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	15	22	ANSI-SYM
75	B 4LAIKC	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
76	B 4LAIKC-BR	On	4LAIKC	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
77	B 4LAIKD	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Normal State	Trip	Trip Mfr	Trip Type	Trip Style	Sensor/Frame	Plug/Tap/Trip	LTPU Setting	LTPU Mult	LTPU (A)	LTD Band
1	B 3HA1A	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
2	B 3HA1A-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
3	B 3HAIB	Closed	SST	GE	Spectra RMS	MCCB SG	400	400	1	1	400	Fixed
4	B 3HAIB-BR	Closed	SST	GE	Spectra RMS	MCCB SE	30A (15AT)	15	1	1	15	Fixed
5	B 3HAIC	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
6	B 3HAIC-BR1	Closed	TMGN	GE	E150	THED (1Pole)	150A(15-30AT)	20				
7	B 3HAIC-BR2	Closed	SST	GE	Spectra RMS	MCCB SE	30A (15AT)	15	1	1	15	Fixed
8	B 3HAID	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
9	B 3HAID-BR1	Closed	TMGN	GE	E150	THED (1Pole)	150A(15-30AT)	20				
10	B 3HAID-BR2	Closed	TMGN	GE	Record Plus	FBN	100A (35AT)	35				
11	B 3HAID-BR3	Closed	SST	GE	Spectra RMS	MCCB SE	30A (15AT)	15	1	1	15	Fixed
12	B 3HDPA	Closed	SST	GE	Power+	ICCB	1600	1600	1		1600	2
13	B 3HDPA-MAIN	Closed	SST	GE	Power+	ICCB	1600	1600	1		1600	1
14	B 3HDPA-SPA	Closed	TMGN	GE	Record Plus	FBH	100A (70AT)	70				
15	B 3LA1A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
16	B 3LA1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
17	B 3LAC1A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
18	B 3LAC1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
19	B 3LAC1B	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
20	B 3LAC1B-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
21	B 3LB1A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
22	B 3LB1A-BR	Closed	TMGN	GE	Q Line	THQB	100(15-20AT)	20				
23	B 3LB1B	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
24	B 3LB1B-BR	Closed	TMGN	GE	Q Line	THQB	100(15-20AT)	20				
25	B 3LBC1A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
26	B 3LBC1A-BR	Closed	TMGN	GE	Q Line	THQB	100(15-20AT)	20				
27	B 3LBC1B	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
28	B 3LBC1B-BR	Closed	TMGN	GE	Q Line	THQB	100(15-20AT)	20				
29	B 3LBC1C	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
30	B 3LBC1C-BR	Closed	TMGN	GE	Q Line	THQB	100(15-20AT)	20				
31	B 3LDPA-BR	Closed	TMGN	GE	E150	TEY	100A (100A)	100				
32	B 3LDPA-MAIN	Closed	SST	GE	Spectra RMS	MCCB SG	400	400	1	1	400	Fixed
33	B 3LDPB-BR	Closed	TMGN	GE	E150	TEY	100A (100A)	100				
34	B 3LDPB-MAIN	Closed	SST	GE	Spectra RMS	MCCB SK	800	800	1		800	Fixed
35	B 4HAIA	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
36	B 4HAIA-BR1	Closed	TMGN	GE	E150	THED (1Pole)	150A(15-30AT)	20				
37	B 4HAIB	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
38	B 4HAIB-BR1	Closed	TMGN	GE	E150	THED (1Pole)	150A(15-30AT)	20				
39	B 4HAIB-BR2	Closed	SST	GE	Spectra RMS	MCCB SE	100A (90AT)	90	1	1	90	Fixed
40	B 4HAIC	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
41	B 4HAIC-BR1	Closed	SST	GE	Spectra RMS	MCCB SE	30A (15AT)	15	1	1	15	Fixed
42	B 4HAIC-BR2	Closed	TMGN	GE	E150	THED (1Pole)	150A(15-30AT)	20				
43	B 4HAID	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
44	B 4HAID-BR	Closed	SST	GE	Spectra RMS	MCCB SE	30A (15AT)	15	1	1	15	Fixed
45	B 4HAID-BR2	Closed	TMGN	GE	E150	THED (1Pole)	150A(15-30AT)	20				
46	B 4HAIE	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
47	B 4HAIE-BR1	Closed	SST	GE	Spectra RMS	MCCB SE	30A (15AT)	15	1	1	15	Fixed
48	B 4HAIE-BR2	Closed	TMGN	GE	E150	THED (1Pole)	150A(15-30AT)	20				
49	B 4HAIF	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
50	B 4HAIF-BR	Closed	SST	GE	Spectra RMS	MCCB SE	30A (15AT)	15	1	1	15	Fixed
51	B 4HAIF-BR2	Closed	TMGN	GE	E150	THED (1Pole)	150A(15-30AT)	20				
52	B 4HAIG	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
53	B 4HAIG-BR	Closed	TMGN	GE	E150	THED (1Pole)	150A(15-30AT)	20				
54	B 4HAIG-BR2	Closed	TMGN	GE	Record Plus	FBN	100A (15AT)	15				
55	B 4HAIG-MAIN	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
56	B 4HAIH	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
57	B 4HAIH-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
58	B 4HDPA	Closed	SST	GE	Power+	ICCB	1600	1600	1		1600	2
59	B 4HDPA-MAIN	Closed	SST	GE	Power+	ICCB	1600	1600	1		1600	3
60	B 4HDPA-SPA	Closed	SST	GE	Spectra RMS	MCCB SE	150A (125AT)	125	1	1	125	Fixed
61	B 4HDPB	Closed	SST	GE	Spectra RMS	MCCB SK	800	800	1		800	Fixed
62	B 4HDPB-MAIN	Closed	SST	GE	Spectra RMS	MCCB SK	800	800	1		800	Fixed
63	B 4LA1A	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
64	B 4LA1A-BR	Closed	TMGN	GE	E150	TEY	100A (20A)	20				
65	B 4LA1C	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
66	B 4LA1C-BR	Closed	TMGN	GE	E150	TEY	100A (20A)	20				
67	B 4LAC1A	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
68	B 4LAC1A-BR	Closed	TMGN	GE	E150	TEY	100A (20A)	20				
69	B 4LAC1B	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
70	B 4LAC1B-BR	Closed	TMGN	GE	E150	TEY	100A (20A)	20				
71	B 4LAIKA	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
72	B 4LAIKA-BR	Closed	TMGN	GE	Q Line	THHQB	100A (15-50AT)	15				
73	B 4LAIKB	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
74	B 4LAIKB-BR	Closed	TMGN	GE	Q Line	THHQB	100A (15-50AT)	15				
75	B 4LAIKC	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
76	B 4LAIKC-BR	Closed	TMGN	GE	Q Line	THHQB	100A (15-50AT)	20				
77	B 4LAIKD	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed

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Comment: Equipment Database

LV Breakers

	ID Name	STPU Setting	STPU Band	STPU I2T	STPU (A)	Inst Setting	Inst Override	Inst (A)	Gnd Pickup	Gnd Delay	Gnd I2T	Gnd (A)	Fuse Mfr	Fuse Type
1	B 3HA1A	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
2	B 3HA1A-BR												<None>	<None>
3	B 3HA1B	4	Fixed	In	1200	4	Pickup	2400			Out		<None>	<None>
4	B 3HA1B-BR	Max	Fixed	In	90	Max	Pickup	187.5			Out		<None>	<None>
5	B 3HA1C	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
6	B 3HA1C-BR1												<None>	<None>
7	B 3HA1C-BR2	Max	Fixed	In	90	Max	Pickup	187.5			Out		<None>	<None>
8	B 3HA1D	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
9	B 3HA1D-BR1												<None>	<None>
10	B 3HA1D-BR2												<None>	<None>
11	B 3HA1D-BR3	Max	Fixed	In	90	Max	Pickup	187.5			Out		<None>	<None>
12	B 3HDPA			Out		13	Pickup	20800			Out		<None>	<None>
13	B 3HDPA-MAIN			Out		7	Pickup	11200			Out		<None>	<None>
14	B 3HDPA-SPA												<None>	<None>
15	B 3LA1A												<None>	<None>
16	B 3LA1A-BR												<None>	<None>
17	B 3LAC1A												<None>	<None>
18	B 3LAC1A-BR												<None>	<None>
19	B 3LAC1B												<None>	<None>
20	B 3LAC1B-BR												<None>	<None>
21	B 3LB1A												<None>	<None>
22	B 3LB1A-BR												<None>	<None>
23	B 3LB1B												<None>	<None>
24	B 3LB1B-BR												<None>	<None>
25	B 3LBC1A												<None>	<None>
26	B 3LBC1A-BR												<None>	<None>
27	B 3LBC1B												<None>	<None>
28	B 3LBC1B-BR												<None>	<None>
29	B 3LBC1C												<None>	<None>
30	B 3LBC1C-BR												<None>	<None>
31	B 3LDPA-BR												<None>	<None>
32	B 3LDPA-MAIN	2	Fixed	In	760	2	Pickup	1540			Out		<None>	<None>
33	B 3LDPB-BR												<None>	<None>
34	B 3LDPB-MAIN	2	Fixed	In	1440	2	Pickup	3080			Out		<None>	<None>
35	B 4HA1A	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
36	B 4HA1A-BR1												<None>	<None>
37	B 4HA1B	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
38	B 4HA1B-BR1												<None>	<None>
39	B 4HA1B-BR2	Max	Fixed	In	585	Max	Pickup	1125			Out		<None>	<None>
40	B 4HA1C	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
41	B 4HA1C-BR1	Max	Fixed	In	90	Max	Pickup	187.5			Out		<None>	<None>
42	B 4HA1C-BR2												<None>	<None>
43	B 4HA1D	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
44	B 4HA1D-BR	Max	Fixed	In	90	Max	Pickup	187.5			Out		<None>	<None>
45	B 4HA1D-BR2												<None>	<None>
46	B 4HA1E	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
47	B 4HA1E-BR1	Max	Fixed	In	90	Max	Pickup	187.5			Out		<None>	<None>
48	B 4HA1E-BR2												<None>	<None>
49	B 4HA1F	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
50	B 4HA1F-BR	Max	Fixed	In	90	Max	Pickup	187.5			Out		<None>	<None>
51	B 4HA1F-BR2												<None>	<None>
52	B 4HA1G	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
53	B 4HA1G-BR												<None>	<None>
54	B 4HA1G-BR2												<None>	<None>
55	B 4HA1G-MAIN	3	Fixed	In	562.5	3	Pickup	1080			Out		<None>	<None>
56	B 4HA1H	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
57	B 4HA1H-BR												<None>	<None>
58	B 4HDPA			Out		7	Pickup	11200			Out		<None>	<None>
59	B 4HDPA-MAIN			Out		13	Pickup	20800			Out		<None>	<None>
60	B 4HDPA-SPA	Min	Fixed	In	187.5	Min	Pickup	362.5			Out		<None>	<None>
61	B 4HDPB	3	Fixed	In	1960	3	Pickup	3872			Out		<None>	<None>
62	B 4HDPB-MAIN	Max	Fixed	In	4000	Max	Pickup	8144			Out		<None>	<None>
63	B 4LA1A	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
64	B 4LA1A-BR												<None>	<None>
65	B 4LA1C	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
66	B 4LA1C-BR												<None>	<None>
67	B 4LAC1A	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
68	B 4LAC1A-BR												<None>	<None>
69	B 4LAC1B	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
70	B 4LAC1B-BR												<None>	<None>
71	B 4LA1KA	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
72	B 4LA1KA-BR												<None>	<None>
73	B 4LA1KB	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
74	B 4LA1KB-BR												<None>	<None>
75	B 4LA1KC	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
76	B 4LA1KC-BR												<None>	<None>
77	B 4LA1KD	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Fuse Style	Fuse Size	Mtr O/L Mfr	Mtr O/L Type	Mtr O/L Style	Motor FLA	Service Factor	PCC kVA Demand	PCC Isc/Iload	Comment
1	B 3HA1A	<None>	<None>	<None>	<None>	<None>		1			
2	B 3HA1A-BR	<None>	<None>	<None>	<None>	<None>		1			
3	B 3HAIB	<None>	<None>	<None>	<None>	<None>		1			
4	B 3HAIB-BR	<None>	<None>	<None>	<None>	<None>		1			
5	B 3HAIC	<None>	<None>	<None>	<None>	<None>		1			
6	B 3HAIC-BR1	<None>	<None>	<None>	<None>	<None>		1			
7	B 3HAIC-BR2	<None>	<None>	<None>	<None>	<None>		1			
8	B 3HAID	<None>	<None>	<None>	<None>	<None>		1			
9	B 3HAID-BR1	<None>	<None>	<None>	<None>	<None>		1			
10	B 3HAID-BR2	<None>	<None>	<None>	<None>	<None>		1			
11	B 3HAID-BR3	<None>	<None>	<None>	<None>	<None>		1			
12	B 3HDPA	<None>	<None>	<None>	<None>	<None>		1			
13	B 3HDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			LIT only
14	B 3HDPA-SPA	<None>	<None>	<None>	<None>	<None>		1			
15	B 3LA1A	<None>	<None>	<None>	<None>	<None>		1			
16	B 3LA1A-BR	<None>	<None>	<None>	<None>	<None>		1			
17	B 3LAC1A	<None>	<None>	<None>	<None>	<None>		1			
18	B 3LAC1A-BR	<None>	<None>	<None>	<None>	<None>		1			
19	B 3LAC1B	<None>	<None>	<None>	<None>	<None>		1			
20	B 3LAC1B-BR	<None>	<None>	<None>	<None>	<None>		1			
21	B 3LB1A	<None>	<None>	<None>	<None>	<None>		1			
22	B 3LB1A-BR	<None>	<None>	<None>	<None>	<None>		1			
23	B 3LB1B	<None>	<None>	<None>	<None>	<None>		1			
24	B 3LB1B-BR	<None>	<None>	<None>	<None>	<None>		1			
25	B 3LBC1A	<None>	<None>	<None>	<None>	<None>		1			
26	B 3LBC1A-BR	<None>	<None>	<None>	<None>	<None>		1			
27	B 3LBC1B	<None>	<None>	<None>	<None>	<None>		1			
28	B 3LBC1B-BR	<None>	<None>	<None>	<None>	<None>		1			
29	B 3LBC1C	<None>	<None>	<None>	<None>	<None>		1			
30	B 3LBC1C-BR	<None>	<None>	<None>	<None>	<None>		1			
31	B 3LDPA-BR	<None>	<None>	<None>	<None>	<None>		1			
32	B 3LDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			
33	B 3LDPB-BR	<None>	<None>	<None>	<None>	<None>		1			
34	B 3LDPB-MAIN	<None>	<None>	<None>	<None>	<None>		1			
35	B 4HAIA	<None>	<None>	<None>	<None>	<None>		1			
36	B 4HAIA-BR1	<None>	<None>	<None>	<None>	<None>		1			
37	B 4HAIB	<None>	<None>	<None>	<None>	<None>		1			
38	B 4HAIB-BR1	<None>	<None>	<None>	<None>	<None>		1			
39	B 4HAIB-BR2	<None>	<None>	<None>	<None>	<None>		1			
40	B 4HAIC	<None>	<None>	<None>	<None>	<None>		1			
41	B 4HAIC-BR1	<None>	<None>	<None>	<None>	<None>		1			
42	B 4HAIC-BR2	<None>	<None>	<None>	<None>	<None>		1			
43	B 4HAID	<None>	<None>	<None>	<None>	<None>		1			
44	B 4HAID-BR	<None>	<None>	<None>	<None>	<None>		1			
45	B 4HAID-BR2	<None>	<None>	<None>	<None>	<None>		1			
46	B 4HAIE	<None>	<None>	<None>	<None>	<None>		1			
47	B 4HAIE-BR1	<None>	<None>	<None>	<None>	<None>		1			
48	B 4HAIE-BR2	<None>	<None>	<None>	<None>	<None>		1			
49	B 4HAIF	<None>	<None>	<None>	<None>	<None>		1			
50	B 4HAIF-BR	<None>	<None>	<None>	<None>	<None>		1			
51	B 4HAIF-BR2	<None>	<None>	<None>	<None>	<None>		1			
52	B 4HAIG	<None>	<None>	<None>	<None>	<None>		1			
53	B 4HAIG-BR	<None>	<None>	<None>	<None>	<None>		1			
54	B 4HAIG-BR2	<None>	<None>	<None>	<None>	<None>		1			
55	B 4HAIG-MAIN	<None>	<None>	<None>	<None>	<None>		1			
56	B 4HAIH	<None>	<None>	<None>	<None>	<None>		1			
57	B 4HAIH-BR	<None>	<None>	<None>	<None>	<None>		1			
58	B 4HDPA	<None>	<None>	<None>	<None>	<None>		1			
59	B 4HDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			LIT Only
60	B 4HDPA-SPA	<None>	<None>	<None>	<None>	<None>		1			
61	B 4HDPB	<None>	<None>	<None>	<None>	<None>		1			
62	B 4HDPB-MAIN	<None>	<None>	<None>	<None>	<None>		1			
63	B 4LA1A	<None>	<None>	<None>	<None>	<None>		1			
64	B 4LA1A-BR	<None>	<None>	<None>	<None>	<None>		1			
65	B 4LA1C	<None>	<None>	<None>	<None>	<None>		1			
66	B 4LA1C-BR	<None>	<None>	<None>	<None>	<None>		1			
67	B 4LAC1A	<None>	<None>	<None>	<None>	<None>		1			
68	B 4LAC1A-BR	<None>	<None>	<None>	<None>	<None>		1			
69	B 4LAC1B	<None>	<None>	<None>	<None>	<None>		1			
70	B 4LAC1B-BR	<None>	<None>	<None>	<None>	<None>		1			
71	B 4LAIKA	<None>	<None>	<None>	<None>	<None>		1			
72	B 4LAIKA-BR	<None>	<None>	<None>	<None>	<None>		1			
73	B 4LAIKB	<None>	<None>	<None>	<None>	<None>		1			
74	B 4LAIKB-BR	<None>	<None>	<None>	<None>	<None>		1			
75	B 4LAIKC	<None>	<None>	<None>	<None>	<None>		1			
76	B 4LAIKC-BR	<None>	<None>	<None>	<None>	<None>		1			
77	B 4LAIKD	<None>	<None>	<None>	<None>	<None>		1			

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Status	On Bus	Base kV	Conn Type	Class	Options	Breaker Mfr	Breaker Type	Breaker Style	Cont Current (A)	SC Int kA	SC Test Std
78	B 4LAIKD-BR	On	4LAIKD	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	22	ANSI-SYM
79	B 4LAIKE	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	100	65	ANSI-SYM
80	B 4LAIKE-BR	On	4LAIKE	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
81	B 4LAIKF	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	100	65	ANSI-SYM
82	B 4LAIKF-BR	On	4LAIKF	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
83	B 4LBCIB	On	4LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	22	ANSI-SYM
84	B 4LBCIB-BR	On	4LBCIB	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	20	65	ANSI-SYM
85	B 4LBIB	On	4LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	22	ANSI-SYM
86	B 4LBIB-BR	On	4LBIB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	22	ANSI-SYM
87	B 4LBIB-MAIN	On	4LBIB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
88	B 4LBID	On	4LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	22	ANSI-SYM
89	B 4LBID-BR	On	4LBID	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	22	ANSI-SYM
90	B 4LBID-MAIN	On	4LBID	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
91	B 4LBIE	On	4LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	22	ANSI-SYM
92	B 4LBIE-BR	On	4LBIE	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	20	65	ANSI-SYM
93	B 4LDPA-MAIN	On	4LDPA	0.208	Feeder	ICCB	Breaker Onl	GE	Power Break II	SS-16	1600	85	ANSI-SYM
94	B 4LDPB-MAIN	On	4LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SKH8	800	65	ANSI-SYM
95	B 6HAIA	On	6HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
96	B 6HAIA-BR	On	6HAIA	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
97	B 6HAIB	On	6HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
98	B 6HAIB-BR1	On	6HAIB	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
99	B 6HAIB-BR2	On	6HAIB	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	15	65	ANSI-SYM
100	B 6HAIC	On	6HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
101	B 6HAIC-BR1	On	6HAIC	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
102	B 6HAIC-BR2	On	6HAIC	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	15	65	ANSI-SYM
103	B 6HDPA	On	MDA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SKL12	1000	65	ANSI-SYM
104	B 6HDPA-MAIN	On	6HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SKL12	1000	65	ANSI-SYM
105	B 6LA1A-MAIN	On	6LAIA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	TQD	225	10	ANSI-SYM
106	B 6LA1A-BR	On	6LAIA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
107	B 6LAC1A-BR	On	6LAC1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
108	B 6LAC1A-MAI	On	6LAC1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	TQD	225	10	ANSI-SYM
109	B 8HA2A	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	400	65	ANSI-SYM
110	B 8HA2A-BR	On	8HA2A	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	20	65	ANSI-SYM
111	B 8HA2B	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
112	B 8HA2B-BR1	On	8HA2B	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	15	65	ANSI-SYM
113	B 8HA2B-BR2	On	8HA2B	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (1Pole)	20	0	ANSI-SYM
114	B 8LA2A	On	8LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
115	B 8LA2A-BR	On	8LA2A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
116	B 8LAC2A	On	8LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
117	B 8LAC2A-BR	On	8LAC2A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
118	B 8LAC2B	On	8LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
119	B 8LAC2B-BR	On	8LAC2B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
120	B 8LB2A	On	8LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
121	B 8LB2A-BR	On	8LB2A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
122	B 8LBC2A	On	8LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
123	B 8LBC2A-BR	On	8LBC2A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
124	B 8LBC2B	On	8LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
125	B 8LBC2B-BR	On	8LBC2B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
126	B 8LDPA-MAIN	On	8LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SGD	400	65	ANSI-SYM
127	B 8LDPB-BR	On	8LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	100	65	ANSI-SYM
128	B 8LDPB-MAIN	On	8LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SGD	400	65	ANSI-SYM
129	B BH E-146	On	4LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	125	65	ANSI-SYM
130	B CA	On	4HDPB	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	70	65	ANSI-SYM
131	B ELEV	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBH	100	100	ANSI-SYM
132	B MDA-MAIN	On	MDA	0.48	Feeder	ICCB	Breaker Onl	GE	Power Break II	SS-40	4000	100	ANSI-SYM
133	B T3DP1	On	3HA1A	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	125	65	ANSI-SYM
134	B T3LDPA	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	175	65	ANSI-SYM
135	B T3LDPB	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	350	65	ANSI-SYM
136	B T4DP1	On	4HAIH	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	125	65	ANSI-SYM
137	B T4LDPA	On	4HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SKL8	800	65	ANSI-SYM
138	B T4LDPB	On	4HDPB	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	350	65	ANSI-SYM
139	B T8LDPA	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	175	65	ANSI-SYM
140	B T8LDPB	On	3HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	175	65	ANSI-SYM
141	B TX T6LAC1A	On	6HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	125	65	ANSI-SYM
142	B TX T6LAIA	On	6HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	125	65	ANSI-SYM

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Normal State	Trip	Trip Mfr	Trip Type	Trip Style	Sensor/Frame	Plug/Tap/Trip	LTPU Setting	LTPU Mult	LTPU (A)	LTD Band
78	B 4LAIK-DR	Closed	TMGN	GE	Q Line	THHQB	100A (15-50AT)	20				
79	B 4LAIKE	Closed	TMGN	GE	E150	TEY	100A (100A)	100				
80	B 4LAIKE-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
81	B 4LAIKF	Closed	TMGN	GE	E150	TEY	100A (100A)	100				
82	B 4LAIKF-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
83	B 4LBCIB	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
84	B 4LBCIB-BR	Closed	TMGN	GE	E150	TEY	100A (20A)	20				
85	B 4LBIB	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
86	B 4LBIB-BR	Closed	TMGN	GE	Q Line	THHQB	100A (15-50AT)	20				
87	B 4LBIB-MAIN	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
88	B 4LBID	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
89	B 4LBID-BR	Closed	TMGN	GE	Q Line	THHQB	100A (15-50AT)	20				
90	B 4LBID-MAIN	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
91	B 4LBIE	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
92	B 4LBIE-BR	Closed	TMGN	GE	E150	TEY	100A (20A)	20				
93	B 4LDPA-MAIN	Closed	SST	GE	Power+	ICCB	1600	1600	1		1600	1
94	B 4LDPB-MAIN	Closed	SST	GE	Spectra RMS	MCCB SK	800	800	1		800	Fixed
95	B 6HAIA	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
96	B 6HAIA-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
97	B 6HAIB	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
98	B 6HAIB-BR1	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
99	B 6HAIB-BR2	Closed	TMGN	GE	Record Plus	FBN	100A (15AT)	15				
100	B 6HAIC	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
101	B 6HAIC-BR1	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
102	B 6HAIC-BR2	Closed	TMGN	GE	Record Plus	FBN	100A (15AT)	15				
103	B 6HDPA	Closed	SST	GE	Spectra RMS	MCCB SK	1200	1000	1		1000	Fixed
104	B 6HDPA-MAIN	Closed	SST	GE	Spectra RMS	MCCB SK	1200	1000	1		1000	Fixed
105	B 6LA1A -MAIN	Closed	TMGN	GE	Q Line	TQD	225A(100-225AT)	225				
106	B 6LA1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
107	B 6LAC1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
108	B 6LAC1A-MAI	Closed	TMGN	GE	Q Line	TQD	225A(100-225AT)	225				
109	B 8HA2A	Closed	SST	GE	Spectra RMS	MCCB SG	400	400	1	1	400	Fixed
110	B 8HA2A-BR	Closed	TMGN	GE	Record Plus	FBN	100A (20AT)	20				
111	B 8HA2B	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
112	B 8HA2B-BR1	Closed	TMGN	GE	Record Plus	FBN	100A (15AT)	15				
113	B 8HA2B-BR2	Closed	TMGN	GE	E150	THED (1Pole)	150A(15-30AT)	20				
114	B 8LA2A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
115	B 8LA2A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
116	B 8LAC2A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
117	B 8LAC2A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
118	B 8LAC2B	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
119	B 8LAC2B-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
120	B 8LB2A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
121	B 8LB2A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
122	B 8LBC2A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
123	B 8LBC2A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
124	B 8LBC2B	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
125	B 8LBC2B-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
126	B 8LDPB-MAIN	Closed	SST	GE	Spectra RMS	MCCB SG	400	400	1	1	400	Fixed
127	B 8LDPB-BR	Closed	TMGN	GE	E150	TEY	100A (100A)	100				
128	B 8LDPB-MAIN	Closed	SST	GE	Spectra RMS	MCCB SG	400	400	1	1	400	Fixed
129	B BH E-146	Closed	SST	GE	Spectra RMS	MCCB SF	250	125	1		125	Fixed
130	B CA	Closed	TMGN	GE	Record Plus	FBN	100A (70AT)	70				
131	B ELEV	Closed	TMGN	GE	Record Plus	FBH	100A (100AT)	100				
132	B MDA-MAIN	Closed	SST	GE	Power+	ICCB	4000	4000	1		4000	2
133	B T3DP1	Closed	SST	GE	Spectra RMS	MCCB SE	150A (125AT)	125	1	1	125	Fixed
134	B T3LDBA	Closed	SST	GE	Spectra RMS	MCCB SF	250	175	1		175	Fixed
135	B T3LDBP	Closed	SST	GE	Spectra RMS	MCCB SG	400	350	1	1	350	Fixed
136	B T4DP1	Closed	SST	GE	Spectra RMS	MCCB SE	150A (125AT)	125	1	1	125	Fixed
137	B T4LDBA	Closed	SST	GE	Spectra RMS	MCCB SK	800	800	1		800	Fixed
138	B T4LDBP	Closed	SST	GE	Spectra RMS	MCCB SF	400	350	1	1	350	Fixed
139	B T8LDBA	Closed	SST	GE	Spectra RMS	MCCB SF	250	175	1		175	Fixed
140	B T8LDBP	Closed	SST	GE	Spectra RMS	MCCB SF	250	175	1		175	Fixed
141	B TX T6LAC1A	Closed	SST	GE	Spectra RMS	MCCB SE	150A (125AT)	125	1	1	125	Fixed
142	B TX T6LAIA	Closed	SST	GE	Spectra RMS	MCCB SE	150A (125AT)	125	1	1	125	Fixed

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	STPU Setting	STPU Band	STPU I2T	STPU (A)	Inst Setting	Inst Override	Inst (A)	Gnd Pickup	Gnd Delay	Gnd I2T	Gnd (A)	Fuse Mfr	Fuse Type
78	B 4LAIKD-BR												<None>	<None>
79	B 4LAIKE												<None>	<None>
80	B 4LAIKE-BR												<None>	<None>
81	B 4LAIKF												<None>	<None>
82	B 4LAIKF-BR												<None>	<None>
83	B 4LBCIB	5	Fixed	In	855	5	Pickup	1755			Out		<None>	<None>
84	B 4LBCIB-BR												<None>	<None>
85	B 4LBIB	5	Fixed	In	855	5	Pickup	1755			Out		<None>	<None>
86	B 4LBIB-BR												<None>	<None>
87	B 4LBIB-MAIN												<None>	<None>
88	B 4LBID	5	Fixed	In	855	5	Pickup	1755			Out		<None>	<None>
89	B 4LBID-BR												<None>	<None>
90	B 4LBID-MAIN												<None>	<None>
91	B 4LBIE	5	Fixed	In	855	5	Pickup	1755			Out		<None>	<None>
92	B 4LBIE-BR												<None>	<None>
93	B 4LDPA-MAIN			Out		5	Pickup	8000			Out		<None>	<None>
94	B 4LDPB-MAIN	2	Fixed	In	1440	2	Pickup	3080			Out		<None>	<None>
95	B 6HAIA	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
96	B 6HAIA-BR												<None>	<None>
97	B 6HAIB	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
98	B 6HAIB-BR1												<None>	<None>
99	B 6HAIB-BR2												<None>	<None>
100	B 6HAIC	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
101	B 6HAIC-BR1												<None>	<None>
102	B 6HAIC-BR2												<None>	<None>
103	B 6HDPA	Max	Fixed	In	5000	Max	Pickup	10180			Out		<None>	<None>
104	B 6HDPA-MAIN	2	Fixed	In	1800	2	Pickup	3850			Out		<None>	<None>
105	B 6LA1A -MAIN												<None>	<None>
106	B 6LA1A-BR												<None>	<None>
107	B 6LAC1A-BR												<None>	<None>
108	B 6LAC1A-MAI												<None>	<None>
109	B 8HA2A	4	Fixed	In	1200	4	Pickup	2400			Out		<None>	<None>
110	B 8HA2A-BR												<None>	<None>
111	B 8HA2B	4	Fixed	In	675	4	Pickup	1350			Out		<None>	<None>
112	B 8HA2B-BR1												<None>	<None>
113	B 8HA2B-BR2												<None>	<None>
114	B 8LA2A												<None>	<None>
115	B 8LA2A-BR												<None>	<None>
116	B 8LAC2A												<None>	<None>
117	B 8LAC2A-BR												<None>	<None>
118	B 8LAC2B												<None>	<None>
119	B 8LAC2B-BR												<None>	<None>
120	B 8LB2A												<None>	<None>
121	B 8LB2A-BR												<None>	<None>
122	B 8LBC2A												<None>	<None>
123	B 8LBC2A-BR												<None>	<None>
124	B 8LBC2B												<None>	<None>
125	B 8LBC2B-BR												<None>	<None>
126	B 8LDPA-MAIN	2	Fixed	In	760	2	Pickup	1540			Out		<None>	<None>
127	B 8LDPB-BR												<None>	<None>
128	B 8LDPB-MAIN	2	Fixed	In	760	2	Pickup	1540			Out		<None>	<None>
129	B BH E-146	Max	Fixed	In	625	Max	Pickup	1250			Out		<None>	<None>
130	B CA												<None>	<None>
131	B ELEV												<None>	<None>
132	B MDA-MAIN			Out		9	Pickup	36000	0.2	Min	Out	800	<None>	<None>
133	B T3DP1	4	Fixed	In	375	4	Pickup	737.5			Out		<None>	<None>
134	B T3LDPA	Max	Fixed	In	875	Max	Pickup	1750			Out		<None>	<None>
135	B T3LDPB	Max	Fixed	In	1750	Max	Pickup	3542			Out		<None>	<None>
136	B T4DP1	6	Fixed	In	637.5	6	Pickup	1237.5			Out		<None>	<None>
137	B T4LDPA	Max	Fixed	In	4000	Max	Pickup	8144			Out		<None>	<None>
138	B T4LDPB	Max	Fixed	In	1750	Max	Pickup	3542			Out		<None>	<None>
139	B T8LDPA	Max	Fixed	In	875	Max	Pickup	1750			Out		<None>	<None>
140	B T8LDPB	Max	Fixed	In	875	Max	Pickup	1750			Out		<None>	<None>
141	B TX T6LAC1A	Max	Fixed	In	875	Max	Pickup	1562.5			Out		<None>	<None>
142	B TX T6LAIA	Max	Fixed	In	875	Max	Pickup	1562.5			Out		<None>	<None>

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Fuse Style	Fuse Size	Mtr O/L Mfr	Mtr O/L Type	Mtr O/L Style	Motor FLA	Service Factor	PCC kVA Demand	PCC Isc/Iload	Comment
78	B 4LAIKD-BR	<None>	<None>	<None>	<None>	<None>		1			
79	B 4LAIKE	<None>	<None>	<None>	<None>	<None>		1			
80	B 4LAIKE-BR	<None>	<None>	<None>	<None>	<None>		1			
81	B 4LAIKF	<None>	<None>	<None>	<None>	<None>		1			
82	B 4LAIKF-BR	<None>	<None>	<None>	<None>	<None>		1			
83	B 4LBCIB	<None>	<None>	<None>	<None>	<None>		1			
84	B 4LBCIB-BR	<None>	<None>	<None>	<None>	<None>		1			
85	B 4LBIB	<None>	<None>	<None>	<None>	<None>		1			
86	B 4LBIB-BR	<None>	<None>	<None>	<None>	<None>		1			
87	B 4LBIB-MAIN	<None>	<None>	<None>	<None>	<None>		1			
88	B 4LBID	<None>	<None>	<None>	<None>	<None>		1			
89	B 4LBID-BR	<None>	<None>	<None>	<None>	<None>		1			
90	B 4LBID-MAIN	<None>	<None>	<None>	<None>	<None>		1			
91	B 4LBIE	<None>	<None>	<None>	<None>	<None>		1			
92	B 4LBIE-BR	<None>	<None>	<None>	<None>	<None>		1			
93	B 4LDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			LIT Only
94	B 4LDPB-MAIN	<None>	<None>	<None>	<None>	<None>		1			
95	B 6HAIA	<None>	<None>	<None>	<None>	<None>		1			
96	B 6HAIA-BR	<None>	<None>	<None>	<None>	<None>		1			
97	B 6HAIB	<None>	<None>	<None>	<None>	<None>		1			
98	B 6HAIB-BR1	<None>	<None>	<None>	<None>	<None>		1			
99	B 6HAIB-BR2	<None>	<None>	<None>	<None>	<None>		1			
100	B 6HAIC	<None>	<None>	<None>	<None>	<None>		1			
101	B 6HAIC-BR1	<None>	<None>	<None>	<None>	<None>		1			
102	B 6HAIC-BR2	<None>	<None>	<None>	<None>	<None>		1			
103	B 6HDPA	<None>	<None>	<None>	<None>	<None>		1			
104	B 6HDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			
105	B 6LA1A -MAIN	<None>	<None>	<None>	<None>	<None>		1			
106	B 6LA1A-BR	<None>	<None>	<None>	<None>	<None>		1			
107	B 6LAC1A-BR	<None>	<None>	<None>	<None>	<None>		1			
108	B 6LAC1A-MAI	<None>	<None>	<None>	<None>	<None>		1			
109	B 8HA2A	<None>	<None>	<None>	<None>	<None>		1			
110	B 8HA2A-BR	<None>	<None>	<None>	<None>	<None>		1			
111	B 8HA2B	<None>	<None>	<None>	<None>	<None>		1			
112	B 8HA2B-BR1	<None>	<None>	<None>	<None>	<None>		1			
113	B 8HA2B-BR2	<None>	<None>	<None>	<None>	<None>		1			
114	B 8LA2A	<None>	<None>	<None>	<None>	<None>		1			
115	B 8LA2A-BR	<None>	<None>	<None>	<None>	<None>		1			
116	B 8LAC2A	<None>	<None>	<None>	<None>	<None>		1			
117	B 8LAC2A-BR	<None>	<None>	<None>	<None>	<None>		1			
118	B 8LAC2B	<None>	<None>	<None>	<None>	<None>		1			
119	B 8LAC2B-BR	<None>	<None>	<None>	<None>	<None>		1			
120	B 8LB2A	<None>	<None>	<None>	<None>	<None>		1			
121	B 8LB2A-BR	<None>	<None>	<None>	<None>	<None>		1			
122	B 8LBC2A	<None>	<None>	<None>	<None>	<None>		1			
123	B 8LBC2A-BR	<None>	<None>	<None>	<None>	<None>		1			
124	B 8LBC2B	<None>	<None>	<None>	<None>	<None>		1			
125	B 8LBC2B-BR	<None>	<None>	<None>	<None>	<None>		1			
126	B 8LDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			
127	B 8LDPB-BR	<None>	<None>	<None>	<None>	<None>		1			
128	B 8LDPB-MAIN	<None>	<None>	<None>	<None>	<None>		1			
129	B BH E-146	<None>	<None>	<None>	<None>	<None>		1			
130	B CA	<None>	<None>	<None>	<None>	<None>		1			
131	B ELEV	<None>	<None>	<None>	<None>	<None>		1			
132	B MDA-MAIN	<None>	<None>	<None>	<None>	<None>		1			LIG with Power+ Prog
133	B T3DP1	<None>	<None>	<None>	<None>	<None>		1			
134	B T3LDPA	<None>	<None>	<None>	<None>	<None>		1			
135	B T3LDPB	<None>	<None>	<None>	<None>	<None>		1			
136	B T4DP1	<None>	<None>	<None>	<None>	<None>		1			
137	B T4LDPA	<None>	<None>	<None>	<None>	<None>		1			
138	B T4LDPB	<None>	<None>	<None>	<None>	<None>		1			
139	B T8LDPA	<None>	<None>	<None>	<None>	<None>		1			
140	B T8LDPB	<None>	<None>	<None>	<None>	<None>		1			
141	B TX T6LAC1A	<None>	<None>	<None>	<None>	<None>		1			
142	B TX T6LAIA	<None>	<None>	<None>	<None>	<None>		1			

Three Phase Bolted Fault
Equipment Duty Ratings

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

3HA1A Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3HA1A-BR	GE	/THED (277V)	ANSI-SYM	65.00			28.99 (-55.4%)		
B T3DP1	GE	/SEL	ANSI-SYM	65.00			28.99 (-55.4%)		
3HA1A		/	ANSI-SYM	42.00			28.99 (-31.0%)		

Equipment Duty Comparison Report For Bus:

3HA1B Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3HA1B-BR	GE	/SEL	ANSI-SYM	65.00			29.62 (-54.4%)		
3HA1B		/	ANSI-SYM	42.00			29.62 (-29.5%)		

Equipment Duty Comparison Report For Bus:

3HA1C Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3HA1C-BR2	GE	/SEL	ANSI-SYM	65.00			28.81 (-55.7%)		
3HA1C		/	ANSI-SYM	42.00			28.81 (-31.4%)		

Equipment Duty Comparison Report For Bus:

3HA1D Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3HA1D-BR2	GE	/FBN	ANSI-SYM	65.00			28.99 (-55.4%)		
B 3HA1D-BR3	GE	/SEL	ANSI-SYM	65.00			28.99 (-55.4%)		
3HA1D		/	ANSI-SYM	42.00			28.99 (-31.0%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

3HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3HDPA-MAIN	GE /SS-16	ANSI-SYM	65.00			32.67 (-49.7%)		
B 3HA1A	GE /SFL	ANSI-SYM	65.00			32.86 (-49.5%)		
B 3HAIB	GE /SGL4	ANSI-SYM	65.00			32.86 (-49.5%)		
B 8HA2A	GE /SGL4	ANSI-SYM	65.00			32.86 (-49.5%)		
B 8HA2B	GE /SFL	ANSI-SYM	65.00			32.86 (-49.5%)		
B T8LDPA	GE /SFL	ANSI-SYM	65.00			32.86 (-49.5%)		
B 3HDPA-SPARE	GE /FBH	ANSI-SYM	100.00			32.86 (-67.1%)		
B T8LDPB	GE /SFL	ANSI-SYM	65.00			32.86 (-49.5%)		
B T3LDPA	GE /SFL	ANSI-SYM	65.00			32.86 (-49.5%)		
B T3LDPB	GE /SGL4	ANSI-SYM	65.00			32.86 (-49.5%)		
B ELEV	GE /FBH	ANSI-SYM	100.00			32.67 (-67.3%)		
B 3HAIC	GE /SFL	ANSI-SYM	65.00			32.86 (-49.5%)		
B 3HAID	GE /SFL	ANSI-SYM	65.00			32.86 (-49.5%)		
3HDPA	/	ANSI-SYM	42.00			32.86 (-21.8%)		

Equipment Duty Comparison Report For Bus:

3LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3LA1A-BR	GE /THQB	ANSI-SYM	10.00			8.40 (-16.0%)		
3LA1A	/	ANSI-SYM	10.00			8.40 (-16.0%)		

Equipment Duty Comparison Report For Bus:

3LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3LAC1A-BR	GE /THQB	ANSI-SYM	10.00			8.40 (-16.0%)		
3LAC1A	/	ANSI-SYM	10.00			8.40 (-16.0%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

3LAC1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))
B 3LAC1B-BR	GE /THQB	ANSI-SYM	10.00			8.40 (-16.0%)	
3LAC1B	/	ANSI-SYM	10.00			8.40 (-16.0%)	

Equipment Duty Comparison Report For Bus:

3LB1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))
B 3LB1A-BR	GE /THQB	ANSI-SYM	22.00			9.90 (-55.0%)	
3LB1A	/	ANSI-SYM	22.00			9.90 (-55.0%)	

Equipment Duty Comparison Report For Bus:

3LB1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))
B 3LB1B-BR	GE /THQB	ANSI-SYM	22.00			9.90 (-55.0%)	
3LB1B	/	ANSI-SYM	22.00			9.90 (-55.0%)	

Equipment Duty Comparison Report For Bus:

3LBC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))
B 3LBC1A-BR	GE /THQB	ANSI-SYM	22.00			9.90 (-55.0%)	
3LBC1A	/	ANSI-SYM	22.00			9.90 (-55.0%)	

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

3LBC1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 3LBC1B-BR	GE	/THHQB	ANSI-SYM	22.00			9.90 (-55.0%)		
3LBC1B		/	ANSI-SYM	22.00			9.90 (-55.0%)		

Equipment Duty Comparison Report For Bus:

3LBC1C Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 3LBC1C-BR	GE	/THHQB	ANSI-SYM	22.00			9.90 (-55.0%)		
3LBC1C		/	ANSI-SYM	22.00			9.90 (-55.0%)		

Equipment Duty Comparison Report For Bus:

3LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 3LAC1A	GE	/THQD	ANSI-SYM	22.00			8.77 (-60.2%)		
B 3LAC1B	GE	/THQD	ANSI-SYM	22.00			8.77 (-60.2%)		
B 3LA1A	GE	/THQD	ANSI-SYM	22.00			8.77 (-60.2%)		
B 3LDPA-BR	GE	/TEY	ANSI-SYM	65.00			8.77 (-86.5%)		
B 3LDPA-MAIN	GE	/SGD	ANSI-SYM	65.00			8.77 (-86.5%)		
3LDPA		/	ANSI-SYM	22.00			8.77 (-60.2%)		

Equipment Duty Comparison Report For Bus:

3LDPB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 3LB1B	GE	/THQD	ANSI-SYM	22.00			10.38 (-52.8%)		
B 3LBC1A	GE	/THQD	ANSI-SYM	22.00			10.38 (-52.8%)		
B 3LBC1B	GE	/THQD	ANSI-SYM	22.00			10.38 (-52.8%)		
B 3LBC1C	GE	/THQD	ANSI-SYM	22.00			10.38 (-52.8%)		
B 3LDPB-BR	GE	/TEY	ANSI-SYM	65.00			10.38 (-84.0%)		
B 3LB1A	GE	/THQD	ANSI-SYM	22.00			10.38 (-52.8%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

B 3LDPB-MAIN	GE	/SKH8	ANSI-SYM	65.00	10.38 (-84.0%)
3LDPB		/	ANSI-SYM	22.00	10.38 (-52.8%)

Equipment Duty Comparison Report For Bus:

4HAIA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 4HAIA-BR1	GE /THED (1Pole)	ANSI-SYM	65.00		37.36 (-42.5%)			
4HAIA	/	ANSI-SYM	65.00		37.36 (-42.5%)			

Equipment Duty Comparison Report For Bus:

4HAIB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 4HAIB-BR1	GE /THED (1Pole)	ANSI-SYM	65.00		29.81 (-54.1%)			
4HAIB	/	ANSI-SYM	65.00		29.81 (-54.1%)			

Equipment Duty Comparison Report For Bus:

4HAIC Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 4HAIC-BR1	GE /SEL	ANSI-SYM	65.00		29.81 (-54.1%)			
4HAIC	/	ANSI-SYM	65.00		29.81 (-54.1%)			

Equipment Duty Comparison Report For Bus:

4HAID Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 4HAID-BR	GE /SEL	ANSI-SYM	65.00		29.63 (-54.4%)			
4HAID	/	ANSI-SYM	65.00		29.63 (-54.4%)			

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4HAIE Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4HAIE-BR1	GE /FBN	ANSI-SYM	65.00		37.08 (-42.9%)		
4HAIE	/	ANSI-SYM	65.00		37.08 (-42.9%)		

Equipment Duty Comparison Report For Bus:

4HAIF Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4HAIF-BR	GE /SEL	ANSI-SYM	65.00		36.81 (-43.4%)		
4HAIF	/	ANSI-SYM	65.00		36.81 (-43.4%)		

Equipment Duty Comparison Report For Bus:

4HAIG Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4HAIG-MAIN	GE /SFL	ANSI-SYM	65.00		29.63 (-45.4%)		
B 4HAIG-BR2	GE /FBN	ANSI-SYM	65.00		29.63 (-45.4%)		
4HAIG	/	ANSI-SYM	42.00		29.63 (-29.5%)		

Equipment Duty Comparison Report For Bus:

4HAIH Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4HAIH-BR	GE /THED (277V)	ANSI-SYM	65.00		29.81 (-45.8%)		
B T4DP1	GE /SEL	ANSI-SYM	65.00		29.81 (-45.8%)		
4HAIH	/	ANSI-SYM	42.00		29.81 (-29.0%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
B 4HAIG	GE /SFL	ANSI-SYM	65.00			32.99	(-49.2%)	
B T4LDPA	GE /SKL8	ANSI-SYM	65.00			32.81	(-49.5%)	
B 4HAIH	GE /SFL	ANSI-SYM	65.00			32.99	(-49.2%)	
B 4HAIB	GE /SFL	ANSI-SYM	65.00			32.99	(-49.2%)	
B 4HAIC	GE /SFL	ANSI-SYM	65.00			32.99	(-49.2%)	
B 4HAID	GE /SFL	ANSI-SYM	65.00			32.99	(-49.2%)	
B 4HDPA-SPARE	GE /SEL	ANSI-SYM	65.00			32.99	(-49.2%)	
B 4HDPA-MAIN	GE /SS-16	ANSI-SYM	65.00			32.81	(-49.5%)	
4HDPA	/	ANSI-SYM	42.00			32.99	(-21.5%)	

Equipment Duty Comparison Report For Bus:

4HDPB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
B T4LDPB	GE /SGL4	ANSI-SYM	65.00			41.87	(-35.6%)	
B 4HDPB-MAIN	GE /SKL8	ANSI-SYM	65.00			41.75	(-35.8%)	
B 4HAIA	GE /SFL	ANSI-SYM	65.00			41.87	(-35.6%)	
B 4HAIE	GE /SFL	ANSI-SYM	65.00			41.87	(-35.6%)	
B 4HAIF	GE /SFL	ANSI-SYM	65.00			41.87	(-35.6%)	
B CA	GE /FBN	ANSI-SYM	65.00			41.75	(-35.8%)	
4HDPB	/	ANSI-SYM	65.00			41.87	(-35.6%)	

Equipment Duty Comparison Report For Bus:

4LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
B 4LA1A-BR	GE /TEY	ANSI-SYM	65.00			16.81	(-74.1%)	
4LA1A	/	ANSI-SYM	42.00			16.81	(-60.0%)	

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4LA1C Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 4LA1C-BR	GE	/TEY	ANSI-SYM	65.00			16.68 (-74.3%)		
4LA1C		/	ANSI-SYM	42.00			16.68 (-60.3%)		

Equipment Duty Comparison Report For Bus:

4LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 4LAC1A-BR	GE	/TEY	ANSI-SYM	65.00			16.44 (-74.7%)		
4LAC1A		/	ANSI-SYM	42.00			16.44 (-60.9%)		

Equipment Duty Comparison Report For Bus:

4LAC1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 4LAC1B-BR	GE	/TEY	ANSI-SYM	65.00			8.18 (-87.4%)		
4LAC1B		/	ANSI-SYM	42.00			8.18 (-80.5%)		

Equipment Duty Comparison Report For Bus:

4LA1KA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 4LA1KA-BR	GE	/THQB	ANSI-SYM	22.00			12.16 (-44.7%)		
4LA1KA		/	ANSI-SYM	22.00			12.16 (-44.7%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4LAIKB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 4LAIKB-BR	GE	/THHQB	ANSI-SYM	22.00			12.09 (-45.1%)		
4LAIKB		/	ANSI-SYM	22.00			12.09 (-45.1%)		

Equipment Duty Comparison Report For Bus:

4LAIKC Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 4LAIKC-BR	GE	/THHQB	ANSI-SYM	22.00			11.94 (-45.7%)		
4LAIKC		/	ANSI-SYM	22.00			11.94 (-45.7%)		

Equipment Duty Comparison Report For Bus:

4LAIKD Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 4LAIKD-BR	GE	/THHQB	ANSI-SYM	22.00			11.87 (-46.0%)		
4LAIKD		/	ANSI-SYM	22.00			11.87 (-46.0%)		

Equipment Duty Comparison Report For Bus:

4LAIKE Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 4LAIKE-BR	GE	/THQB	ANSI-SYM	10.00			3.70 (-63.0%)		
4LAIKE		/	ANSI-SYM	10.00			3.70 (-63.0%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4LAIKF Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 4LAIKF-BR	GE /THQB	ANSI-SYM	10.00		3.06 (-69.4%)		
4LAIKF	/	ANSI-SYM	10.00		3.06 (-69.4%)		

Equipment Duty Comparison Report For Bus:

4LBCIB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 4LBCIB-BR	GE /TEY	ANSI-SYM	65.00		11.01 (-83.1%)		
4LBCIB	/	ANSI-SYM	42.00		11.01 (-73.8%)		

Equipment Duty Comparison Report For Bus:

4LBIB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 4LBIB-MAIN	GE /THQD	ANSI-SYM	22.00		9.69 (-55.9%)		
B 4LBIB-BR	GE /THHQB	ANSI-SYM	22.00		9.69 (-55.9%)		
4LBIB	/	ANSI-SYM	22.00		9.69 (-55.9%)		

Equipment Duty Comparison Report For Bus:

4LBID Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 4LBID-BR	GE /THHQB	ANSI-SYM	22.00		7.00 (-68.2%)		
B 4LBID-MAIN	GE /THQD	ANSI-SYM	22.00		7.00 (-68.2%)		
4LBID	/	ANSI-SYM	22.00		7.00 (-68.2%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4LBIE Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B 4LBIE-BR	GE /TEY	ANSI-SYM	65.00			11.01		(-83.1%)
4LBIE	/	ANSI-SYM	42.00			11.01		(-73.8%)

Equipment Duty Comparison Report For Bus:

4LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B BH E-146	GE /SFH	ANSI-SYM	65.00			17.87		(-72.5%)
B 4LAIKA	GE /SFH	ANSI-SYM	65.00			18.29		(-71.9%)
B 4LAIKB	GE /SFH	ANSI-SYM	65.00			18.29		(-71.9%)
B 4LAIKC	GE /SFH	ANSI-SYM	65.00			18.29		(-71.9%)
B 4LAIKD	GE /SFH	ANSI-SYM	65.00			18.29		(-71.9%)
B 4LAIKE	GE /TEY	ANSI-SYM	65.00			18.29		(-71.9%)
B 4LAIKF	GE /TEY	ANSI-SYM	65.00			18.29		(-71.9%)
B 4LDPA-MAIN	GE /SS-16	ANSI-SYM	85.00			17.87		(-79.0%)
B 4LAC1A	GE /SFH	ANSI-SYM	65.00			18.29		(-71.9%)
B 4LAC1B	GE /SFH	ANSI-SYM	65.00			18.29		(-71.9%)
B 4LA1A	GE /SFH	ANSI-SYM	65.00			18.29		(-71.9%)
B 4LA1C	GE /SFH	ANSI-SYM	65.00			18.29		(-71.9%)
4LDPA	/	ANSI-SYM	42.00			18.29		(-56.4%)

Equipment Duty Comparison Report For Bus:

4LDPB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B 4LBCIB	GE /SFH	ANSI-SYM	22.00			11.59		(-47.3%)
B 4LBID	GE /SFH	ANSI-SYM	22.00			11.59		(-47.3%)
B 4LBIB	GE /SFH	ANSI-SYM	22.00			11.59		(-47.3%)
B 4LBIE	GE /SFH	ANSI-SYM	22.00			11.59		(-47.3%)
B 4LDPB-MAIN	GE /SKH8	ANSI-SYM	65.00			11.59		(-82.2%)
4LDPB	/	ANSI-SYM	42.00			11.59		(-72.4%)

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

6HAIA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 6HAIA-BR	GE	/THED (277V)	ANSI-SYM	65.00			22.95 (-64.7%)		
6HAIA		/	ANSI-SYM	42.00			22.95 (-45.4%)		

Equipment Duty Comparison Report For Bus:

6HAIB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 6HAIB-BR2	GE	/FBN	ANSI-SYM	65.00			22.83 (-64.9%)		
B 6HAIB-BR1	GE	/THED (277V)	ANSI-SYM	65.00			22.83 (-64.9%)		
6HAIB		/	ANSI-SYM	42.00			22.83 (-45.6%)		

Equipment Duty Comparison Report For Bus:

6HAIC Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 6HAIC-BR2	GE	/FBN	ANSI-SYM	65.00			22.83 (-64.9%)		
B 6HAIC-BR1	GE	/THED (277V)	ANSI-SYM	65.00			22.83 (-64.9%)		
6HAIC		/	ANSI-SYM	42.00			22.83 (-45.6%)		

Equipment Duty Comparison Report For Bus:

6HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 6HDPA-MAIN	GE	/SKL12	ANSI-SYM	65.00			25.04 (-61.5%)		
B 6HAIA	GE	/SFL	ANSI-SYM	65.00			25.04 (-61.5%)		
B 6HAIB	GE	/SFL	ANSI-SYM	65.00			25.04 (-61.5%)		
B 6HAIC	GE	/SFL	ANSI-SYM	65.00			25.04 (-61.5%)		
B TX T6LAIA	GE	/SEL	ANSI-SYM	65.00			25.04 (-61.5%)		
B TX T6LAC1A	GE	/SEL	ANSI-SYM	65.00			25.04 (-61.5%)		
6HDPA		/	ANSI-SYM	65.00			25.04 (-61.5%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

6LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 6LAC1A-BR	GE	/THQB	ANSI-SYM	10.00			3.78 (-62.2%)		
B 6LAC1A-MAIN	GE	/TQD	ANSI-SYM	10.00			3.78 (-62.2%)		
6LAC1A		/	ANSI-SYM	10.00			3.78 (-62.2%)		

Equipment Duty Comparison Report For Bus:

6LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 6LA1A -MAIN	GE	/TQD	ANSI-SYM	10.00			4.23 (-57.7%)		
B 6LA1A-BR	GE	/THQB	ANSI-SYM	10.00			4.23 (-57.7%)		
6LA1A		/	ANSI-SYM	10.00			4.23 (-57.7%)		

Equipment Duty Comparison Report For Bus:

8HA2A Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 8HA2A-BR	GE	/FBN	ANSI-SYM	65.00			31.23 (-51.9%)		
8HA2A		/	ANSI-SYM	42.00			31.23 (-25.6%)		

Equipment Duty Comparison Report For Bus:

8HA2B Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 8HA2B-BR1	GE	/FBN	ANSI-SYM	65.00			30.83 (-52.6%)		
8HA2B		/	ANSI-SYM	42.00			30.83 (-26.6%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

8LA2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 8LA2A-BR	GE	/THQB	ANSI-SYM	10.00			8.40	(-16.0%)	
8LA2A		/	ANSI-SYM	10.00			8.40	(-16.0%)	

Equipment Duty Comparison Report For Bus:

8LAC2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 8LAC2A-BR	GE	/THQB	ANSI-SYM	10.00			8.40	(-16.0%)	
8LAC2A		/	ANSI-SYM	10.00			8.40	(-16.0%)	

Equipment Duty Comparison Report For Bus:

8LAC2B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 8LAC2B-BR	GE	/THQB	ANSI-SYM	10.00			8.40	(-16.0%)	
8LAC2B		/	ANSI-SYM	10.00			8.40	(-16.0%)	

Equipment Duty Comparison Report For Bus:

8LB2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 8LB2A-BR	GE	/THQB	ANSI-SYM	10.00			7.53	(-24.7%)	
8LB2A		/	ANSI-SYM	10.00			7.53	(-24.7%)	

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

8LBC2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 8LBC2A-BR	GE	/THQB	ANSI-SYM	10.00			7.53 (-24.7%)		
8LBC2A		/	ANSI-SYM	10.00			7.53 (-24.7%)		

Equipment Duty Comparison Report For Bus:

8LBC2B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 8LBC2B-BR	GE	/THQB	ANSI-SYM	10.00			7.53 (-24.7%)		
8LBC2B		/	ANSI-SYM	10.00			7.53 (-24.7%)		

Equipment Duty Comparison Report For Bus:

8LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 8LAC2A	GE	/THQD	ANSI-SYM	22.00			8.77 (-60.2%)		
B 8LAC2B	GE	/THQD	ANSI-SYM	22.00			8.77 (-60.2%)		
B 8LA2A	GE	/THQD	ANSI-SYM	22.00			8.77 (-60.2%)		
B 8LDPA-MAIN	GE	/SGD	ANSI-SYM	65.00			8.77 (-86.5%)		
8LDPA		/	ANSI-SYM	22.00			8.77 (-60.2%)		

Equipment Duty Comparison Report For Bus:

8LDPB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 8LBC2A	GE	/THQD	ANSI-SYM	22.00			7.83 (-64.4%)		
B 8LBC2B	GE	/THQD	ANSI-SYM	22.00			7.83 (-64.4%)		
B 8LB2A	GE	/THQD	ANSI-SYM	22.00			7.83 (-64.4%)		
B 8LDPB-BR	GE	/TEY	ANSI-SYM	65.00			7.83 (-87.9%)		
B 8LDPB-MAIN	GE	/SGD	ANSI-SYM	65.00			7.83 (-87.9%)		
8LDPB		/	ANSI-SYM	22.00			7.83 (-64.4%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

MDA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle	Interrupting (kA)	Cyc	1/2 Cycle	Interrupting kA (%)	
B 6HDPA	GE /SKL12	ANSI-SYM	65.00			55.92	(-14.0%)	
B 3HDPA	GE /SS-16	ANSI-SYM	65.00			55.73	(-14.3%)	
B 4HDPA	GE /SS-16	ANSI-SYM	65.00			55.73	(-14.3%)	
B 4HDPB	GE /SKL8	ANSI-SYM	65.00			55.80	(-14.2%)	
B MDA-MAIN	GE /SS-40	ANSI-SYM	100.00			55.42	(-44.6%)	
MDA	/	ANSI-SYM	65.00			53.03	(-18.4%)	

Three Phase Bolted Fault
Low Voltage Momentary Report

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 3DP1 0.208 kV, Zone 1, Area 1
 E/Z = 3.655 kA (1.32 MVA) At -57.46DEG, X/R = 1.57
 Z1 = 40.846415 +j 64.013564 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 5.849 IASYM Based on X/R ratio = 3.769
 Max. Low Voltage Power Circuit Breaker Duty = 3.66 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 3.66 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 3.66 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1	L	3DP1	3.66	-57.46	Branch	1	1	C 3DP1

*Bus 3HA1A 0.480 kV, Zone 1, Area 1
 E/Z = 28.986 kA (24.10 MVA) At -66.10DEG, X/R = 2.26
 Z1 = 1.681367 +j 3.793736 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 46.378 IASYM Based on X/R ratio = 31.350
 Max. Low Voltage Power Circuit Breaker Duty = 28.99 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 28.99 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 28.99 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HA1A	28.99	-66.10	Branch	1	1	C 3HA1A
T3DP1	H	3HA1A	0.00	0.00	Branch	1	1	C T3DP1

*Bus 3HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 29.619 kA (24.62 MVA) At -69.31DEG, X/R = 2.65
 Z1 = 1.434556 +j 3.799193 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 47.390 IASYM Based on X/R ratio = 32.955
 Max. Low Voltage Power Circuit Breaker Duty = 29.62 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 29.62 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 29.62 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAIB	29.62	-69.31	Branch	1	1	C 3HAIB

*Bus 3HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 28.812 kA (23.95 MVA) At -65.89DEG, X/R = 2.23
 Z1 = 1.705617 +j 3.810435 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 46.099 IASYM Based on X/R ratio = 31.111
 Max. Low Voltage Power Circuit Breaker Duty = 28.81 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 28.81 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 28.81 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAIC	28.81	-65.89	Branch	1	1	C 3HAIC

*Bus 3HAID 0.480 kV, Zone 1, Area 1
 E/Z = 28.986 kA (24.10 MVA) At -66.10DEG, X/R = 2.26
 Z1 = 1.681367 +j 3.793736 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 46.378 IASYM Based on X/R ratio = 31.350
 Max. Low Voltage Power Circuit Breaker Duty = 28.99 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 28.99 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 28.99 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAID	28.99	-66.10	Branch	1	1	C 3HAID

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 3HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 32.857 kA (27.32 MVA) At -70.93DEG, X/R = 2.89
 Z1 = 1.196348 +j 3.459744 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 52.571 IASYM Based on X/R ratio = 37.184
 Max. Low Voltage Power Circuit Breaker Duty = 32.86 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 32.86 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 32.86 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDA		3HDPA	32.67	-70.89	Branch	1	1	C 3HDPA
3HA1A		3HDPA	0.00	0.00	Branch	1	1	C 3HA1A
3HA1B		3HDPA	0.00	0.00	Branch	1	1	C 3HA1B
8HA2A		3HDPA	0.00	0.00	Branch	1	1	C 8HA2A
8HA2B		3HDPA	0.00	0.00	Branch	1	1	C 8HA2B
T8LDPA H		3HDPA	0.00	0.00	Branch	1	1	C T8LDPA
T8LDPB H		3HDPA	0.00	0.00	Branch	1	1	C T8LDPB
T3LDPA H		3HDPA	0.00	0.00	Branch	1	1	C T3LDPA
T3LDPB H		3HDPA	0.00	0.00	Branch	1	1	C T3LDPB
ELEV		3HDPA	0.19	-77.47	Branch	1	1	C ELEV
3HAIC		3HDPA	0.00	0.00	Branch	1	1	C 3HAIC
3HAID		3HDPA	0.00	0.00	Branch	1	1	C 3HAID

*Bus 3LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.397 kA (3.03 MVA) At -61.11DEG, X/R = 1.81
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 13.435 IASYM Based on X/R ratio = 8.798
 Max. Low Voltage Power Circuit Breaker Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.40 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LA1A	8.40	-61.11	Branch	1	1	C 3LA1A

*Bus 3LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.397 kA (3.03 MVA) At -61.11DEG, X/R = 1.81
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 13.435 IASYM Based on X/R ratio = 8.798
 Max. Low Voltage Power Circuit Breaker Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.40 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LAC1A	8.40	-61.11	Branch	1	1	C 3LAC1A

*Bus 3LAC1B 0.208 kV, Zone 1, Area 1
 E/Z = 8.397 kA (3.03 MVA) At -61.11DEG, X/R = 1.81
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 13.435 IASYM Based on X/R ratio = 8.798
 Max. Low Voltage Power Circuit Breaker Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.40 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LAC1B	8.40	-61.11	Branch	1	1	C 3LAC1B

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 3LB1A 0.208 kV, Zone 1, Area 1
 E/Z = 9.903 kA (3.57 MVA) At -68.55DEG, X/R = 2.55
 Z1 = 10.250304 +j 26.087383 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 15.845 IASYM Based on X/R ratio = 10.938
 Max. Low Voltage Power Circuit Breaker Duty = 9.90 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.90 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.90 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LB1A	9.90	-68.55	Branch	1	1	C 3LB1A

*Bus 3LB1B 0.208 kV, Zone 1, Area 1
 E/Z = 9.903 kA (3.57 MVA) At -68.55DEG, X/R = 2.55
 Z1 = 10.250304 +j 26.087383 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 15.845 IASYM Based on X/R ratio = 10.938
 Max. Low Voltage Power Circuit Breaker Duty = 9.90 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.90 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.90 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LB1B	9.90	-68.55	Branch	1	1	C 3LB1B

*Bus 3LBC1A 0.208 kV, Zone 1, Area 1
 E/Z = 9.903 kA (3.57 MVA) At -68.55DEG, X/R = 2.55
 Z1 = 10.250304 +j 26.087383 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 15.845 IASYM Based on X/R ratio = 10.938
 Max. Low Voltage Power Circuit Breaker Duty = 9.90 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.90 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.90 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1A	9.90	-68.55	Branch	1	1	C 3LBC1A

*Bus 3LBC1B 0.208 kV, Zone 1, Area 1
 E/Z = 9.903 kA (3.57 MVA) At -68.55DEG, X/R = 2.55
 Z1 = 10.250304 +j 26.087383 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 15.845 IASYM Based on X/R ratio = 10.938
 Max. Low Voltage Power Circuit Breaker Duty = 9.90 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.90 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.90 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1B	9.90	-68.55	Branch	1	1	C 3LBC1B

*Bus 3LBC1C 0.208 kV, Zone 1, Area 1
 E/Z = 9.903 kA (3.57 MVA) At -68.55DEG, X/R = 2.55
 Z1 = 10.250304 +j 26.087383 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 15.845 IASYM Based on X/R ratio = 10.938
 Max. Low Voltage Power Circuit Breaker Duty = 9.90 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.90 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.90 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1C	9.90	-68.55	Branch	1	1	C 3LBC1C

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 3LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 8.767 kA (3.16 MVA) At -62.38DEG, X/R = 1.91
 Z1 = 14.679039 +j 28.052801 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 14.027 IASYM Based on X/R ratio = 9.249
 Max. Low Voltage Power Circuit Breaker Duty = 8.77 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.77 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.77 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA	L	3LDPA	8.77	-62.38	Branch	1	1	C 3LDPA
3LAC1A		3LDPA	0.00	0.00	Branch	1	1	C 3LAC1A
3LAC1B		3LDPA	0.00	0.00	Branch	1	1	C 3LAC1B
3LA1A		3LDPA	0.00	0.00	Branch	1	1	C 3LA1A

*Bus 3LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 10.379 kA (3.74 MVA) At -70.43DEG, X/R = 2.81
 Z1 = 8.958835 +j 25.198055 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 16.607 IASYM Based on X/R ratio = 11.682
 Max. Low Voltage Power Circuit Breaker Duty = 10.38 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 10.38 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 10.38 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LB1B		3LDPB	0.00	0.00	Branch	1	1	C 3LB1B
T3LDPB	L	3LDPB	10.38	-70.43	Branch	1	1	C 3LDPB
3LBC1A		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1A
3LBC1B		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1B
3LBC1C		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1C
3LB1A		3LDPB	0.00	0.00	Branch	1	1	C 3LB1A

*Bus 4DP1 0.208 kV, Zone 1, Area 1
 E/Z = 3.824 kA (1.38 MVA) At -59.83DEG, X/R = 1.72
 Z1 = 36.479521 +j 62.763855 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 6.118 IASYM Based on X/R ratio = 3.981
 Max. Low Voltage Power Circuit Breaker Duty = 3.82 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 3.82 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 3.82 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1	L	4DP1	3.82	-59.83	Branch	1	1	C 4DP1

*Bus 4HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 37.359 kA (31.06 MVA) At -70.31DEG, X/R = 2.79
 Z1 = 1.084827 +j 3.031324 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 59.775 IASYM Based on X/R ratio = 41.996
 Max. Low Voltage Power Circuit Breaker Duty = 37.36 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 37.36 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 37.36 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPB		4HAIA	37.36	-70.31	Branch	1	1	C 4HAIA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 4HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 29.811 kA (24.78 MVA) At -67.01DEG, X/R = 2.36
 Z1 = 1.575929 +j 3.714366 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 47.697 IASYM Based on X/R ratio = 32.479
 Max. Low Voltage Power Circuit Breaker Duty = 29.81 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 29.81 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 29.81 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIB	29.81	-67.01	Branch	1	1	C 4HAIB

*Bus 4HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 29.811 kA (24.78 MVA) At -67.01DEG, X/R = 2.36
 Z1 = 1.575929 +j 3.714366 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 47.697 IASYM Based on X/R ratio = 32.479
 Max. Low Voltage Power Circuit Breaker Duty = 29.81 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 29.81 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 29.81 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIC	29.81	-67.01	Branch	1	1	C 4HAIC

*Bus 4HAID 0.480 kV, Zone 1, Area 1
 E/Z = 29.628 kA (24.63 MVA) At -66.79DEG, X/R = 2.33
 Z1 = 1.600180 +j 3.731066 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 47.405 IASYM Based on X/R ratio = 32.221
 Max. Low Voltage Power Circuit Breaker Duty = 29.63 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 29.63 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 29.63 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAID	29.63	-66.79	Branch	1	1	C 4HAID

*Bus 4HAIE 0.480 kV, Zone 1, Area 1
 E/Z = 37.083 kA (30.83 MVA) At -70.01DEG, X/R = 2.75
 Z1 = 1.109078 +j 3.048024 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 59.333 IASYM Based on X/R ratio = 41.552
 Max. Low Voltage Power Circuit Breaker Duty = 37.08 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 37.08 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 37.08 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIE	37.08	-70.01	Branch	1	1	C 4HAIE

*Bus 4HAIF 0.480 kV, Zone 1, Area 1
 E/Z = 36.811 kA (30.60 MVA) At -69.71DEG, X/R = 2.70
 Z1 = 1.133329 +j 3.064724 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 58.897 IASYM Based on X/R ratio = 41.119
 Max. Low Voltage Power Circuit Breaker Duty = 36.81 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 36.81 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 36.81 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIF	36.81	-69.71	Branch	1	1	C 4HAIF

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Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 4HAIG 0.480 kV, Zone 1, Area 1
 E/Z = 29.628 kA (24.63 MVA) At -66.79DEG, X/R = 2.33
 Z1 = 1.600180 +j 3.731066 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 47.405 IASYM Based on X/R ratio = 32.221
 Max. Low Voltage Power Circuit Breaker Duty = 29.63 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 29.63 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 29.63 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIG	29.63	-66.79	Branch	1	1	C 4HAIG

*Bus 4HAIH 0.480 kV, Zone 1, Area 1
 E/Z = 29.811 kA (24.78 MVA) At -67.01DEG, X/R = 2.36
 Z1 = 1.575929 +j 3.714366 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 47.697 IASYM Based on X/R ratio = 32.479
 Max. Low Voltage Power Circuit Breaker Duty = 29.81 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 29.81 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 29.81 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIH	29.81	-67.01	Branch	1	1	C 4HAIH
T4DP1 H		4HAIH	0.00	0.00	Branch	1	1	C T4DP1

*Bus 4HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 32.989 kA (27.43 MVA) At -70.99DEG, X/R = 2.90
 Z1 = 1.187915 +j 3.447173 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 52.782 IASYM Based on X/R ratio = 37.359
 Max. Low Voltage Power Circuit Breaker Duty = 32.99 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 32.99 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 32.99 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HAIG		4HDPA	0.00	0.00	Branch	1	1	C 4HAIG
T4LDPA H		4HDPA	0.18	-76.26	Branch	1	1	C T4LDPA
4HAIH		4HDPA	0.00	0.00	Branch	1	1	C 4HAIH
4HAIB		4HDPA	0.00	0.00	Branch	1	1	C 4HAIB
4HAIC		4HDPA	0.00	0.00	Branch	1	1	C 4HAIC
4HAID		4HDPA	0.00	0.00	Branch	1	1	C 4HAID
MDA		4HDPA	32.81	-70.96	Branch	1	1	C 4HDPA

*Bus 4HDPB 0.480 kV, Zone 1, Area 1
 E/Z = 41.869 kA (34.81 MVA) At -75.46DEG, X/R = 3.86
 Z1 = 0.721063 +j 2.780830 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 66.991 IASYM Based on X/R ratio = 50.301
 Max. Low Voltage Power Circuit Breaker Duty = 41.87 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 41.87 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 43.78 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB H		4HDPB	0.00	0.00	Branch	1	1	C T4LDPB
MDA		4HDPB	41.75	-75.47	Branch	1	1	C4HDPB
4HAIA		4HDPB	0.00	0.00	Branch	1	1	C 4HAIA
4HAIE		4HDPB	0.00	0.00	Branch	1	1	C 4HAIE
4HAIF		4HDPB	0.00	0.00	Branch	1	1	C 4HAIF
CA		4HDPB	0.12	-72.52	Branch	1	1	C CA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 4LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 16.810 kA (6.06 MVA) At -71.78DEG, X/R = 3.04
 Z1 = 5.163696 +j 15.683885 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 26.896 IASYM Based on X/R ratio = 19.212
 Max. Low Voltage Power Circuit Breaker Duty = 16.81 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 16.81 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 16.81 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LA1A	16.81	-71.78	Branch	1	1	C 4LA1A

*Bus 4LA1C 0.208 kV, Zone 1, Area 1
 E/Z = 16.684 kA (6.01 MVA) At -71.45DEG, X/R = 2.98
 Z1 = 5.292843 +j 15.772818 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 26.694 IASYM Based on X/R ratio = 18.994
 Max. Low Voltage Power Circuit Breaker Duty = 16.68 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 16.68 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 16.68 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LA1C	16.68	-71.45	Branch	1	1	C 4LA1C

*Bus 4LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 16.435 kA (5.92 MVA) At -70.81DEG, X/R = 2.87
 Z1 = 5.551137 +j 15.950683 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 26.296 IASYM Based on X/R ratio = 18.576
 Max. Low Voltage Power Circuit Breaker Duty = 16.44 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 16.44 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 16.44 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAC1A	16.44	-70.81	Branch	1	1	C 4LAC1A

*Bus 4LAC1B 0.208 kV, Zone 1, Area 1
 E/Z = 8.179 kA (2.95 MVA) At -51.67DEG, X/R = 1.26
 Z1 = 21.048760 +j 26.622622 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 13.086 IASYM Based on X/R ratio = 8.298
 Max. Low Voltage Power Circuit Breaker Duty = 8.18 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.18 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.18 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAC1B	8.18	-51.67	Branch	1	1	C 4LAC1B

*Bus 4LA1KA 0.208 kV, Zone 1, Area 1
 E/Z = 12.163 kA (4.38 MVA) At -60.51DEG, X/R = 1.77
 Z1 = 11.233599 +j 19.863728 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 19.462 IASYM Based on X/R ratio = 12.706
 Max. Low Voltage Power Circuit Breaker Duty = 12.16 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 12.16 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 12.16 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LA1KA	12.16	-60.51	Branch	1	1	C 4LA1KA

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Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 4LAIKB 0.208 kV, Zone 1, Area 1
 E/Z = 12.089 kA (4.36 MVA) At -60.34DEG, X/R = 1.76
 Z1 = 11.362746 +j 19.952660 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 19.342 IASYM Based on X/R ratio = 12.617
 Max. Low Voltage Power Circuit Breaker Duty = 12.09 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 12.09 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 12.09 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKB	12.09	-60.34	Branch	1	1	C 4LAIKB

*Bus 4LAIKC 0.208 kV, Zone 1, Area 1
 E/Z = 11.942 kA (4.30 MVA) At -60.00DEG, X/R = 1.73
 Z1 = 11.621040 +j 20.130526 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 19.107 IASYM Based on X/R ratio = 12.444
 Max. Low Voltage Power Circuit Breaker Duty = 11.94 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 11.94 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 11.94 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKC	11.94	-60.00	Branch	1	1	C 4LAIKC

*Bus 4LAIKD 0.208 kV, Zone 1, Area 1
 E/Z = 11.869 kA (4.28 MVA) At -59.84DEG, X/R = 1.72
 Z1 = 11.750186 +j 20.219459 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 18.991 IASYM Based on X/R ratio = 12.359
 Max. Low Voltage Power Circuit Breaker Duty = 11.87 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 11.87 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 11.87 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKD	11.87	-59.84	Branch	1	1	C 4LAIKD

*Bus 4LAIKE 0.208 kV, Zone 1, Area 1
 E/Z = 3.704 kA (1.33 MVA) At -23.29DEG, X/R = 0.43
 Z1 = 68.825325 +j 29.622060 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 5.927 IASYM Based on X/R ratio = 3.704
 Max. Low Voltage Power Circuit Breaker Duty = 3.70 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 3.70 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 3.70 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKE	3.70	-23.29	Branch	1	1	C 4LAIKE

*Bus 4LAIKF 0.208 kV, Zone 1, Area 1
 E/Z = 3.058 kA (1.10 MVA) At -21.46DEG, X/R = 0.39
 Z1 = 84.478012 +j 33.209557 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 4.893 IASYM Based on X/R ratio = 3.058
 Max. Low Voltage Power Circuit Breaker Duty = 3.06 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 3.06 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 3.06 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKF	3.06	-21.46	Branch	1	1	C 4LAIKF

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Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 4LBCIB 0.208 kV, Zone 1, Area 1
 E/Z = 11.007 kA (3.97 MVA) At -70.10DEG, X/R = 2.76
 Z1 = 8.583980 +j 23.711220 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 17.612 IASYM Based on X/R ratio = 12.346
 Max. Low Voltage Power Circuit Breaker Duty = 11.01 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 11.01 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 11.01 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBCIB	11.01	-70.10	Branch	1	1	C 4LBCIB

*Bus 4LBIB 0.208 kV, Zone 1, Area 1
 E/Z = 9.694 kA (3.49 MVA) At -65.35DEG, X/R = 2.18
 Z1 = 11.941798 +j 26.023474 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 15.511 IASYM Based on X/R ratio = 10.426
 Max. Low Voltage Power Circuit Breaker Duty = 9.69 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.69 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.69 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBIB	9.69	-65.35	Branch	1	1	C 4LBIB

*Bus 4LBID 0.208 kV, Zone 1, Area 1
 E/Z = 7.003 kA (2.52 MVA) At -56.26DEG, X/R = 1.50
 Z1 = 22.015253 +j 32.960234 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 11.205 IASYM Based on X/R ratio = 7.191
 Max. Low Voltage Power Circuit Breaker Duty = 7.00 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 7.00 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 7.00 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBID	7.00	-56.26	Branch	1	1	C 4LBID

*Bus 4LBIE 0.208 kV, Zone 1, Area 1
 E/Z = 11.007 kA (3.97 MVA) At -70.10DEG, X/R = 2.76
 Z1 = 8.583980 +j 23.711220 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 17.612 IASYM Based on X/R ratio = 12.346
 Max. Low Voltage Power Circuit Breaker Duty = 11.01 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 11.01 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 11.01 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBIE	11.01	-70.10	Branch	1	1	C 4LBIE

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First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 4LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 18.292 kA (6.59 MVA) At -75.72DEG, X/R = 3.93
 Z1 = 3.743080 +j 14.705624 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 29.267 IASYM Based on X/R ratio = 22.063
 Max. Low Voltage Power Circuit Breaker Duty = 18.29 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 18.29 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 19.20 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LAIKA		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKA
4LAIKB		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKB
4LAIKC		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKC
4LAIKD		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKD
4LAIKE		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKE
4LAIKF		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKF
T4LDPA L		4LDPA	17.87	-75.71	Branch	1	1	C 4LDPA
4LAC1A		4LDPA	0.00	0.00	Branch	1	1	C 4LAC1A
4LAC1B		4LDPA	0.00	0.00	Branch	1	1	C 4LAC1B
4LA1A		4LDPA	0.00	0.00	Branch	1	1	C 4LA1A
4LA1C		4LDPA	0.00	0.00	Branch	1	1	C 4LA1C
BH		4LDPA	0.42	-76.24	Branch	1	1	C BH E-146

*Bus 4LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 11.585 kA (4.17 MVA) At -72.28DEG, X/R = 3.13
 Z1 = 7.292511 +j 22.821892 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 18.537 IASYM Based on X/R ratio = 13.321
 Max. Low Voltage Power Circuit Breaker Duty = 11.59 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 11.59 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 11.59 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LBCIB		4LDPB	0.00	0.00	Branch	1	1	C 4LBCIB
4LBID		4LDPB	0.00	0.00	Branch	1	1	C 4LBID
4LBIB		4LDPB	0.00	0.00	Branch	1	1	C 4LBIB
4LBIE		4LDPB	0.00	0.00	Branch	1	1	C 4LBIE
T4LDPB L		4LDPB	11.59	-72.28	Branch	1	1	C 4LDPB

*Bus 6HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 22.948 kA (19.08 MVA) At -55.38DEG, X/R = 1.45
 Z1 = 2.977518 +j 4.313557 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 36.717 IASYM Based on X/R ratio = 23.500
 Max. Low Voltage Power Circuit Breaker Duty = 22.95 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 22.95 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 22.95 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIA	22.95	-55.38	Branch	1	1	C 6HAIA

*Bus 6HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 22.828 kA (18.98 MVA) At -55.27DEG, X/R = 1.44
 Z1 = 3.001769 +j 4.330257 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 36.525 IASYM Based on X/R ratio = 23.370
 Max. Low Voltage Power Circuit Breaker Duty = 22.83 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 22.83 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 22.83 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIB	22.83	-55.27	Branch	1	1	C 6HAIB

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 6HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 22.828 kA (18.98 MVA) At -55.27DEG, X/R = 1.44
 Z1 = 3.001769 +j 4.330257 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 36.525 IASYM Based on X/R ratio = 23.370
 Max. Low Voltage Power Circuit Breaker Duty = 22.83 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 22.83 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 22.83 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIC	22.83	-55.27	Branch	1	1	C 6HAIC

*Bus 6HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 25.038 kA (20.82 MVA) At -57.38DEG, X/R = 1.56
 Z1 = 2.589504 +j 4.046363 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 40.060 IASYM Based on X/R ratio = 25.810
 Max. Low Voltage Power Circuit Breaker Duty = 25.04 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 25.04 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 25.04 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDA		6HDPA	25.04	-57.38	Branch	1	1	C 6HDPA
6HAIA		6HDPA	0.00	0.00	Branch	1	1	C 6HAIA
6HAIB		6HDPA	0.00	0.00	Branch	1	1	C 6HAIB
6HAIC		6HDPA	0.00	0.00	Branch	1	1	C 6HAIC
TX T6LAIA H		6HDPA	0.00	0.00	Branch	1	1	C TX T6LAIA
TX T6LAC1A H		6HDPA	0.00	0.00	Branch	1	1	C TX T6LAC1A

*Bus 6LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 3.784 kA (1.36 MVA) At -59.31DEG, X/R = 1.69
 Z1 = 37.431778 +j 63.077808 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 6.055 IASYM Based on X/R ratio = 3.931
 Max. Low Voltage Power Circuit Breaker Duty = 3.78 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 3.78 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 3.78 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A L		6LAC1A	3.78	-59.31	Branch	1	1	C 6LAC1A

*Bus 6LAIA 0.208 kV, Zone 1, Area 1
 E/Z = 4.230 kA (1.52 MVA) At -59.19DEG, X/R = 1.68
 Z1 = 33.611012 +j 56.354255 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 6.768 IASYM Based on X/R ratio = 4.392
 Max. Low Voltage Power Circuit Breaker Duty = 4.23 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 4.23 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 4.23 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA L		6LAIA	4.23	-59.19	Branch	1	1	C 6LAIA

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Driving Point Voltage (P.U.) = 1.00000

*Bus 8HA2A 0.480 kV, Zone 1, Area 1
 E/Z = 31.234 kA (25.97 MVA) At -70.12DEG, X/R = 2.76
 Z1 = 1.309781 +j 3.621386 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 49.974 IASYM Based on X/R ratio = 35.038
 Max. Low Voltage Power Circuit Breaker Duty = 31.23 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 31.23 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 31.23 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		8HA2A	31.23	-70.12	Branch	1	1	C 8HA2A

*Bus 8HA2B 0.480 kV, Zone 1, Area 1
 E/Z = 30.828 kA (25.63 MVA) At -68.36DEG, X/R = 2.52
 Z1 = 1.438857 +j 3.626740 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 49.324 IASYM Based on X/R ratio = 33.988
 Max. Low Voltage Power Circuit Breaker Duty = 30.83 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 30.83 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 30.83 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		8HA2B	30.83	-68.36	Branch	1	1	C 8HA2B

*Bus 8LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.397 kA (3.03 MVA) At -61.11DEG, X/R = 1.81
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 13.435 IASYM Based on X/R ratio = 8.798
 Max. Low Voltage Power Circuit Breaker Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.40 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LA2A	8.40	-61.11	Branch	1	1	C 8LA2A

*Bus 8LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.397 kA (3.03 MVA) At -61.11DEG, X/R = 1.81
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 13.435 IASYM Based on X/R ratio = 8.798
 Max. Low Voltage Power Circuit Breaker Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.40 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LAC2A	8.40	-61.11	Branch	1	1	C 8LAC2A

*Bus 8LAC2B 0.208 kV, Zone 1, Area 1
 E/Z = 8.397 kA (3.03 MVA) At -61.11DEG, X/R = 1.81
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 13.435 IASYM Based on X/R ratio = 8.798
 Max. Low Voltage Power Circuit Breaker Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.40 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LAC2B	8.40	-61.11	Branch	1	1	C 8LAC2B

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Driving Point Voltage (P.U.) = 1.00000

*Bus 8LB2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.527 kA (2.71 MVA) At -56.77DEG, X/R = 1.53
 Z1 = 20.211562 +j 30.845903 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 12.043 IASYM Based on X/R ratio = 7.742
 Max. Low Voltage Power Circuit Breaker Duty = 7.53 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 7.53 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 7.53 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LB2A	7.53	-56.77	Branch	1	1	C 8LB2A

*Bus 8LBC2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.527 kA (2.71 MVA) At -56.77DEG, X/R = 1.53
 Z1 = 20.211562 +j 30.845903 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 12.043 IASYM Based on X/R ratio = 7.742
 Max. Low Voltage Power Circuit Breaker Duty = 7.53 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 7.53 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 7.53 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LBC2A	7.53	-56.77	Branch	1	1	C 8LBC2A

*Bus 8LBC2B 0.208 kV, Zone 1, Area 1
 E/Z = 7.527 kA (2.71 MVA) At -56.77DEG, X/R = 1.53
 Z1 = 20.211562 +j 30.845903 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 12.043 IASYM Based on X/R ratio = 7.742
 Max. Low Voltage Power Circuit Breaker Duty = 7.53 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 7.53 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 7.53 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LBC2B	7.53	-56.77	Branch	1	1	C 8LBC2B

*Bus 8LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 8.767 kA (3.16 MVA) At -62.38DEG, X/R = 1.91
 Z1 = 14.679039 +j 28.052801 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 14.027 IASYM Based on X/R ratio = 9.249
 Max. Low Voltage Power Circuit Breaker Duty = 8.77 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.77 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.77 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA L		8LDPA	8.77	-62.38	Branch	1	1	C 8LDPA
8LAC2A		8LDPA	0.00	0.00	Branch	1	1	C 8LAC2A
8LAC2B		8LDPA	0.00	0.00	Branch	1	1	C 8LAC2B
8LA2A		8LDPA	0.00	0.00	Branch	1	1	C 8LA2A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 8LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 7.834 kA (2.82 MVA) At -57.72DEG, X/R = 1.58
 Z1 = 18.920093 +j 29.956575 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 12.535 IASYM Based on X/R ratio = 8.086
 Max. Low Voltage Power Circuit Breaker Duty = 7.83 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 7.83 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 7.83 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB L		8LDPB	7.83	-57.72	Branch	1	1	C 8LDPB
8LBC2A		8LDPB	0.00	0.00	Branch	1	1	C 8LBC2A
8LBC2B		8LDPB	0.00	0.00	Branch	1	1	C 8LBC2B
8LB2A		8LDPB	0.00	0.00	Branch	1	1	C 8LB2A

*Bus BH 0.208 kV, Zone 1, Area 1
 E/Z = 9.864 kA (3.55 MVA) At -45.02DEG, X/R = 1.00
 Z1 = 19.890862 +j 19.903789 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 15.783 IASYM Based on X/R ratio = 9.916
 Max. Low Voltage Power Circuit Breaker Duty = 9.86 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.86 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.86 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M BH E-146		BH	0.43	-77.63	Motor	1	1	
4LDPA		BH	9.50	-43.62	Branch	1	1	C BH E-146

*Bus CA 0.480 kV, Zone 1, Area 1
 E/Z = 9.618 kA (8.00 MVA) At -21.27DEG, X/R = 0.39
 Z1 = 11.653755 +j 4.536518 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 15.389 IASYM Based on X/R ratio = 9.618
 Max. Low Voltage Power Circuit Breaker Duty = 9.62 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.62 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.62 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M CA		CA	0.12	-73.09	Motor	1	1	
4HDPA		CA	9.55	-20.72	Branch	1	1	C CA

*Bus ELEV 0.480 kV, Zone 1, Area 1
 E/Z = 24.112 kA (20.05 MVA) At -51.52DEG, X/R = 1.26
 Z1 = 3.103754 +j 3.905207 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 38.580 IASYM Based on X/R ratio = 24.458
 Max. Low Voltage Power Circuit Breaker Duty = 24.11 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 24.11 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 24.11 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M ELEV 360		ELEV	0.19	-77.63	Motor	1	1	
3HDPA		ELEV	23.94	-51.33	Branch	1	1	C ELEV

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Driving Point Voltage (P.U.) = 1.00000

*Bus MDA 0.480 kV, Zone 1, Area 1
 E/Z = 53.029 kA (44.09 MVA) At -81.31DEG, X/R = 6.54
 Z1 = 0.342691 +j 2.242196 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 84.846 IASYM Based on X/R ratio = 71.096
 Max. Low Voltage Power Circuit Breaker Duty = 53.03 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 55.92 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 61.50 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		MDA	0.00	0.00	Branch	1	1	C 6HDPA
3HDPA		MDA	0.19	-77.42	Branch	1	1	C 3HDPA
4HDPA		MDA	0.18	-76.21	Branch	1	1	C 4HDPA
4HDPB		MDA	0.12	-72.51	Branch	1	1	C4HDPB
TX NPC L		MDA	52.55	-81.36	Branch	1	1	C MDA

*Bus T3DP1 H 0.480 kV, Zone 1, Area 1
 E/Z = 14.813 kA (12.32 MVA) At -39.34DEG, X/R = 0.82
 Z1 = 6.280130 +j 5.147053 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 23.701 IASYM Based on X/R ratio = 14.839
 Max. Low Voltage Power Circuit Breaker Duty = 14.81 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 14.81 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 14.81 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1 L		T3DP1 H	0.00	0.00	Branch	1	1	T3DP1
3HA1A		T3DP1 H	14.81	-39.34	Branch	1	1	C T3DP1

*Bus T3DP1 L 0.208 kV, Zone 1, Area 1
 E/Z = 3.736 kA (1.35 MVA) At -58.14DEG, X/R = 1.61
 Z1 = 39.217767 +j 63.108727 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 5.977 IASYM Based on X/R ratio = 3.862
 Max. Low Voltage Power Circuit Breaker Duty = 3.74 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 3.74 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 3.74 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1 H		T3DP1 L	3.74	-58.14	Branch	1	1	T3DP1
3DP1		T3DP1 L	0.00	0.00	Branch	1	1	C 3DP1

*Bus T3LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 30.357 kA (25.24 MVA) At -66.47DEG, X/R = 2.30
 Z1 = 1.581899 +j 3.632814 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 48.570 IASYM Based on X/R ratio = 32.929
 Max. Low Voltage Power Circuit Breaker Duty = 30.36 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 30.36 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 30.36 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA L		T3LDPA H	0.00	0.00	Branch	1	1	T3LDPA
3HDPA		T3LDPA H	30.36	-66.47	Branch	1	1	C T3LDPA

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Driving Point Voltage (P.U.) = 1.00000

*Bus T3LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.065 kA (3.27 MVA) At -62.63DEG, X/R = 1.93
 Z1 = 14.074962 +j 27.191982 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 14.505 IASYM Based on X/R ratio = 9.578
 Max. Low Voltage Power Circuit Breaker Duty = 9.07 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.07 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.07 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA H		T3LDPA L	9.07	-62.63	Branch	1	1	T3LDPA
3LDPA		T3LDPA L	0.00	0.00	Branch	1	1	C 3LDPA

*Bus T3LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 20.466 kA (17.01 MVA) At -64.82DEG, X/R = 2.13
 Z1 = 2.500820 +j 5.318636 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 32.745 IASYM Based on X/R ratio = 21.927
 Max. Low Voltage Power Circuit Breaker Duty = 20.47 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 20.47 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 20.47 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPB L		T3LDPB H	0.00	0.00	Branch	1	1	T3LDPB
3HDPA		T3LDPB H	20.47	-64.82	Branch	1	1	C T3LDPB

*Bus T3LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 10.579 kA (3.81 MVA) At -70.73DEG, X/R = 2.86
 Z1 = 8.656797 +j 24.767645 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 16.927 IASYM Based on X/R ratio = 11.947
 Max. Low Voltage Power Circuit Breaker Duty = 10.58 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 10.58 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 10.58 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPB H		T3LDPB L	10.58	-70.73	Branch	1	1	T3LDPB
3LDPB		T3LDPB L	0.00	0.00	Branch	1	1	C 3LDPB

*Bus T4DP1 H 0.480 kV, Zone 1, Area 1
 E/Z = 26.647 kA (22.15 MVA) At -60.10DEG, X/R = 1.74
 Z1 = 2.250415 +j 3.912853 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 42.636 IASYM Based on X/R ratio = 27.780
 Max. Low Voltage Power Circuit Breaker Duty = 26.65 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 26.65 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 26.65 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1 L		T4DP1 H	0.00	0.00	Branch	1	1	T4DP1
4HAIH		T4DP1 H	26.65	-60.10	Branch	1	1	C T4DP1

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

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Driving Point Voltage (P.U.) = 1.00000

*Bus T4DP1 L 0.208 kV, Zone 1, Area 1
 E/Z = 3.900 kA (1.40 MVA) At -60.37DEG, X/R = 1.76
 Z1 = 35.188052 +j 61.874527 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 6.239 IASYM Based on X/R ratio = 4.071
 Max. Low Voltage Power Circuit Breaker Duty = 3.90 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 3.90 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 3.90 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1	H	T4DP1 L	3.90	-60.37	Branch	1	1	T4DP1
4DP1		T4DP1 L	0.00	0.00	Branch	1	1	C 4DP1

*Bus T4LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 32.160 kA (26.74 MVA) At -70.57DEG, X/R = 2.84
 Z1 = 1.243919 +j 3.527161 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 51.456 IASYM Based on X/R ratio = 36.255
 Max. Low Voltage Power Circuit Breaker Duty = 32.16 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 32.16 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 32.16 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPA	L	T4LDPA H	0.18	-76.26	Branch	1	1	T4LDPA
4HDPA		T4LDPA H	31.98	-70.54	Branch	1	1	C T4LDPA

*Bus T4LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 18.521 kA (6.67 MVA) At -75.99DEG, X/R = 4.01
 Z1 = 3.627892 +j 14.541365 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 29.633 IASYM Based on X/R ratio = 22.435
 Max. Low Voltage Power Circuit Breaker Duty = 18.52 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 18.52 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 19.53 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPA	H	T4LDPA L	18.10	-75.99	Branch	1	1	T4LDPA
4LDPA		T4LDPA L	0.42	-76.23	Branch	1	1	C 4LDPA

*Bus T4LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 39.327 kA (32.70 MVA) At -74.17DEG, X/R = 3.53
 Z1 = 0.834496 +j 2.942473 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 62.923 IASYM Based on X/R ratio = 46.356
 Max. Low Voltage Power Circuit Breaker Duty = 39.33 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 39.33 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 40.29 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB	L	T4LDPB H	0.00	0.00	Branch	1	1	T4LDPB
4HDPB		T4LDPB H	39.33	-74.17	Branch	1	1	C T4LDPB

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus T4LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 11.833 kA (4.26 MVA) At -72.66DEG, X/R = 3.20
 Z1 = 6.990473 +j 22.391482 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 18.933 IASYM Based on X/R ratio = 13.671
 Max. Low Voltage Power Circuit Breaker Duty = 11.83 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 11.83 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 11.85 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB H		T4LDPB L	11.83	-72.66	Branch	1	1	T4LDPB
4LDPB		T4LDPB L	0.00	0.00	Branch	1	1	C 4LDPB

*Bus T8LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 30.357 kA (25.24 MVA) At -66.47DEG, X/R = 2.30
 Z1 = 1.581899 +j 3.632814 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 48.570 IASYM Based on X/R ratio = 32.929
 Max. Low Voltage Power Circuit Breaker Duty = 30.36 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 30.36 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 30.36 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA L		T8LDPA H	0.00	0.00	Branch	1	1	T8LDPA
3HDPA		T8LDPA H	30.36	-66.47	Branch	1	1	C T8LDPA

*Bus T8LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.065 kA (3.27 MVA) At -62.63DEG, X/R = 1.93
 Z1 = 14.074962 +j 27.191982 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 14.505 IASYM Based on X/R ratio = 9.578
 Max. Low Voltage Power Circuit Breaker Duty = 9.07 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.07 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.07 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA H		T8LDPA L	9.07	-62.63	Branch	1	1	T8LDPA
8LDPA		T8LDPA L	0.00	0.00	Branch	1	1	C 8LDPA

*Bus T8LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 14.970 kA (12.45 MVA) At -43.56DEG, X/R = 0.95
 Z1 = 5.822953 +j 5.536588 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 23.952 IASYM Based on X/R ratio = 15.030
 Max. Low Voltage Power Circuit Breaker Duty = 14.97 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 14.97 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 14.97 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB L		T8LDPB H	0.00	0.00	Branch	1	1	T8LDPB
3HDPA		T8LDPB H	14.97	-43.56	Branch	1	1	C T8LDPB

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus T8LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 8.073 kA (2.91 MVA) At -57.81DEG, X/R = 1.59
 Z1 = 18.316016 +j 29.095755 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 12.918 IASYM Based on X/R ratio = 8.336
 Max. Low Voltage Power Circuit Breaker Duty = 8.07 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.07 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.07 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB H		T8LDPB L	8.07	-57.81	Branch	1	1	T8LDPB
8LDPB		T8LDPB L	0.00	0.00	Branch	1	1	C 8LDPB

*Bus TX NPC L 0.480 kV, Zone 1, Area 1
 E/Z = 53.965 kA (44.87 MVA) At -81.82DEG, X/R = 6.95
 Z1 = 0.317308 +j 2.206167 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 86.344 IASYM Based on X/R ratio = 73.197
 Max. Low Voltage Power Circuit Breaker Duty = 54.43 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 57.49 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 63.22 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
NPC		TX NPC L	53.48	-81.87	Util	1	1	
MDA		TX NPC L	0.48	-75.78	Branch	1	1	C MDA

*Bus TX T6LAC1A H 0.480 kV, Zone 1, Area 1
 E/Z = 22.681 kA (18.86 MVA) At -52.85DEG, X/R = 1.32
 Z1 = 3.202672 +j 4.226806 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 36.290 IASYM Based on X/R ratio = 23.072
 Max. Low Voltage Power Circuit Breaker Duty = 22.68 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 22.68 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 22.68 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A L		TX T6LAC1A H	0.00	0.00	Branch	1	1	TX T6LAC1A
6HDPA		TX T6LAC1A H	22.68	-52.85	Branch	1	1	C TX T6LAC1A

*Bus TX T6LAC1A L 0.208 kV, Zone 1, Area 1
 E/Z = 3.859 kA (1.39 MVA) At -59.84DEG, X/R = 1.72
 Z1 = 36.140310 +j 62.188479 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 6.175 IASYM Based on X/R ratio = 4.018
 Max. Low Voltage Power Circuit Breaker Duty = 3.86 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 3.86 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 3.86 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A H		TX T6LAC1A L	3.86	-59.84	Branch	1	1	TX T6LAC1A
6LAC1A		TX T6LAC1A L	0.00	0.00	Branch	1	1	C 6LAC1A

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus TX T6LAIA H 0.480 kV, Zone 1, Area 1
 E/Z = 22.681 kA (18.86 MVA) At -52.85DEG, X/R = 1.32
 Z1 = 3.202672 +j 4.226806 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 36.290 IASYM Based on X/R ratio = 23.072
 Max. Low Voltage Power Circuit Breaker Duty = 22.68 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 22.68 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 22.68 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA L		TX T6LAIA H	0.00	0.00	Branch	1	1	TX T6LAIA
6HDPA		TX T6LAIA H	22.68	-52.85	Branch	1	1	C TX T6LAIA

*Bus TX T6LAIA L 0.208 kV, Zone 1, Area 1
 E/Z = 4.324 kA (1.56 MVA) At -59.77DEG, X/R = 1.72
 Z1 = 32.319543 +j 55.464927 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 6.918 IASYM Based on X/R ratio = 4.501
 Max. Low Voltage Power Circuit Breaker Duty = 4.32 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 4.32 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 4.32 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA H		TX T6LAIA L	4.32	-59.77	Branch	1	1	TX T6LAIA
6LAIA		TX T6LAIA L	0.00	0.00	Branch	1	1	C 6LAIA

Three Phase Bolted Fault
Low Voltage Interrupting Report

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 3DP1 0.208 kV, Zone 1, Area 1
 E/Z = 3.654 kA (1.316 MVA) At -57.47DEG, X/R = 1.86
 Z1 = 40.855977 +j 64.045359 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1 L		3DP1	3.65	-57.47	Branch	1	1	C 3DP1

*Bus 3HA1A 0.480 kV, Zone 1, Area 1
 E/Z = 28.758 kA (23.909 MVA) At -66.15DEG, X/R = 2.47
 Z1 = 1.690928 +j 3.825530 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HA1A	28.76	-66.15	Branch	1	1	C 3HA1A
T3DP1 H		3HA1A	0.00	0.00	Branch	1	1	C T3DP1

*Bus 3HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 29.379 kA (24.425 MVA) At -69.35DEG, X/R = 2.84
 Z1 = 1.444118 +j 3.830988 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAIB	29.38	-69.35	Branch	1	1	C 3HAIB

*Bus 3HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 28.586 kA (23.766 MVA) At -65.94DEG, X/R = 2.45
 Z1 = 1.715179 +j 3.842230 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAIC	28.59	-65.94	Branch	1	1	C 3HAIC

*Bus 3HAID 0.480 kV, Zone 1, Area 1
 E/Z = 28.758 kA (23.909 MVA) At -66.15DEG, X/R = 2.47
 Z1 = 1.690928 +j 3.825530 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAID	28.76	-66.15	Branch	1	1	C 3HAID

*Bus 3HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 32.562 kA (27.072 MVA) At -70.95DEG, X/R = 3.06
 Z1 = 1.205910 +j 3.491538 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDA		3HDPA	32.56	-70.95	Branch	1	1	C 3HDPA
3HA1A		3HDPA	0.00	0.00	Branch	1	1	C 3HA1A
3HAIB		3HDPA	0.00	0.00	Branch	1	1	C 3HAIB
8HA2A		3HDPA	0.00	0.00	Branch	1	1	C 8HA2A
8HA2B		3HDPA	0.00	0.00	Branch	1	1	C 8HA2B
T8LDPA H		3HDPA	0.00	0.00	Branch	1	1	C T8LDPA
T8LDPB H		3HDPA	0.00	0.00	Branch	1	1	C T8LDPB
T3LDPA H		3HDPA	0.00	0.00	Branch	1	1	C T3LDPA
T3LDPB H		3HDPA	0.00	0.00	Branch	1	1	C T3LDPB
ELEV		3HDPA	0.00	0.00	Branch	1	1	C ELEV
3HAIC		3HDPA	0.00	0.00	Branch	1	1	C 3HAIC
3HAID		3HDPA	0.00	0.00	Branch	1	1	C 3HAID

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 3LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.389 kA (3.022 MVA) At -61.12DEG, X/R = 2.07
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LA1A	8.39	-61.12	Branch	1	1	C 3LA1A

*Bus 3LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.389 kA (3.022 MVA) At -61.12DEG, X/R = 2.07
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LAC1A	8.39	-61.12	Branch	1	1	C 3LAC1A

*Bus 3LAC1B 0.208 kV, Zone 1, Area 1
 E/Z = 8.389 kA (3.022 MVA) At -61.12DEG, X/R = 2.07
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LAC1B	8.39	-61.12	Branch	1	1	C 3LAC1B

*Bus 3LB1A 0.208 kV, Zone 1, Area 1
 E/Z = 9.891 kA (3.564 MVA) At -68.55DEG, X/R = 2.74
 Z1 = 10.259866 +j 26.119177 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LB1A	9.89	-68.55	Branch	1	1	C 3LB1A

*Bus 3LB1B 0.208 kV, Zone 1, Area 1
 E/Z = 9.891 kA (3.564 MVA) At -68.55DEG, X/R = 2.74
 Z1 = 10.259866 +j 26.119177 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LB1B	9.89	-68.55	Branch	1	1	C 3LB1B

*Bus 3LBC1A 0.208 kV, Zone 1, Area 1
 E/Z = 9.891 kA (3.564 MVA) At -68.55DEG, X/R = 2.74
 Z1 = 10.259866 +j 26.119177 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1A	9.89	-68.55	Branch	1	1	C 3LBC1A

*Bus 3LBC1B 0.208 kV, Zone 1, Area 1
 E/Z = 9.891 kA (3.564 MVA) At -68.55DEG, X/R = 2.74
 Z1 = 10.259866 +j 26.119177 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1B	9.89	-68.55	Branch	1	1	C 3LBC1B

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 3LBC1C 0.208 kV, Zone 1, Area 1
 E/Z = 9.891 kA (3.564 MVA) At -68.55DEG, X/R = 2.74
 Z1 = 10.259866 +j 26.119177 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1C	9.89	-68.55	Branch	1	1	C 3LBC1C

*Bus 3LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 8.758 kA (3.155 MVA) At -62.39DEG, X/R = 2.16
 Z1 = 14.688601 +j 28.084595 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA L		3LDPA	8.76	-62.39	Branch	1	1	C 3LDPA
3LAC1A		3LDPA	0.00	0.00	Branch	1	1	C 3LAC1A
3LAC1B		3LDPA	0.00	0.00	Branch	1	1	C 3LAC1B
3LA1A		3LDPA	0.00	0.00	Branch	1	1	C 3LA1A

*Bus 3LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 10.366 kA (3.735 MVA) At -70.43DEG, X/R = 2.99
 Z1 = 8.968397 +j 25.229849 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LB1B		3LDPB	0.00	0.00	Branch	1	1	C 3LB1B
T3LDPB L		3LDPB	10.37	-70.43	Branch	1	1	C 3LDPB
3LBC1A		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1A
3LBC1B		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1B
3LBC1C		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1C
3LB1A		3LDPB	0.00	0.00	Branch	1	1	C 3LB1A

*Bus 4DP1 0.208 kV, Zone 1, Area 1
 E/Z = 3.822 kA (1.377 MVA) At -59.84DEG, X/R = 1.99
 Z1 = 36.488442 +j 62.795289 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1 L		4DP1	3.82	-59.84	Branch	1	1	C 4DP1

*Bus 4HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 37.091 kA (30.837 MVA) At -70.40DEG, X/R = 2.98
 Z1 = 1.087587 +j 3.055051 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPB		4HAIA	37.09	-70.40	Branch	1	1	C 4HAIA

*Bus 4HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 29.573 kA (24.586 MVA) At -67.07DEG, X/R = 2.57
 Z1 = 1.584850 +j 3.745800 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIB	29.57	-67.07	Branch	1	1	C 4HAIB

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 4HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 29.573 kA (24.586 MVA) At -67.07DEG, X/R = 2.57
 Z1 = 1.584850 +j 3.745800 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIC	29.57	-67.07	Branch	1	1	C 4HAIC

*Bus 4HAID 0.480 kV, Zone 1, Area 1
 E/Z = 29.393 kA (24.437 MVA) At -66.85DEG, X/R = 2.54
 Z1 = 1.609101 +j 3.762500 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAID	29.39	-66.85	Branch	1	1	C 4HAID

*Bus 4HAIE 0.480 kV, Zone 1, Area 1
 E/Z = 36.820 kA (30.611 MVA) At -70.10DEG, X/R = 2.94
 Z1 = 1.111838 +j 3.071750 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIE	36.82	-70.10	Branch	1	1	C 4HAIE

*Bus 4HAIF 0.480 kV, Zone 1, Area 1
 E/Z = 36.551 kA (30.388 MVA) At -69.80DEG, X/R = 2.90
 Z1 = 1.136089 +j 3.088450 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIF	36.55	-69.80	Branch	1	1	C 4HAIF

*Bus 4HAIG 0.480 kV, Zone 1, Area 1
 E/Z = 29.393 kA (24.437 MVA) At -66.85DEG, X/R = 2.54
 Z1 = 1.609101 +j 3.762500 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIG	29.39	-66.85	Branch	1	1	C 4HAIG

*Bus 4HAIH 0.480 kV, Zone 1, Area 1
 E/Z = 29.573 kA (24.586 MVA) At -67.07DEG, X/R = 2.57
 Z1 = 1.584850 +j 3.745800 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIH	29.57	-67.07	Branch	1	1	C 4HAIH
T4DP1 H		4HAIH	0.00	0.00	Branch	1	1	C T4DP1

*Bus 4HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 32.696 kA (27.183 MVA) At -71.01DEG, X/R = 3.07
 Z1 = 1.196836 +j 3.478606 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HAIG		4HDPA	0.00	0.00	Branch	1	1	C 4HAIG
T4LDPA H		4HDPA	0.00	0.00	Branch	1	1	C T4LDPA
4HAIH		4HDPA	0.00	0.00	Branch	1	1	C 4HAIH
4HAIB		4HDPA	0.00	0.00	Branch	1	1	C 4HAIB
4HAIC		4HDPA	0.00	0.00	Branch	1	1	C 4HAIC
4HAID		4HDPA	0.00	0.00	Branch	1	1	C 4HAID
MDA		4HDPA	32.70	-71.01	Branch	1	1	C 4HDPA

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Comment: Three Phase Fault - Low Voltage Interrupting Report

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Driving Point Voltage (P.U.) = 1.00000

*Bus 4HDPB 0.480 kV, Zone 1, Area 1
 E/Z = 41.527 kA (34.525 MVA) At -75.53DEG, X/R = 4.00
 Z1 = 0.723823 +j 2.804557 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB	H	4HDPB	0.00	0.00	Branch	1	1	C T4LDPB
MDA		4HDPB	41.53	-75.53	Branch	1	1	C4HDPB
4HAIA		4HDPB	0.00	0.00	Branch	1	1	C 4HAIA
4HAIE		4HDPB	0.00	0.00	Branch	1	1	C 4HAIE
4HAIF		4HDPB	0.00	0.00	Branch	1	1	C 4HAIF
CA		4HDPB	0.00	0.00	Branch	1	1	C CA

*Bus 4LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 16.439 kA (5.923 MVA) At -71.86DEG, X/R = 3.21
 Z1 = 5.256546 +j 16.045632 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LA1A	16.44	-71.86	Branch	1	1	C 4LA1A

*Bus 4LA1C 0.208 kV, Zone 1, Area 1
 E/Z = 16.318 kA (5.879 MVA) At -71.54DEG, X/R = 3.16
 Z1 = 5.385693 +j 16.134565 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LA1C	16.32	-71.54	Branch	1	1	C 4LA1C

*Bus 4LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 16.081 kA (5.793 MVA) At -70.91DEG, X/R = 3.06
 Z1 = 5.643986 +j 16.312431 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAC1A	16.08	-70.91	Branch	1	1	C 4LAC1A

*Bus 4LAC1B 0.208 kV, Zone 1, Area 1
 E/Z = 8.097 kA (2.917 MVA) At -51.92DEG, X/R = 1.62
 Z1 = 21.141610 +j 26.984370 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAC1B	8.10	-51.92	Branch	1	1	C 4LAC1B

*Bus 4LAIKA 0.208 kV, Zone 1, Area 1
 E/Z = 11.974 kA (4.314 MVA) At -60.75DEG, X/R = 2.05
 Z1 = 11.326449 +j 20.225475 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKA	11.97	-60.75	Branch	1	1	C 4LAIKA

*Bus 4LAIKB 0.208 kV, Zone 1, Area 1
 E/Z = 11.902 kA (4.288 MVA) At -60.58DEG, X/R = 2.04
 Z1 = 11.455595 +j 20.314408 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKB	11.90	-60.58	Branch	1	1	C 4LAIKB

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Driving Point Voltage (P.U.) = 1.00000

*Bus 4LAIKC 0.208 kV, Zone 1, Area 1
 E/Z = 11.760 kA (4.237 MVA) At -60.25DEG, X/R = 2.02
 Z1 = 11.713890 +j 20.492274 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKC	11.76	-60.25	Branch	1	1	C 4LAIKC

*Bus 4LAIKD 0.208 kV, Zone 1, Area 1
 E/Z = 11.690 kA (4.211 MVA) At -60.08DEG, X/R = 2.01
 Z1 = 11.843036 +j 20.581206 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKD	11.69	-60.08	Branch	1	1	C 4LAIKD

*Bus 4LAIKE 0.208 kV, Zone 1, Area 1
 E/Z = 3.693 kA (1.331 MVA) At -23.51DEG, X/R = 1.09
 Z1 = 68.918175 +j 29.983807 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKE	3.69	-23.51	Branch	1	1	C 4LAIKE

*Bus 4LAIKF 0.208 kV, Zone 1, Area 1
 E/Z = 3.051 kA (1.099 MVA) At -21.65DEG, X/R = 1.08
 Z1 = 84.570862 +j 33.571304 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKF	3.05	-21.65	Branch	1	1	C 4LAIKF

*Bus 4LBCIB 0.208 kV, Zone 1, Area 1
 E/Z = 10.997 kA (3.962 MVA) At -70.11DEG, X/R = 2.94
 Z1 = 8.586740 +j 23.734946 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBCIB	11.00	-70.11	Branch	1	1	C 4LBCIB

*Bus 4LBIB 0.208 kV, Zone 1, Area 1
 E/Z = 9.687 kA (3.490 MVA) At -65.37DEG, X/R = 2.40
 Z1 = 11.944558 +j 26.047200 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBIB	9.69	-65.37	Branch	1	1	C 4LBIB

*Bus 4LBID 0.208 kV, Zone 1, Area 1
 E/Z = 6.999 kA (2.522 MVA) At -56.28DEG, X/R = 1.80
 Z1 = 22.018013 +j 32.983960 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBID	7.00	-56.28	Branch	1	1	C 4LBID

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Driving Point Voltage (P.U.) = 1.00000

*Bus 4LBIE 0.208 kV, Zone 1, Area 1
 E/Z = 10.997 kA (3.962 MVA) At -70.11DEG, X/R = 2.94
 Z1 = 8.586740 +j 23.734946 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBIE	11.00	-70.11	Branch	1	1	C 4LBIE

*Bus 4LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 17.853 kA (6.432 MVA) At -75.72DEG, X/R = 4.05
 Z1 = 3.835930 +j 15.067371 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LAIKA		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKA
4LAIKB		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKB
4LAIKC		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKC
4LAIKD		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKD
4LAIKE		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKE
4LAIKF		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKF
T4LDPA L		4LDPA	17.85	-75.72	Branch	1	1	C 4LDPA
4LAC1A		4LDPA	0.00	0.00	Branch	1	1	C 4LAC1A
4LAC1B		4LDPA	0.00	0.00	Branch	1	1	C 4LAC1B
4LA1A		4LDPA	0.00	0.00	Branch	1	1	C 4LA1A
4LA1C		4LDPA	0.00	0.00	Branch	1	1	C 4LA1C
BH		4LDPA	0.00	0.00	Branch	1	1	C BH E-146

*Bus 4LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 11.574 kA (4.170 MVA) At -72.29DEG, X/R = 3.29
 Z1 = 7.295271 +j 22.845618 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LBCIB		4LDPB	0.00	0.00	Branch	1	1	C 4LBCIB
4LBID		4LDPB	0.00	0.00	Branch	1	1	C 4LBID
4LBIB		4LDPB	0.00	0.00	Branch	1	1	C 4LBIB
4LBIE		4LDPB	0.00	0.00	Branch	1	1	C 4LBIE
T4LDPB L		4LDPB	11.57	-72.29	Branch	1	1	C 4LDPB

*Bus 6HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 22.871 kA (19.014 MVA) At -55.50DEG, X/R = 1.77
 Z1 = 2.978653 +j 4.334415 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIA	22.87	-55.50	Branch	1	1	C 6HAIA

*Bus 6HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 22.752 kA (18.915 MVA) At -55.39DEG, X/R = 1.76
 Z1 = 3.002904 +j 4.351114 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIB	22.75	-55.39	Branch	1	1	C 6HAIB

*Bus 6HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 22.752 kA (18.915 MVA) At -55.39DEG, X/R = 1.76
 Z1 = 3.002904 +j 4.351114 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIC	22.75	-55.39	Branch	1	1	C 6HAIC

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Driving Point Voltage (P.U.) = 1.00000

*Bus 6HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 24.943 kA (20.737 MVA) At -57.50DEG, X/R = 1.86
 Z1 = 2.590638 +j 4.067221 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDA		6HDPA	24.94	-57.50	Branch	1	1	C 6HDPA
6HAIA		6HDPA	0.00	0.00	Branch	1	1	C 6HAIA
6HAIB		6HDPA	0.00	0.00	Branch	1	1	C 6HAIB
6HAIC		6HDPA	0.00	0.00	Branch	1	1	C 6HAIC
TX T6LAIA H		6HDPA	0.00	0.00	Branch	1	1	C TX T6LAIA
TX T6LAC1A H		6HDPA	0.00	0.00	Branch	1	1	C TX T6LAC1A

*Bus 6LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 3.783 kA (1.363 MVA) At -59.32DEG, X/R = 1.96
 Z1 = 37.432913 +j 63.098665 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A L		6LAC1A	3.78	-59.32	Branch	1	1	C 6LAC1A

*Bus 6LAIA 0.208 kV, Zone 1, Area 1
 E/Z = 4.229 kA (1.524 MVA) At -59.20DEG, X/R = 1.95
 Z1 = 33.612146 +j 56.375113 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA L		6LAIA	4.23	-59.20	Branch	1	1	C 6LAIA

*Bus 8HA2A 0.480 kV, Zone 1, Area 1
 E/Z = 30.967 kA (25.746 MVA) At -70.14DEG, X/R = 2.94
 Z1 = 1.319342 +j 3.653181 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		8HA2A	30.97	-70.14	Branch	1	1	C 8HA2A

*Bus 8HA2B 0.480 kV, Zone 1, Area 1
 E/Z = 30.568 kA (25.414 MVA) At -68.40DEG, X/R = 2.72
 Z1 = 1.448419 +j 3.658534 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		8HA2B	30.57	-68.40	Branch	1	1	C 8HA2B

*Bus 8LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.389 kA (3.022 MVA) At -61.12DEG, X/R = 2.07
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LA2A	8.39	-61.12	Branch	1	1	C 8LA2A

*Bus 8LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.389 kA (3.022 MVA) At -61.12DEG, X/R = 2.07
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LAC2A	8.39	-61.12	Branch	1	1	C 8LAC2A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 8LAC2B 0.208 kV, Zone 1, Area 1
 E/Z = 8.389 kA (3.022 MVA) At -61.12DEG, X/R = 2.07
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LAC2B	8.39	-61.12	Branch	1	1	C 8LAC2B

*Bus 8LB2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.520 kA (2.709 MVA) At -56.78DEG, X/R = 1.83
 Z1 = 20.221124 +j 30.877697 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LB2A	7.52	-56.78	Branch	1	1	C 8LB2A

*Bus 8LBC2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.520 kA (2.709 MVA) At -56.78DEG, X/R = 1.83
 Z1 = 20.221124 +j 30.877697 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LBC2A	7.52	-56.78	Branch	1	1	C 8LBC2A

*Bus 8LBC2B 0.208 kV, Zone 1, Area 1
 E/Z = 7.520 kA (2.709 MVA) At -56.78DEG, X/R = 1.83
 Z1 = 20.221124 +j 30.877697 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LBC2B	7.52	-56.78	Branch	1	1	C 8LBC2B

*Bus 8LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 8.758 kA (3.155 MVA) At -62.39DEG, X/R = 2.16
 Z1 = 14.688601 +j 28.084595 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA L		8LDPA	8.76	-62.39	Branch	1	1	C 8LDPA
8LAC2A		8LDPA	0.00	0.00	Branch	1	1	C 8LAC2A
8LAC2B		8LDPA	0.00	0.00	Branch	1	1	C 8LAC2B
8LA2A		8LDPA	0.00	0.00	Branch	1	1	C 8LA2A

*Bus 8LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 7.827 kA (2.820 MVA) At -57.74DEG, X/R = 1.87
 Z1 = 18.929655 +j 29.988369 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB L		8LDPB	7.83	-57.74	Branch	1	1	C 8LDPB
8LBC2A		8LDPB	0.00	0.00	Branch	1	1	C 8LBC2A
8LBC2B		8LDPB	0.00	0.00	Branch	1	1	C 8LBC2B
8LB2A		8LDPB	0.00	0.00	Branch	1	1	C 8LB2A

*Bus BH 0.208 kV, Zone 1, Area 1
 E/Z = 9.501 kA (3.423 MVA) At -43.64DEG, X/R = 1.38
 Z1 = 21.142399 +j 20.160341 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M BH E-146		BH	0.00	0.00	Motor	1	1	
4LDPA		BH	9.50	-43.64	Branch	1	1	C BH E-146

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Driving Point Voltage (P.U.) = 1.00000

*Bus CA 0.480 kV, Zone 1, Area 1
 E/Z = 9.541 kA (7.932 MVA) At -20.78DEG, X/R = 1.07
 Z1 = 11.786545 +j 4.472960 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M CA		CA	0.00	0.00	Motor	1	1	
4HDPB		CA	9.54	-20.78	Branch	1	1	C CA

*Bus ELEV 0.480 kV, Zone 1, Area 1
 E/Z = 23.895 kA (19.866 MVA) At -51.41DEG, X/R = 1.60
 Z1 = 3.139610 +j 3.934730 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M ELEV 360		ELEV	0.00	0.00	Motor	1	1	
3HDPA		ELEV	23.89	-51.41	Branch	1	1	C ELEV

*Bus MDA 0.480 kV, Zone 1, Area 1
 E/Z = 52.547 kA (43.687 MVA) At -81.36DEG, X/R = 6.66
 Z1 = 0.343825 +j 2.263053 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		MDA	0.00	0.00	Branch	1	1	C 6HDPA
3HDPA		MDA	0.00	0.00	Branch	1	1	C 3HDPA
4HDPA		MDA	0.00	0.00	Branch	1	1	C 4HDPA
4HDPB		MDA	0.00	0.00	Branch	1	1	C 4HDPB
TX NPC L		MDA	52.55	-81.36	Branch	1	1	C MDA

*Bus T3DP1 H 0.480 kV, Zone 1, Area 1
 E/Z = 14.763 kA (12.274 MVA) At -39.47DEG, X/R = 1.30
 Z1 = 6.289692 +j 5.178847 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1 L		T3DP1 H	0.00	0.00	Branch	1	1	T3DP1
3HA1A		T3DP1 H	14.76	-39.47	Branch	1	1	C T3DP1

*Bus T3DP1 L 0.208 kV, Zone 1, Area 1
 E/Z = 3.734 kA (1.345 MVA) At -58.15DEG, X/R = 1.89
 Z1 = 39.227329 +j 63.140521 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1 H		T3DP1 L	3.73	-58.15	Branch	1	1	T3DP1
3DP1		T3DP1 L	0.00	0.00	Branch	1	1	C 3DP1

*Bus T3LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 30.106 kA (25.030 MVA) At -66.53DEG, X/R = 2.51
 Z1 = 1.591460 +j 3.664608 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA L		T3LDPA H	0.00	0.00	Branch	1	1	T3LDPA
3HDPA		T3LDPA H	30.11	-66.53	Branch	1	1	C T3LDPA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus T3LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.056 kA (3.262 MVA) At -62.64DEG, X/R = 2.18
 Z1 = 14.084523 +j 27.223776 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA H		T3LDPA L	9.06	-62.64	Branch	1	1	T3LDPA
3LDPA		T3LDPA L	0.00	0.00	Branch	1	1	C 3LDPA

*Bus T3LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 20.352 kA (16.920 MVA) At -64.86DEG, X/R = 2.35
 Z1 = 2.510382 +j 5.350430 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPB L		T3LDPB H	0.00	0.00	Branch	1	1	T3LDPB
3HDPA		T3LDPB H	20.35	-64.86	Branch	1	1	C T3LDPB

*Bus T3LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 10.566 kA (3.807 MVA) At -70.74DEG, X/R = 3.03
 Z1 = 8.666358 +j 24.799439 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPB H		T3LDPB L	10.57	-70.74	Branch	1	1	T3LDPB
3LDPB		T3LDPB L	0.00	0.00	Branch	1	1	C 3LDPB

*Bus T4DP1 H 0.480 kV, Zone 1, Area 1
 E/Z = 26.461 kA (22.000 MVA) At -60.20DEG, X/R = 2.01
 Z1 = 2.259336 +j 3.944287 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1 L		T4DP1 H	0.00	0.00	Branch	1	1	T4DP1
4HAIH		T4DP1 H	26.46	-60.20	Branch	1	1	C T4DP1

*Bus T4DP1 L 0.208 kV, Zone 1, Area 1
 E/Z = 3.898 kA (1.404 MVA) At -60.38DEG, X/R = 2.02
 Z1 = 35.196973 +j 61.905960 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1 H		T4DP1 L	3.90	-60.38	Branch	1	1	T4DP1
4DP1		T4DP1 L	0.00	0.00	Branch	1	1	C 4DP1

*Bus T4LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 31.873 kA (26.499 MVA) At -70.60DEG, X/R = 3.01
 Z1 = 1.253552 +j 3.559428 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPA L		T4LDPA H	0.00	0.00	Branch	1	1	T4LDPA
4HDPA		T4LDPA H	31.87	-70.60	Branch	1	1	C T4LDPA

*Bus T4LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 18.081 kA (6.514 MVA) At -76.00DEG, X/R = 4.13
 Z1 = 3.715115 +j 14.895208 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPA H		T4LDPA L	18.08	-76.00	Branch	1	1	T4LDPA
4LDPA		T4LDPA L	0.00	0.00	Branch	1	1	C 4LDPA

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Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus T4LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 39.026 kA (32.445 MVA) At -74.24DEG, X/R = 3.68
 Z1 = 0.837256 +j 2.966199 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB L		T4LDPB H	0.00	0.00	Branch	1	1	T4LDPB
4HDPB		T4LDPB H	39.03	-74.24	Branch	1	1	C T4LDPB

*Bus T4LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 11.821 kA (4.259 MVA) At -72.67DEG, X/R = 3.36
 Z1 = 6.993233 +j 22.415208 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB H		T4LDPB L	11.82	-72.67	Branch	1	1	T4LDPB
4LDPB		T4LDPB L	0.00	0.00	Branch	1	1	C 4LDPB

*Bus T8LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 30.106 kA (25.030 MVA) At -66.53DEG, X/R = 2.51
 Z1 = 1.591460 +j 3.664608 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA L		T8LDPA H	0.00	0.00	Branch	1	1	T8LDPA
3HDPA		T8LDPA H	30.11	-66.53	Branch	1	1	C T8LDPA

*Bus T8LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.056 kA (3.262 MVA) At -62.64DEG, X/R = 2.18
 Z1 = 14.084523 +j 27.223776 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA H		T8LDPA L	9.06	-62.64	Branch	1	1	T8LDPA
8LDPA		T8LDPA L	0.00	0.00	Branch	1	1	C 8LDPA

*Bus T8LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 14.916 kA (12.401 MVA) At -43.67DEG, X/R = 1.38
 Z1 = 5.832515 +j 5.568382 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB L		T8LDPB H	0.00	0.00	Branch	1	1	T8LDPB
3HDPA		T8LDPB H	14.92	-43.67	Branch	1	1	C T8LDPB

*Bus T8LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 8.066 kA (2.906 MVA) At -57.82DEG, X/R = 1.88
 Z1 = 18.325578 +j 29.127550 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB H		T8LDPB L	8.07	-57.82	Branch	1	1	T8LDPB
8LDPB		T8LDPB L	0.00	0.00	Branch	1	1	C 8LDPB

*Bus TX NPC L 0.480 kV, Zone 1, Area 1
 E/Z = 53.484 kA (44.466 MVA) At -81.87DEG, X/R = 7.07
 Z1 = 0.318045 +j 2.226317 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
NPC		TX NPC L	53.48	-81.87	Util	1	1	
MDA		TX NPC L	0.00	0.00	Branch	1	1	C MDA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus TX T6LAC1A H 0.480 kV, Zone 1, Area 1
 E/Z = 22.607 kA (18.795 MVA) At -52.97DEG, X/R = 1.66
 Z1 = 3.203807 +j 4.247663 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A L		TX T6LAC1A H	0.00	0.00	Branch	1	1	TX T6LAC1A
6HDPA		TX T6LAC1A H	22.61	-52.97	Branch	1	1	C TX T6LAC1A

*Bus TX T6LAC1A L 0.208 kV, Zone 1, Area 1
 E/Z = 3.858 kA (1.390 MVA) At -59.84DEG, X/R = 1.99
 Z1 = 36.141444 +j 62.209337 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A H		TX T6LAC1A L	3.86	-59.84	Branch	1	1	TX T6LAC1A
6LAC1A		TX T6LAC1A L	0.00	0.00	Branch	1	1	C 6LAC1A

*Bus TX T6LAIA H 0.480 kV, Zone 1, Area 1
 E/Z = 22.607 kA (18.795 MVA) At -52.97DEG, X/R = 1.66
 Z1 = 3.203807 +j 4.247663 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA L		TX T6LAIA H	0.00	0.00	Branch	1	1	TX T6LAIA
6HDPA		TX T6LAIA H	22.61	-52.97	Branch	1	1	C TX T6LAIA

*Bus TX T6LAIA L 0.208 kV, Zone 1, Area 1
 E/Z = 4.323 kA (1.557 MVA) At -59.78DEG, X/R = 1.99
 Z1 = 32.320678 +j 55.485784 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA H		TX T6LAIA L	4.32	-59.78	Branch	1	1	TX T6LAIA
6LAIA		TX T6LAIA L	0.00	0.00	Branch	1	1	C 6LAIA

Ground Fault

Equipment Duty Ratings

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

3HA1A Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3HA1A-BR	GE	/THED (277V)	ANSI-SYM	65.00			19.72 (-69.7%)		
B T3DP1	GE	/SEL	ANSI-SYM	65.00			19.72 (-69.7%)		
3HA1A		/	ANSI-SYM	42.00			19.72 (-53.0%)		

Equipment Duty Comparison Report For Bus:

3HA1B Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3HA1B-BR	GE	/SEL	ANSI-SYM	65.00			20.46 (-68.5%)		
3HA1B		/	ANSI-SYM	42.00			20.46 (-51.3%)		

Equipment Duty Comparison Report For Bus:

3HA1C Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3HA1C-BR2	GE	/SEL	ANSI-SYM	65.00			19.55 (-69.9%)		
3HA1C		/	ANSI-SYM	42.00			19.55 (-53.5%)		

Equipment Duty Comparison Report For Bus:

3HA1D Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3HA1D-BR2	GE	/FBN	ANSI-SYM	65.00			19.72 (-69.7%)		
B 3HA1D-BR3	GE	/SEL	ANSI-SYM	65.00			19.72 (-69.7%)		
3HA1D		/	ANSI-SYM	42.00			19.72 (-53.0%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

3HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3HDPA-MAIN	GE /SS-16	ANSI-SYM	65.00			23.67 (-63.6%)		
B 3HA1A	GE /SFL	ANSI-SYM	65.00			23.76 (-63.4%)		
B 3HAIB	GE /SGL4	ANSI-SYM	65.00			23.76 (-63.4%)		
B 8HA2A	GE /SGL4	ANSI-SYM	65.00			23.76 (-63.4%)		
B 8HA2B	GE /SFL	ANSI-SYM	65.00			23.76 (-63.4%)		
B T8LDPA	GE /SFL	ANSI-SYM	65.00			23.76 (-63.4%)		
B 3HDPA-SPARE	GE /FBH	ANSI-SYM	100.00			23.76 (-76.2%)		
B T8LDPB	GE /SFL	ANSI-SYM	65.00			23.76 (-63.4%)		
B T3LDPA	GE /SFL	ANSI-SYM	65.00			23.76 (-63.4%)		
B T3LDPB	GE /SGL4	ANSI-SYM	65.00			23.76 (-63.4%)		
B ELEV	GE /FBH	ANSI-SYM	100.00			23.67 (-76.3%)		
B 3HAIC	GE /SFL	ANSI-SYM	65.00			23.76 (-63.4%)		
B 3HAID	GE /SFL	ANSI-SYM	65.00			23.76 (-63.4%)		
3HDPA	/	ANSI-SYM	42.00			23.76 (-43.4%)		

Equipment Duty Comparison Report For Bus:

3LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3LA1A-BR	GE /THQB	ANSI-SYM	10.00			8.44 (-15.6%)		
3LA1A	/	ANSI-SYM	10.00			8.44 (-15.6%)		

Equipment Duty Comparison Report For Bus:

3LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 3LAC1A-BR	GE /THQB	ANSI-SYM	10.00			8.44 (-15.6%)		
3LAC1A	/	ANSI-SYM	10.00			8.44 (-15.6%)		

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Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

3LAC1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 3LAC1B-BR	GE /THQB	ANSI-SYM	10.00		8.44 (-15.6%)		
3LAC1B	/	ANSI-SYM	10.00		8.44 (-15.6%)		

Equipment Duty Comparison Report For Bus:

3LB1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 3LB1A-BR	GE /THHQB	ANSI-SYM	22.00		10.32 (-53.1%)		
3LB1A	/	ANSI-SYM	22.00		10.32 (-53.1%)		

Equipment Duty Comparison Report For Bus:

3LB1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 3LB1B-BR	GE /THHQB	ANSI-SYM	22.00		10.32 (-53.1%)		
3LB1B	/	ANSI-SYM	22.00		10.32 (-53.1%)		

Equipment Duty Comparison Report For Bus:

3LBC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 3LBC1A-BR	GE /THHQB	ANSI-SYM	22.00		10.32 (-53.1%)		
3LBC1A	/	ANSI-SYM	22.00		10.32 (-53.1%)		

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EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

3LBC1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 3LBC1B-BR	GE	/THHQB	ANSI-SYM	22.00			10.32 (-53.1%)		
3LBC1B		/	ANSI-SYM	22.00			10.32 (-53.1%)		

Equipment Duty Comparison Report For Bus:

3LBC1C Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 3LBC1C-BR	GE	/THHQB	ANSI-SYM	22.00			10.32 (-53.1%)		
3LBC1C		/	ANSI-SYM	22.00			10.32 (-53.1%)		

Equipment Duty Comparison Report For Bus:

3LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 3LAC1A	GE	/THQD	ANSI-SYM	22.00			9.24 (-58.0%)		
B 3LAC1B	GE	/THQD	ANSI-SYM	22.00			9.24 (-58.0%)		
B 3LA1A	GE	/THQD	ANSI-SYM	22.00			9.24 (-58.0%)		
B 3LDPA-BR	GE	/TEY	ANSI-SYM	65.00			9.24 (-85.8%)		
B 3LDPA-MAIN	GE	/SGD	ANSI-SYM	65.00			9.24 (-85.8%)		
3LDPA		/	ANSI-SYM	22.00			9.24 (-58.0%)		

Equipment Duty Comparison Report For Bus:

3LDPB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 3LB1B	GE	/THQD	ANSI-SYM	22.00			11.43 (-48.0%)		
B 3LBC1A	GE	/THQD	ANSI-SYM	22.00			11.43 (-48.0%)		
B 3LBC1B	GE	/THQD	ANSI-SYM	22.00			11.43 (-48.0%)		
B 3LBC1C	GE	/THQD	ANSI-SYM	22.00			11.43 (-48.0%)		
B 3LDPB-BR	GE	/TEY	ANSI-SYM	65.00			11.43 (-82.4%)		
B 3LB1A	GE	/THQD	ANSI-SYM	22.00			11.43 (-48.0%)		

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Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

B 3LDPB-MAIN	GE	/SKH8	ANSI-SYM	65.00	11.43 (-82.4%)
3LDPB		/	ANSI-SYM	22.00	11.43 (-48.0%)

Equipment Duty Comparison Report For Bus:

4HAIA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 4HAIA-BR1	GE /THED (1Pole)	ANSI-SYM	65.00		28.79 (-55.7%)			
4HAIA	/	ANSI-SYM	65.00		28.79 (-55.7%)			

Equipment Duty Comparison Report For Bus:

4HAIB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 4HAIB-BR1	GE /THED (1Pole)	ANSI-SYM	65.00		20.54 (-68.4%)			
4HAIB	/	ANSI-SYM	65.00		20.54 (-68.4%)			

Equipment Duty Comparison Report For Bus:

4HAIC Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 4HAIC-BR1	GE /SEL	ANSI-SYM	65.00		20.54 (-68.4%)			
4HAIC	/	ANSI-SYM	65.00		20.54 (-68.4%)			

Equipment Duty Comparison Report For Bus:

4HAID Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 4HAID-BR	GE /SEL	ANSI-SYM	65.00		20.35 (-68.7%)			
4HAID	/	ANSI-SYM	65.00		20.35 (-68.7%)			

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Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4HAIE Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4HAIE-BR1	GE /FBN	ANSI-SYM	65.00		28.44 (-56.2%)		
4HAIE	/	ANSI-SYM	65.00		28.44 (-56.2%)		

Equipment Duty Comparison Report For Bus:

4HAIF Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4HAIF-BR	GE /SEL	ANSI-SYM	65.00		28.10 (-56.8%)		
4HAIF	/	ANSI-SYM	65.00		28.10 (-56.8%)		

Equipment Duty Comparison Report For Bus:

4HAIG Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4HAIG-MAIN	GE /SFL	ANSI-SYM	65.00		20.35 (-68.7%)		
B 4HAIG-BR2	GE /FBN	ANSI-SYM	65.00		20.35 (-68.7%)		
4HAIG	/	ANSI-SYM	42.00		20.35 (-51.5%)		

Equipment Duty Comparison Report For Bus:

4HAIH Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4HAIH-BR	GE /THED (277V)	ANSI-SYM	65.00		20.54 (-68.4%)		
B T4DP1	GE /SEL	ANSI-SYM	65.00		20.54 (-68.4%)		
4HAIH	/	ANSI-SYM	42.00		20.54 (-51.1%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B 4HAIG	GE /SFL	ANSI-SYM	65.00			23.91		(-63.2%)
B T4LDPA	GE /SKL8	ANSI-SYM	65.00			23.82		(-63.4%)
B 4HAIH	GE /SFL	ANSI-SYM	65.00			23.91		(-63.2%)
B 4HAIB	GE /SFL	ANSI-SYM	65.00			23.91		(-63.2%)
B 4HAIC	GE /SFL	ANSI-SYM	65.00			23.91		(-63.2%)
B 4HAID	GE /SFL	ANSI-SYM	65.00			23.91		(-63.2%)
B 4HDPA-SPARE	GE /SEL	ANSI-SYM	65.00			23.91		(-63.2%)
B 4HDPA-MAIN	GE /SS-16	ANSI-SYM	65.00			23.82		(-63.4%)
4HDPA	/	ANSI-SYM	42.00			23.91		(-43.1%)

Equipment Duty Comparison Report For Bus:

4HDPB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B T4LDPB	GE /SGL4	ANSI-SYM	65.00			35.01		(-46.1%)
B 4HDPB-MAIN	GE /SKL8	ANSI-SYM	65.00			34.95		(-46.2%)
B 4HAIA	GE /SFL	ANSI-SYM	65.00			35.01		(-46.1%)
B 4HAIE	GE /SFL	ANSI-SYM	65.00			35.01		(-46.1%)
B 4HAIF	GE /SFL	ANSI-SYM	65.00			35.01		(-46.1%)
B CA	GE /FBN	ANSI-SYM	65.00			34.95		(-46.2%)
4HDPB	/	ANSI-SYM	65.00			35.01		(-46.1%)

Equipment Duty Comparison Report For Bus:

4LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B 4LA1A-BR	GE /TEY	ANSI-SYM	65.00			16.91		(-74.0%)
4LA1A	/	ANSI-SYM	42.00			16.91		(-59.7%)

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4LA1C Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4LA1C-BR	GE /TEY	ANSI-SYM	65.00		16.64 (-74.4%)		
4LA1C	/	ANSI-SYM	42.00		16.64 (-60.4%)		

Equipment Duty Comparison Report For Bus:

4LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4LAC1A-BR	GE /TEY	ANSI-SYM	65.00		16.13 (-75.2%)		
4LAC1A	/	ANSI-SYM	42.00		16.13 (-61.6%)		

Equipment Duty Comparison Report For Bus:

4LAC1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4LAC1B-BR	GE /TEY	ANSI-SYM	65.00		5.23 (-92.0%)		
4LAC1B	/	ANSI-SYM	42.00		5.23 (-87.5%)		

Equipment Duty Comparison Report For Bus:

4LA1KA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4LA1KA-BR	GE /THQB	ANSI-SYM	22.00		9.30 (-57.7%)		
4LA1KA	/	ANSI-SYM	22.00		9.30 (-57.7%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4LAIKB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 4LAIKB-BR	GE	/THHQB	ANSI-SYM	22.00			9.21 (-58.2%)		
4LAIKB		/	ANSI-SYM	22.00			9.21 (-58.2%)		

Equipment Duty Comparison Report For Bus:

4LAIKC Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 4LAIKC-BR	GE	/THHQB	ANSI-SYM	22.00			9.03 (-59.0%)		
4LAIKC		/	ANSI-SYM	22.00			9.03 (-59.0%)		

Equipment Duty Comparison Report For Bus:

4LAIKD Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 4LAIKD-BR	GE	/THHQB	ANSI-SYM	22.00			8.94 (-59.4%)		
4LAIKD		/	ANSI-SYM	22.00			8.94 (-59.4%)		

Equipment Duty Comparison Report For Bus:

4LAIKE Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 4LAIKE-BR	GE	/THQB	ANSI-SYM	10.00			1.98 (-80.2%)		
4LAIKE		/	ANSI-SYM	10.00			1.98 (-80.2%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4LAIKF Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 4LAIKF-BR	GE /THQB	ANSI-SYM	10.00		1.61 (-83.9%)		
4LAIKF	/	ANSI-SYM	10.00		1.61 (-83.9%)		

Equipment Duty Comparison Report For Bus:

4LBCIB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 4LBCIB-BR	GE /TEY	ANSI-SYM	65.00		11.11 (-82.9%)		
4LBCIB	/	ANSI-SYM	42.00		11.11 (-73.6%)		

Equipment Duty Comparison Report For Bus:

4LBIB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 4LBIB-MAIN	GE /THQD	ANSI-SYM	22.00		8.63 (-60.8%)		
B 4LBIB-BR	GE /THHQB	ANSI-SYM	22.00		8.63 (-60.8%)		
4LBIB	/	ANSI-SYM	22.00		8.63 (-60.8%)		

Equipment Duty Comparison Report For Bus:

4LBID Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 4LBID-BR	GE /THHQB	ANSI-SYM	22.00		5.02 (-77.2%)		
B 4LBID-MAIN	GE /THQD	ANSI-SYM	22.00		5.02 (-77.2%)		
4LBID	/	ANSI-SYM	22.00		5.02 (-77.2%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4LBIE Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B 4LBIE-BR	GE /TEY	ANSI-SYM	65.00			11.11		(-82.9%)
4LBIE	/	ANSI-SYM	42.00			11.11		(-73.6%)

Equipment Duty Comparison Report For Bus:

4LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B BH E-146	GE /SFH	ANSI-SYM	65.00			20.00		(-69.2%)
B 4LAIKA	GE /SFH	ANSI-SYM	65.00			20.32		(-68.7%)
B 4LAIKB	GE /SFH	ANSI-SYM	65.00			20.32		(-68.7%)
B 4LAIKC	GE /SFH	ANSI-SYM	65.00			20.32		(-68.7%)
B 4LAIKD	GE /SFH	ANSI-SYM	65.00			20.32		(-68.7%)
B 4LAIKE	GE /TEY	ANSI-SYM	65.00			20.32		(-68.7%)
B 4LAIKF	GE /TEY	ANSI-SYM	65.00			20.32		(-68.7%)
B 4LDPA-MAIN	GE /SS-16	ANSI-SYM	85.00			20.00		(-76.5%)
B 4LAC1A	GE /SFH	ANSI-SYM	65.00			20.32		(-68.7%)
B 4LAC1B	GE /SFH	ANSI-SYM	65.00			20.32		(-68.7%)
B 4LA1A	GE /SFH	ANSI-SYM	65.00			20.32		(-68.7%)
B 4LA1C	GE /SFH	ANSI-SYM	65.00			20.32		(-68.7%)
4LDPA	/	ANSI-SYM	42.00			20.32		(-51.6%)

Equipment Duty Comparison Report For Bus:

4LDPB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B 4LBCIB	GE /SFH	ANSI-SYM	22.00			12.38		(-43.7%)
B 4LBID	GE /SFH	ANSI-SYM	22.00			12.38		(-43.7%)
B 4LBIB	GE /SFH	ANSI-SYM	22.00			12.38		(-43.7%)
B 4LBIE	GE /SFH	ANSI-SYM	22.00			12.38		(-43.7%)
B 4LDPB-MAIN	GE /SKH8	ANSI-SYM	65.00			12.38		(-81.0%)
4LDPB	/	ANSI-SYM	42.00			12.38		(-70.5%)

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

6HAIA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 6HAIA-BR	GE	/THED (277V)	ANSI-SYM	65.00			14.23 (-78.1%)		
6HAIA		/	ANSI-SYM	42.00			14.23 (-66.1%)		

Equipment Duty Comparison Report For Bus:

6HAIB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 6HAIB-BR2	GE	/FBN	ANSI-SYM	65.00			14.13 (-78.3%)		
B 6HAIB-BR1	GE	/THED (277V)	ANSI-SYM	65.00			14.13 (-78.3%)		
6HAIB		/	ANSI-SYM	42.00			14.13 (-66.3%)		

Equipment Duty Comparison Report For Bus:

6HAIC Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 6HAIC-BR2	GE	/FBN	ANSI-SYM	65.00			14.13 (-78.3%)		
B 6HAIC-BR1	GE	/THED (277V)	ANSI-SYM	65.00			14.13 (-78.3%)		
6HAIC		/	ANSI-SYM	42.00			14.13 (-66.3%)		

Equipment Duty Comparison Report For Bus:

6HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 6HDPA-MAIN	GE	/SKL12	ANSI-SYM	65.00			15.95 (-75.5%)		
B 6HAIA	GE	/SFL	ANSI-SYM	65.00			15.95 (-75.5%)		
B 6HAIB	GE	/SFL	ANSI-SYM	65.00			15.95 (-75.5%)		
B 6HAIC	GE	/SFL	ANSI-SYM	65.00			15.95 (-75.5%)		
B TX T6LAIA	GE	/SEL	ANSI-SYM	65.00			15.95 (-75.5%)		
B TX T6LAC1A	GE	/SEL	ANSI-SYM	65.00			15.95 (-75.5%)		
6HDPA		/	ANSI-SYM	65.00			15.95 (-75.5%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

6LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 6LAC1A-BR	GE	/THQB	ANSI-SYM	10.00			3.98 (-60.2%)		
B 6LAC1A-MAIN	GE	/TQD	ANSI-SYM	10.00			3.98 (-60.2%)		
6LAC1A		/	ANSI-SYM	10.00			3.98 (-60.2%)		

Equipment Duty Comparison Report For Bus:

6LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 6LA1A -MAIN	GE	/TQD	ANSI-SYM	10.00			4.45 (-55.5%)		
B 6LA1A-BR	GE	/THQB	ANSI-SYM	10.00			4.45 (-55.5%)		
6LA1A		/	ANSI-SYM	10.00			4.45 (-55.5%)		

Equipment Duty Comparison Report For Bus:

8HA2A Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 8HA2A-BR	GE	/FBN	ANSI-SYM	65.00			22.07 (-66.0%)		
8HA2A		/	ANSI-SYM	42.00			22.07 (-47.5%)		

Equipment Duty Comparison Report For Bus:

8HA2B Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B 8HA2B-BR1	GE	/FBN	ANSI-SYM	65.00			21.58 (-66.8%)		
8HA2B		/	ANSI-SYM	42.00			21.58 (-48.6%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

8LA2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 8LA2A-BR	GE	/THQB	ANSI-SYM	10.00			8.44 (-15.6%)		
8LA2A		/	ANSI-SYM	10.00			8.44 (-15.6%)		

Equipment Duty Comparison Report For Bus:

8LAC2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 8LAC2A-BR	GE	/THQB	ANSI-SYM	10.00			8.44 (-15.6%)		
8LAC2A		/	ANSI-SYM	10.00			8.44 (-15.6%)		

Equipment Duty Comparison Report For Bus:

8LAC2B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 8LAC2B-BR	GE	/THQB	ANSI-SYM	10.00			8.44 (-15.6%)		
8LAC2B		/	ANSI-SYM	10.00			8.44 (-15.6%)		

Equipment Duty Comparison Report For Bus:

8LB2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 8LB2A-BR	GE	/THQB	ANSI-SYM	10.00			7.83 (-21.7%)		
8LB2A		/	ANSI-SYM	10.00			7.83 (-21.7%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

8LBC2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 8LBC2A-BR	GE	/THQB	ANSI-SYM	10.00			7.83 (-21.7%)		
8LBC2A		/	ANSI-SYM	10.00			7.83 (-21.7%)		

Equipment Duty Comparison Report For Bus:

8LBC2B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 8LBC2B-BR	GE	/THQB	ANSI-SYM	10.00			7.83 (-21.7%)		
8LBC2B		/	ANSI-SYM	10.00			7.83 (-21.7%)		

Equipment Duty Comparison Report For Bus:

8LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 8LAC2A	GE	/THQD	ANSI-SYM	22.00			9.24 (-58.0%)		
B 8LAC2B	GE	/THQD	ANSI-SYM	22.00			9.24 (-58.0%)		
B 8LA2A	GE	/THQD	ANSI-SYM	22.00			9.24 (-58.0%)		
B 8LDPA-MAIN	GE	/SGD	ANSI-SYM	65.00			9.24 (-85.8%)		
8LDPA		/	ANSI-SYM	22.00			9.24 (-58.0%)		

Equipment Duty Comparison Report For Bus:

8LDPB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 8LBC2A	GE	/THQD	ANSI-SYM	22.00			8.53 (-61.2%)		
B 8LBC2B	GE	/THQD	ANSI-SYM	22.00			8.53 (-61.2%)		
B 8LB2A	GE	/THQD	ANSI-SYM	22.00			8.53 (-61.2%)		
B 8LDPB-BR	GE	/TEY	ANSI-SYM	65.00			8.53 (-86.9%)		
B 8LDPB-MAIN	GE	/SGD	ANSI-SYM	65.00			8.53 (-86.9%)		
8LDPB		/	ANSI-SYM	22.00			8.53 (-61.2%)		

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

MDA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle	Interrupting (kA)	Cyc	1/2 Cycle	Interrupting	
						kA (%)	kA (%)	
B 6HDPA	GE /SKL12	ANSI-SYM	65.00			57.11 (-12.1%)		
B 3HDPA	GE /SS-16	ANSI-SYM	65.00			56.98 (-12.3%)		
B 4HDPA	GE /SS-16	ANSI-SYM	65.00			56.99 (-12.3%)		
B 4HDPB	GE /SKL8	ANSI-SYM	65.00			57.03 (-12.3%)		
B MDA-MAIN	GE /SS-40	ANSI-SYM	100.00			56.77 (-43.2%)		
MDA	/	ANSI-SYM	65.00			54.72 (-15.8%)		

Ground Fault

Low Voltage Momentary Report

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 3DP1 0.208 kV, Zone 1, Area 1
 E/Z = 3.873 kA (1.40 MVA) At -57.29DEG, X/R = 1.56
 Z1 = 40.846415 +j 64.013564 pu, Z0 = 34.511299 +j 52.886617 pu
 1.6*ISYM= 6.196 IASYM Based on X/R ratio = 3.991
 Max. Low Voltage Power Circuit Breaker Duty = 3.87 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 3.87 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 3.87 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1	L	3DP1	3.87	-57.29	Branch	1	1	C 3DP1

*Bus 3HA1A 0.480 kV, Zone 1, Area 1
 E/Z = 19.721 kA (16.40 MVA) At -60.10DEG, X/R = 1.74
 Z1 = 1.681367 +j 3.793736 pu, Z0 = 5.759695 +j 8.274254 pu
 1.6*ISYM= 31.553 IASYM Based on X/R ratio = 20.559
 Max. Low Voltage Power Circuit Breaker Duty = 19.72 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 19.72 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 19.72 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HA1A	19.72	-60.10	Branch	1	1	C 3HA1A
T3DP1	H	3HA1A	0.00	0.00	Branch	1	1	C T3DP1

*Bus 3HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 20.461 kA (17.01 MVA) At -64.32DEG, X/R = 2.08
 Z1 = 1.434556 +j 3.799193 pu, Z0 = 4.772459 +j 8.296081 pu
 1.6*ISYM= 32.737 IASYM Based on X/R ratio = 21.847
 Max. Low Voltage Power Circuit Breaker Duty = 20.46 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 20.46 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 20.46 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAIB	20.46	-64.32	Branch	1	1	C 3HAIB

*Bus 3HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 19.550 kA (16.25 MVA) At -59.86DEG, X/R = 1.72
 Z1 = 1.705617 +j 3.810435 pu, Z0 = 5.856703 +j 8.341052 pu
 1.6*ISYM= 31.280 IASYM Based on X/R ratio = 20.359
 Max. Low Voltage Power Circuit Breaker Duty = 19.55 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 19.55 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 19.55 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAIC	19.55	-59.86	Branch	1	1	C 3HAIC

*Bus 3HAID 0.480 kV, Zone 1, Area 1
 E/Z = 19.721 kA (16.40 MVA) At -60.10DEG, X/R = 1.74
 Z1 = 1.681367 +j 3.793736 pu, Z0 = 5.759699 +j 8.274254 pu
 1.6*ISYM= 31.553 IASYM Based on X/R ratio = 20.559
 Max. Low Voltage Power Circuit Breaker Duty = 19.72 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 19.72 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 19.72 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAID	19.72	-60.10	Branch	1	1	C 3HAID

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 3HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 23.761 kA (19.75 MVA) At -65.85DEG, X/R = 2.23
 Z1 = 1.196348 +j 3.459744 pu, Z0 = 3.819630 +j 6.938281 pu
 1.6*ISYM= 38.017 IASYM Based on X/R ratio = 25.651
 Max. Low Voltage Power Circuit Breaker Duty = 23.76 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 23.76 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 23.76 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDA		3HDPA	23.67	-65.83	Branch	1	1	C 3HDPA
3HA1A		3HDPA	0.00	0.00	Branch	1	1	C 3HA1A
3HA1B		3HDPA	0.00	0.00	Branch	1	1	C 3HA1B
8HA2A		3HDPA	0.00	0.00	Branch	1	1	C 8HA2A
8HA2B		3HDPA	0.00	0.00	Branch	1	1	C 8HA2B
T8LDPA H		3HDPA	0.00	0.00	Branch	1	1	C T8LDPA
T8LDPB H		3HDPA	0.00	0.00	Branch	1	1	C T8LDPB
T3LDPA H		3HDPA	0.00	0.00	Branch	1	1	C T3LDPA
T3LDPB H		3HDPA	0.00	0.00	Branch	1	1	C T3LDPB
ELEV		3HDPA	0.09	-72.40	Branch	1	1	C ELEV
3HAIC		3HDPA	0.00	0.00	Branch	1	1	C 3HAIC
3HAID		3HDPA	0.00	0.00	Branch	1	1	C 3HAID

*Bus 3LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.445 kA (3.04 MVA) At -59.44DEG, X/R = 1.69
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 13.511 IASYM Based on X/R ratio = 8.777
 Max. Low Voltage Power Circuit Breaker Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.44 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LA1A	8.44	-59.44	Branch	1	1	C 3LA1A

*Bus 3LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.445 kA (3.04 MVA) At -59.44DEG, X/R = 1.69
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 13.511 IASYM Based on X/R ratio = 8.777
 Max. Low Voltage Power Circuit Breaker Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.44 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LAC1A	8.44	-59.44	Branch	1	1	C 3LAC1A

*Bus 3LAC1B 0.208 kV, Zone 1, Area 1
 E/Z = 8.445 kA (3.04 MVA) At -59.44DEG, X/R = 1.69
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 13.511 IASYM Based on X/R ratio = 8.777
 Max. Low Voltage Power Circuit Breaker Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.44 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LAC1B	8.44	-59.44	Branch	1	1	C 3LAC1B

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 3LB1A 0.208 kV, Zone 1, Area 1
 E/Z = 10.325 kA (3.72 MVA) At -66.54DEG, X/R = 2.30
 Z1 = 10.250304 +j 26.087383 pu, Z0 = 11.606581 +j 21.810593 pu
 1.6*ISYM= 16.520 IASYM Based on X/R ratio = 11.206
 Max. Low Voltage Power Circuit Breaker Duty = 10.32 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 10.32 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 10.32 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LB1A	10.32	-66.54	Branch	1	1	C 3LB1A

*Bus 3LB1B 0.208 kV, Zone 1, Area 1
 E/Z = 10.325 kA (3.72 MVA) At -66.54DEG, X/R = 2.30
 Z1 = 10.250304 +j 26.087383 pu, Z0 = 11.606581 +j 21.810593 pu
 1.6*ISYM= 16.520 IASYM Based on X/R ratio = 11.206
 Max. Low Voltage Power Circuit Breaker Duty = 10.32 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 10.32 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 10.32 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LB1B	10.32	-66.54	Branch	1	1	C 3LB1B

*Bus 3LBC1A 0.208 kV, Zone 1, Area 1
 E/Z = 10.325 kA (3.72 MVA) At -66.54DEG, X/R = 2.30
 Z1 = 10.250304 +j 26.087383 pu, Z0 = 11.606581 +j 21.810593 pu
 1.6*ISYM= 16.520 IASYM Based on X/R ratio = 11.206
 Max. Low Voltage Power Circuit Breaker Duty = 10.32 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 10.32 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 10.32 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1A	10.32	-66.54	Branch	1	1	C 3LBC1A

*Bus 3LBC1B 0.208 kV, Zone 1, Area 1
 E/Z = 10.325 kA (3.72 MVA) At -66.54DEG, X/R = 2.30
 Z1 = 10.250304 +j 26.087383 pu, Z0 = 11.606581 +j 21.810593 pu
 1.6*ISYM= 16.520 IASYM Based on X/R ratio = 11.206
 Max. Low Voltage Power Circuit Breaker Duty = 10.32 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 10.32 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 10.32 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1B	10.32	-66.54	Branch	1	1	C 3LBC1B

*Bus 3LBC1C 0.208 kV, Zone 1, Area 1
 E/Z = 10.325 kA (3.72 MVA) At -66.54DEG, X/R = 2.30
 Z1 = 10.250304 +j 26.087383 pu, Z0 = 11.606581 +j 21.810593 pu
 1.6*ISYM= 16.520 IASYM Based on X/R ratio = 11.206
 Max. Low Voltage Power Circuit Breaker Duty = 10.32 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 10.32 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 10.32 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1C	10.32	-66.54	Branch	1	1	C 3LBC1C

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 3LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 9.236 kA (3.33 MVA) At -61.95DEG, X/R = 1.88
 Z1 = 14.679039 +j 28.052801 pu, Z0 = 13.035366 +j 23.468541 pu
 1.6*ISYM= 14.777 IASYM Based on X/R ratio = 9.720
 Max. Low Voltage Power Circuit Breaker Duty = 9.24 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.24 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.24 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA	L	3LDPA	9.24	-61.95	Branch	1	1	C 3LDPA
3LAC1A		3LDPA	0.00	0.00	Branch	1	1	C 3LAC1A
3LAC1B		3LDPA	0.00	0.00	Branch	1	1	C 3LAC1B
3LA1A		3LDPA	0.00	0.00	Branch	1	1	C 3LA1A

*Bus 3LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 11.432 kA (4.12 MVA) At -70.46DEG, X/R = 2.82
 Z1 = 8.958835 +j 25.198055 pu, Z0 = 6.440715 +j 18.253271 pu
 1.6*ISYM= 18.291 IASYM Based on X/R ratio = 12.872
 Max. Low Voltage Power Circuit Breaker Duty = 11.43 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 11.43 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 11.43 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LB1B		3LDPB	0.00	0.00	Branch	1	1	C 3LB1B
T3LDPB	L	3LDPB	11.43	-70.46	Branch	1	1	C 3LDPB
3LBC1A		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1A
3LBC1B		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1B
3LBC1C		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1C
3LB1A		3LDPB	0.00	0.00	Branch	1	1	C 3LB1A

*Bus 4DP1 0.208 kV, Zone 1, Area 1
 E/Z = 4.012 kA (1.45 MVA) At -59.25DEG, X/R = 1.68
 Z1 = 36.479521 +j 62.763855 pu, Z0 = 33.162580 +j 52.824580 pu
 1.6*ISYM= 6.420 IASYM Based on X/R ratio = 4.167
 Max. Low Voltage Power Circuit Breaker Duty = 4.01 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 4.01 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 4.01 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1	L	4DP1	4.01	-59.25	Branch	1	1	C 4DP1

*Bus 4HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 28.789 kA (23.93 MVA) At -63.89DEG, X/R = 2.04
 Z1 = 1.084827 +j 3.031324 pu, Z0 = 3.346361 +j 5.192347 pu
 1.6*ISYM= 46.063 IASYM Based on X/R ratio = 30.652
 Max. Low Voltage Power Circuit Breaker Duty = 28.79 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 28.79 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 28.79 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPB		4HAIA	28.79	-63.89	Branch	1	1	C 4HAIA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 4HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 20.538 kA (17.07 MVA) At -61.11DEG, X/R = 1.81
 Z1 = 1.575929 +j 3.714366 pu, Z0 = 5.335403 +j 7.955342 pu
 1.6*ISYM= 32.860 IASYM Based on X/R ratio = 21.518
 Max. Low Voltage Power Circuit Breaker Duty = 20.54 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 20.54 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 20.54 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIB	20.54	-61.11	Branch	1	1	C 4HAIB

*Bus 4HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 20.538 kA (17.07 MVA) At -61.11DEG, X/R = 1.81
 Z1 = 1.575929 +j 3.714366 pu, Z0 = 5.335403 +j 7.955342 pu
 1.6*ISYM= 32.860 IASYM Based on X/R ratio = 21.518
 Max. Low Voltage Power Circuit Breaker Duty = 20.54 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 20.54 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 20.54 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIC	20.54	-61.11	Branch	1	1	C 4HAIC

*Bus 4HAID 0.480 kV, Zone 1, Area 1
 E/Z = 20.354 kA (16.92 MVA) At -60.86DEG, X/R = 1.79
 Z1 = 1.600180 +j 3.731066 pu, Z0 = 5.432406 +j 8.022141 pu
 1.6*ISYM= 32.567 IASYM Based on X/R ratio = 21.299
 Max. Low Voltage Power Circuit Breaker Duty = 20.35 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 20.35 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 20.35 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAID	20.35	-60.86	Branch	1	1	C 4HAID

*Bus 4HAIE 0.480 kV, Zone 1, Area 1
 E/Z = 28.439 kA (23.64 MVA) At -63.50DEG, X/R = 2.01
 Z1 = 1.109078 +j 3.048024 pu, Z0 = 3.443364 +j 5.259145 pu
 1.6*ISYM= 45.503 IASYM Based on X/R ratio = 30.204
 Max. Low Voltage Power Circuit Breaker Duty = 28.44 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 28.44 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 28.44 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIE	28.44	-63.50	Branch	1	1	C 4HAIE

*Bus 4HAIF 0.480 kV, Zone 1, Area 1
 E/Z = 28.096 kA (23.36 MVA) At -63.12DEG, X/R = 1.97
 Z1 = 1.133329 +j 3.064724 pu, Z0 = 3.540368 +j 5.325944 pu
 1.6*ISYM= 44.954 IASYM Based on X/R ratio = 29.770
 Max. Low Voltage Power Circuit Breaker Duty = 28.10 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 28.10 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 28.10 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIF	28.10	-63.12	Branch	1	1	C 4HAIF

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 4HAIG 0.480 kV, Zone 1, Area 1
 E/Z = 20.354 kA (16.92 MVA) At -60.86DEG, X/R = 1.79
 Z1 = 1.600180 +j 3.731066 pu, Z0 = 5.432406 +j 8.022141 pu
 1.6*ISYM= 32.567 IASYM Based on X/R ratio = 21.299
 Max. Low Voltage Power Circuit Breaker Duty = 20.35 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 20.35 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 20.35 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIG	20.35	-60.86	Branch	1	1	C 4HAIG

*Bus 4HAIH 0.480 kV, Zone 1, Area 1
 E/Z = 20.538 kA (17.07 MVA) At -61.11DEG, X/R = 1.81
 Z1 = 1.575929 +j 3.714366 pu, Z0 = 5.335400 +j 7.955342 pu
 1.6*ISYM= 32.860 IASYM Based on X/R ratio = 21.518
 Max. Low Voltage Power Circuit Breaker Duty = 20.54 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 20.54 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 20.54 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIH	20.54	-61.11	Branch	1	1	C 4HAIH
T4DP1 H		4HAIH	0.00	0.00	Branch	1	1	C T4DP1

*Bus 4HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 23.905 kA (19.87 MVA) At -65.92DEG, X/R = 2.24
 Z1 = 1.187915 +j 3.447173 pu, Z0 = 3.783347 +j 6.886564 pu
 1.6*ISYM= 38.249 IASYM Based on X/R ratio = 25.819
 Max. Low Voltage Power Circuit Breaker Duty = 23.91 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 23.91 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 23.91 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HAIG		4HDPA	0.00	0.00	Branch	1	1	C 4HAIG
T4LDPA H		4HDPA	0.09	-71.19	Branch	1	1	C T4LDPA
4HAIH		4HDPA	0.00	0.00	Branch	1	1	C 4HAIH
4HAIB		4HDPA	0.00	0.00	Branch	1	1	C 4HAIB
4HAIC		4HDPA	0.00	0.00	Branch	1	1	C 4HAIC
4HAID		4HDPA	0.00	0.00	Branch	1	1	C 4HAID
MDA		4HDPA	23.82	-65.90	Branch	1	1	C 4HDPA

*Bus 4HDPB 0.480 kV, Zone 1, Area 1
 E/Z = 35.013 kA (29.11 MVA) At -71.13DEG, X/R = 2.93
 Z1 = 0.721063 +j 2.780830 pu, Z0 = 1.891309 +j 4.190368 pu
 1.6*ISYM= 56.021 IASYM Based on X/R ratio = 39.715
 Max. Low Voltage Power Circuit Breaker Duty = 35.01 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 35.01 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 35.01 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB H		4HDPB	0.00	0.00	Branch	1	1	C T4LDPB
MDA		4HDPB	34.95	-71.13	Branch	1	1	C4HDPB
4HAIA		4HDPB	0.00	0.00	Branch	1	1	C 4HAIA
4HAIE		4HDPB	0.00	0.00	Branch	1	1	C 4HAIE
4HAIF		4HDPB	0.00	0.00	Branch	1	1	C 4HAIF
CA		4HDPB	0.07	-68.19	Branch	1	1	C CA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 4LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 16.909 kA (6.09 MVA) At -67.83DEG, X/R = 2.45
 Z1 = 5.163696 +j 15.683885 pu, Z0 = 8.258045 +j 14.237142 pu
 1.6*ISYM= 27.055 IASYM Based on X/R ratio = 18.553
 Max. Low Voltage Power Circuit Breaker Duty = 16.91 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 16.91 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 16.91 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LA1A	16.91	-67.83	Branch	1	1	C 4LA1A

*Bus 4LA1C 0.208 kV, Zone 1, Area 1
 E/Z = 16.642 kA (6.00 MVA) At -67.24DEG, X/R = 2.38
 Z1 = 5.292843 +j 15.772818 pu, Z0 = 8.774632 +j 14.592875 pu
 1.6*ISYM= 26.628 IASYM Based on X/R ratio = 18.167
 Max. Low Voltage Power Circuit Breaker Duty = 16.64 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 16.64 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 16.64 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LA1C	16.64	-67.24	Branch	1	1	C 4LA1C

*Bus 4LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 16.129 kA (5.81 MVA) At -66.11DEG, X/R = 2.26
 Z1 = 5.551137 +j 15.950683 pu, Z0 = 9.807805 +j 15.304339 pu
 1.6*ISYM= 25.806 IASYM Based on X/R ratio = 17.446
 Max. Low Voltage Power Circuit Breaker Duty = 16.13 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 16.13 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 16.13 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAC1A	16.13	-66.11	Branch	1	1	C 4LAC1A

*Bus 4LAC1B 0.208 kV, Zone 1, Area 1
 E/Z = 5.230 kA (1.88 MVA) At -44.32DEG, X/R = 0.98
 Z1 = 21.048760 +j 26.622622 pu, Z0 = 71.798189 +j 57.992209 pu
 1.6*ISYM= 8.369 IASYM Based on X/R ratio = 5.255
 Max. Low Voltage Power Circuit Breaker Duty = 5.23 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 5.23 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 5.23 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAC1B	5.23	-44.32	Branch	1	1	C 4LAC1B

*Bus 4LA1KA 0.208 kV, Zone 1, Area 1
 E/Z = 9.297 kA (3.35 MVA) At -52.11DEG, X/R = 1.29
 Z1 = 11.233599 +j 19.863728 pu, Z0 = 32.537614 +j 30.956559 pu
 1.6*ISYM= 14.876 IASYM Based on X/R ratio = 9.442
 Max. Low Voltage Power Circuit Breaker Duty = 9.30 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.30 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.30 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LA1KA	9.30	-52.11	Branch	1	1	C 4LA1KA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 4LAIKB 0.208 kV, Zone 1, Area 1
 E/Z = 9.205 kA (3.32 MVA) At -51.93DEG, X/R = 1.28
 Z1 = 11.362746 +j 19.952660 pu, Z0 = 33.054199 +j 31.312291 pu
 1.6*ISYM= 14.728 IASYM Based on X/R ratio = 9.345
 Max. Low Voltage Power Circuit Breaker Duty = 9.21 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.21 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.21 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKB	9.21	-51.93	Branch	1	1	C 4LAIKB

*Bus 4LAIKC 0.208 kV, Zone 1, Area 1
 E/Z = 9.026 kA (3.25 MVA) At -51.58DEG, X/R = 1.26
 Z1 = 11.621040 +j 20.130526 pu, Z0 = 34.087373 +j 32.023757 pu
 1.6*ISYM= 14.441 IASYM Based on X/R ratio = 9.156
 Max. Low Voltage Power Circuit Breaker Duty = 9.03 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.03 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.03 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKC	9.03	-51.58	Branch	1	1	C 4LAIKC

*Bus 4LAIKD 0.208 kV, Zone 1, Area 1
 E/Z = 8.939 kA (3.22 MVA) At -51.41DEG, X/R = 1.25
 Z1 = 11.750186 +j 20.219459 pu, Z0 = 34.603960 +j 32.379488 pu
 1.6*ISYM= 14.302 IASYM Based on X/R ratio = 9.065
 Max. Low Voltage Power Circuit Breaker Duty = 8.94 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.94 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.94 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKD	8.94	-51.41	Branch	1	1	C 4LAIKD

*Bus 4LAIKE 0.208 kV, Zone 1, Area 1
 E/Z = 1.978 kA (0.71 MVA) At -17.88DEG, X/R = 0.32
 Z1 = 68.825325 +j 29.622060 pu, Z0 = 262.903810 +j 69.989684 pu
 1.6*ISYM= 3.166 IASYM Based on X/R ratio = 1.978
 Max. Low Voltage Power Circuit Breaker Duty = 1.98 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 1.98 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 1.98 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKE	1.98	-17.88	Branch	1	1	C 4LAIKE

*Bus 4LAIKF 0.208 kV, Zone 1, Area 1
 E/Z = 1.611 kA (0.58 MVA) At -16.96DEG, X/R = 0.30
 Z1 = 84.478012 +j 33.209557 pu, Z0 = 325.514406 +j 84.339636 pu
 1.6*ISYM= 2.577 IASYM Based on X/R ratio = 1.611
 Max. Low Voltage Power Circuit Breaker Duty = 1.61 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 1.61 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 1.61 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKF	1.61	-16.96	Branch	1	1	C 4LAIKF

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 4LBCIB 0.208 kV, Zone 1, Area 1
 E/Z = 11.107 kA (4.00 MVA) At -67.43DEG, X/R = 2.41
 Z1 = 8.583980 +j 23.711220 pu, Z0 = 11.606581 +j 21.810593 pu
 1.6*ISYM= 17.771 IASYM Based on X/R ratio = 12.144
 Max. Low Voltage Power Circuit Breaker Duty = 11.11 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 11.11 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 11.11 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBCIB	11.11	-67.43	Branch	1	1	C 4LBCIB

*Bus 4LBIB 0.208 kV, Zone 1, Area 1
 E/Z = 8.635 kA (3.11 MVA) At -59.52DEG, X/R = 1.70
 Z1 = 11.941798 +j 26.023474 pu, Z0 = 25.037832 +j 31.059632 pu
 1.6*ISYM= 13.816 IASYM Based on X/R ratio = 8.978
 Max. Low Voltage Power Circuit Breaker Duty = 8.63 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.63 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.63 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBIB	8.63	-59.52	Branch	1	1	C 4LBIB

*Bus 4LBID 0.208 kV, Zone 1, Area 1
 E/Z = 5.020 kA (1.81 MVA) At -48.76DEG, X/R = 1.14
 Z1 = 22.015253 +j 32.960234 pu, Z0 = 65.331577 +j 58.806745 pu
 1.6*ISYM= 8.032 IASYM Based on X/R ratio = 5.068
 Max. Low Voltage Power Circuit Breaker Duty = 5.02 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 5.02 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 5.02 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBID	5.02	-48.76	Branch	1	1	C 4LBID

*Bus 4LBIE 0.208 kV, Zone 1, Area 1
 E/Z = 11.107 kA (4.00 MVA) At -67.43DEG, X/R = 2.41
 Z1 = 8.583980 +j 23.711220 pu, Z0 = 11.606581 +j 21.810593 pu
 1.6*ISYM= 17.771 IASYM Based on X/R ratio = 12.144
 Max. Low Voltage Power Circuit Breaker Duty = 11.11 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 11.11 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 11.11 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBIE	11.11	-67.43	Branch	1	1	C 4LBIE

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 4LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 20.315 kA (7.32 MVA) At -75.79DEG, X/R = 3.95
 Z1 = 3.743080 +j 14.705624 pu, Z0 = 2.575594 +j 10.324088 pu
 1.6*ISYM= 32.505 IASYM Based on X/R ratio = 24.531
 Max. Low Voltage Power Circuit Breaker Duty = 20.32 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 20.32 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 21.35 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LAIKA		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKA
4LAIKB		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKB
4LAIKC		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKC
4LAIKD		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKD
4LAIKE		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKE
4LAIKF		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKF
T4LDPA L		4LDPA	20.00	-75.78	Branch	1	1	C 4LDPA
4LAC1A		4LDPA	0.00	0.00	Branch	1	1	C 4LAC1A
4LAC1B		4LDPA	0.00	0.00	Branch	1	1	C 4LAC1B
4LA1A		4LDPA	0.00	0.00	Branch	1	1	C 4LA1A
4LA1C		4LDPA	0.00	0.00	Branch	1	1	C 4LA1C
BH		4LDPA	0.31	-76.31	Branch	1	1	C BH E-146

*Bus 4LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 12.379 kA (4.46 MVA) At -71.79DEG, X/R = 3.04
 Z1 = 7.292511 +j 22.821892 pu, Z0 = 6.440715 +j 18.253271 pu
 1.6*ISYM= 19.807 IASYM Based on X/R ratio = 14.149
 Max. Low Voltage Power Circuit Breaker Duty = 12.38 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 12.38 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 12.38 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LBCIB		4LDPB	0.00	0.00	Branch	1	1	C 4LBCIB
4LBID		4LDPB	0.00	0.00	Branch	1	1	C 4LBID
4LBIB		4LDPB	0.00	0.00	Branch	1	1	C 4LBIB
4LBIE		4LDPB	0.00	0.00	Branch	1	1	C 4LBIE
T4LDPB L		4LDPB	12.38	-71.79	Branch	1	1	C 4LDPB

*Bus 6HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 14.230 kA (11.83 MVA) At -48.31DEG, X/R = 1.12
 Z1 = 2.977518 +j 4.313557 pu, Z0 = 10.910620 +j 10.309804 pu
 1.6*ISYM= 22.767 IASYM Based on X/R ratio = 14.357
 Max. Low Voltage Power Circuit Breaker Duty = 14.23 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 14.23 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 14.23 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIA	14.23	-48.31	Branch	1	1	C 6HAIA

*Bus 6HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 14.134 kA (11.75 MVA) At -48.22DEG, X/R = 1.12
 Z1 = 3.001769 +j 4.330257 pu, Z0 = 11.007624 +j 10.376603 pu
 1.6*ISYM= 22.614 IASYM Based on X/R ratio = 14.258
 Max. Low Voltage Power Circuit Breaker Duty = 14.13 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 14.13 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 14.13 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIB	14.13	-48.22	Branch	1	1	C 6HAIB

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 6HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 14.134 kA (11.75 MVA) At -48.22DEG, X/R = 1.12
 Z1 = 3.001769 +j 4.330257 pu, Z0 = 11.007624 +j 10.376603 pu
 1.6*ISYM= 22.614 IASYM Based on X/R ratio = 14.258
 Max. Low Voltage Power Circuit Breaker Duty = 14.13 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 14.13 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 14.13 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIC	14.13	-48.22	Branch	1	1	C 6HAIC

*Bus 6HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 15.950 kA (13.26 MVA) At -50.01DEG, X/R = 1.19
 Z1 = 2.589504 +j 4.046363 pu, Z0 = 9.358565 +j 9.241026 pu
 1.6*ISYM= 25.521 IASYM Based on X/R ratio = 16.134
 Max. Low Voltage Power Circuit Breaker Duty = 15.95 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 15.95 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 15.95 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDA		6HDPA	15.95	-50.01	Branch	1	1	C 6HDPA
6HAIA		6HDPA	0.00	0.00	Branch	1	1	C 6HAIA
6HAIB		6HDPA	0.00	0.00	Branch	1	1	C 6HAIB
6HAIC		6HDPA	0.00	0.00	Branch	1	1	C 6HAIC
TX T6LAIA H		6HDPA	0.00	0.00	Branch	1	1	C TX T6LAIA
TX T6LAC1A H		6HDPA	0.00	0.00	Branch	1	1	C TX T6LAC1A

*Bus 6LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 3.983 kA (1.44 MVA) At -58.89DEG, X/R = 1.66
 Z1 = 37.431778 +j 63.077808 pu, Z0 = 33.162580 +j 52.824580 pu
 1.6*ISYM= 6.373 IASYM Based on X/R ratio = 4.130
 Max. Low Voltage Power Circuit Breaker Duty = 3.98 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 3.98 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 3.98 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A L		6LAC1A	3.98	-58.89	Branch	1	1	C 6LAC1A

*Bus 6LAIA 0.208 kV, Zone 1, Area 1
 E/Z = 4.452 kA (1.60 MVA) At -58.71DEG, X/R = 1.65
 Z1 = 33.611012 +j 56.354255 pu, Z0 = 29.914990 +j 47.109596 pu
 1.6*ISYM= 7.124 IASYM Based on X/R ratio = 4.614
 Max. Low Voltage Power Circuit Breaker Duty = 4.45 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 4.45 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 4.45 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA L		6LAIA	4.45	-58.71	Branch	1	1	C 6LAIA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

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First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 8HA2A 0.480 kV, Zone 1, Area 1
 E/Z = 22.068 kA (18.35 MVA) At -65.07DEG, X/R = 2.15
 Z1 = 1.309781 +j 3.621386 pu, Z0 = 4.273358 +j 7.584853 pu
 1.6*ISYM= 35.309 IASYM Based on X/R ratio = 23.685
 Max. Low Voltage Power Circuit Breaker Duty = 22.07 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 22.07 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 22.07 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		8HA2A	22.07	-65.07	Branch	1	1	C 8HA2A

*Bus 8HA2B 0.480 kV, Zone 1, Area 1
 E/Z = 21.580 kA (17.94 MVA) At -62.71DEG, X/R = 1.94
 Z1 = 1.438857 +j 3.626740 pu, Z0 = 4.789665 +j 7.606268 pu
 1.6*ISYM= 34.528 IASYM Based on X/R ratio = 22.809
 Max. Low Voltage Power Circuit Breaker Duty = 21.58 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 21.58 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 21.58 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		8HA2B	21.58	-62.71	Branch	1	1	C 8HA2B

*Bus 8LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.445 kA (3.04 MVA) At -59.44DEG, X/R = 1.69
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 13.511 IASYM Based on X/R ratio = 8.777
 Max. Low Voltage Power Circuit Breaker Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.44 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LA2A	8.44	-59.44	Branch	1	1	C 8LA2A

*Bus 8LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.445 kA (3.04 MVA) At -59.44DEG, X/R = 1.69
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 13.511 IASYM Based on X/R ratio = 8.777
 Max. Low Voltage Power Circuit Breaker Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.44 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LAC2A	8.44	-59.44	Branch	1	1	C 8LAC2A

*Bus 8LAC2B 0.208 kV, Zone 1, Area 1
 E/Z = 8.445 kA (3.04 MVA) At -59.44DEG, X/R = 1.69
 Z1 = 15.970507 +j 28.942130 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 13.511 IASYM Based on X/R ratio = 8.777
 Max. Low Voltage Power Circuit Breaker Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.44 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.44 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LAC2B	8.44	-59.44	Branch	1	1	C 8LAC2B

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 8LB2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.831 kA (2.82 MVA) At -56.54DEG, X/R = 1.51
 Z1 = 20.211562 +j 30.845903 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 12.529 IASYM Based on X/R ratio = 8.049
 Max. Low Voltage Power Circuit Breaker Duty = 7.83 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 7.83 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 7.83 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LB2A	7.83	-56.54	Branch	1	1	C 8LB2A

*Bus 8LBC2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.831 kA (2.82 MVA) At -56.54DEG, X/R = 1.51
 Z1 = 20.211562 +j 30.845903 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 12.529 IASYM Based on X/R ratio = 8.049
 Max. Low Voltage Power Circuit Breaker Duty = 7.83 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 7.83 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 7.83 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LBC2A	7.83	-56.54	Branch	1	1	C 8LBC2A

*Bus 8LBC2B 0.208 kV, Zone 1, Area 1
 E/Z = 7.831 kA (2.82 MVA) At -56.54DEG, X/R = 1.51
 Z1 = 20.211562 +j 30.845903 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 12.529 IASYM Based on X/R ratio = 8.049
 Max. Low Voltage Power Circuit Breaker Duty = 7.83 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 7.83 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 7.83 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LBC2B	7.83	-56.54	Branch	1	1	C 8LBC2B

*Bus 8LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 9.236 kA (3.33 MVA) At -61.95DEG, X/R = 1.88
 Z1 = 14.679039 +j 28.052801 pu, Z0 = 13.035366 +j 23.468541 pu
 1.6*ISYM= 14.777 IASYM Based on X/R ratio = 9.720
 Max. Low Voltage Power Circuit Breaker Duty = 9.24 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.24 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.24 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA L		8LDPA	9.24	-61.95	Branch	1	1	C 8LDPA
8LAC2A		8LDPA	0.00	0.00	Branch	1	1	C 8LAC2A
8LAC2B		8LDPA	0.00	0.00	Branch	1	1	C 8LAC2B
8LA2A		8LDPA	0.00	0.00	Branch	1	1	C 8LA2A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 8LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 8.525 kA (3.07 MVA) At -58.61DEG, X/R = 1.64
 Z1 = 18.920093 +j 29.956575 pu, Z0 = 13.035366 +j 23.468541 pu
 1.6*ISYM= 13.640 IASYM Based on X/R ratio = 8.830
 Max. Low Voltage Power Circuit Breaker Duty = 8.53 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.53 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.53 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB L		8LDPB	8.53	-58.61	Branch	1	1	C 8LDPB
8LBC2A		8LDPB	0.00	0.00	Branch	1	1	C 8LBC2A
8LBC2B		8LDPB	0.00	0.00	Branch	1	1	C 8LBC2B
8LB2A		8LDPB	0.00	0.00	Branch	1	1	C 8LB2A

*Bus BH 0.208 kV, Zone 1, Area 1
 E/Z = 6.309 kA (2.27 MVA) At -32.29DEG, X/R = 0.63
 Z1 = 19.890862 +j 19.903789 pu, Z0 = 71.802187 +j 30.695841 pu
 1.6*ISYM= 10.094 IASYM Based on X/R ratio = 6.311
 Max. Low Voltage Power Circuit Breaker Duty = 6.31 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 6.31 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 6.31 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M BH E-146		BH	0.18	-64.89	Motor	1	1	
4LDPA		BH	6.16	-31.37	Branch	1	1	C BH E-146

*Bus CA 0.480 kV, Zone 1, Area 1
 E/Z = 4.994 kA (4.15 MVA) At -16.02DEG, X/R = 0.29
 Z1 = 11.653755 +j 4.536518 pu, Z0 = 46.142487 +j 10.863923 pu
 1.6*ISYM= 7.990 IASYM Based on X/R ratio = 4.994
 Max. Low Voltage Power Circuit Breaker Duty = 4.99 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 4.99 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 4.99 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M CA		CA	0.04	-67.83	Motor	1	1	
4HDPB		CA	4.97	-15.65	Branch	1	1	C CA

*Bus ELEV 0.480 kV, Zone 1, Area 1
 E/Z = 14.875 kA (12.37 MVA) At -42.93DEG, X/R = 0.93
 Z1 = 3.103754 +j 3.905207 pu, Z0 = 11.554418 +j 8.711046 pu
 1.6*ISYM= 23.801 IASYM Based on X/R ratio = 14.929
 Max. Low Voltage Power Circuit Breaker Duty = 14.88 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 14.88 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 14.88 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M ELEV 360		ELEV	0.08	-69.03	Motor	1	1	
3HDPB		ELEV	14.81	-42.80	Branch	1	1	C ELEV

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Driving Point Voltage (P.U.) = 1.00000

*Bus MDA 0.480 kV, Zone 1, Area 1
 E/Z = 54.723 kA (45.50 MVA) At -80.78DEG, X/R = 6.16
 Z1 = 0.342691 +j 2.242196 pu, Z0 = 0.371320 +j 2.024355 pu
 1.6*ISYM= 87.557 IASYM Based on X/R ratio = 72.506
 Max. Low Voltage Power Circuit Breaker Duty = 54.72 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 57.11 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 62.81 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		MDA	0.00	0.00	Branch	1	1	C 6HDPA
3HDPA		MDA	0.13	-76.89	Branch	1	1	C 3HDPA
4HDPA		MDA	0.12	-75.68	Branch	1	1	C 4HDPA
4HDPB		MDA	0.08	-71.98	Branch	1	1	C4HDPB
TX NPC L		MDA	54.39	-80.81	Branch	1	1	C MDA

*Bus T3DP1 H 0.480 kV, Zone 1, Area 1
 E/Z = 8.228 kA (6.84 MVA) At -33.15DEG, X/R = 0.65
 Z1 = 6.280130 +j 5.147053 pu, Z0 = 24.154757 +j 13.687546 pu
 1.6*ISYM= 13.165 IASYM Based on X/R ratio = 8.232
 Max. Low Voltage Power Circuit Breaker Duty = 8.23 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.23 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.23 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1 L		T3DP1 H	0.00	0.00	Branch	1	1	T3DP1
3HA1A		T3DP1 H	8.23	-33.15	Branch	1	1	C T3DP1

*Bus T3DP1 L 0.208 kV, Zone 1, Area 1
 E/Z = 4.057 kA (1.46 MVA) At -58.76DEG, X/R = 1.65
 Z1 = 39.217767 +j 63.108727 pu, Z0 = 27.996715 +j 49.267257 pu
 1.6*ISYM= 6.492 IASYM Based on X/R ratio = 4.205
 Max. Low Voltage Power Circuit Breaker Duty = 4.06 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 4.06 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 4.06 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1 H		T3DP1 L	4.06	-58.76	Branch	1	1	T3DP1
3DP1		T3DP1 L	0.00	0.00	Branch	1	1	C 3DP1

*Bus T3LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 21.024 kA (17.48 MVA) At -60.22DEG, X/R = 1.75
 Z1 = 1.581899 +j 3.632814 pu, Z0 = 5.361827 +j 7.630565 pu
 1.6*ISYM= 33.638 IASYM Based on X/R ratio = 21.931
 Max. Low Voltage Power Circuit Breaker Duty = 21.02 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 21.02 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 21.02 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA L		T3LDPA H	0.00	0.00	Branch	1	1	T3LDPA
3HDPA		T3LDPA H	21.02	-60.22	Branch	1	1	C T3LDPA

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Driving Point Voltage (P.U.) = 1.00000

*Bus T3LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.925 kA (3.58 MVA) At -62.48DEG, X/R = 1.92
 Z1 = 14.074962 +j 27.191982 pu, Z0 = 10.619061 +j 20.025263 pu
 1.6*ISYM= 15.880 IASYM Based on X/R ratio = 10.476
 Max. Low Voltage Power Circuit Breaker Duty = 9.92 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.92 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.92 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA H		T3LDPA L	9.92	-62.48	Branch	1	1	T3LDPA
3LDPA		T3LDPA L	0.00	0.00	Branch	1	1	C 3LDPA

*Bus T3LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 12.581 kA (10.46 MVA) At -60.69DEG, X/R = 1.78
 Z1 = 2.500820 +j 5.318636 pu, Z0 = 9.037485 +j 14.373842 pu
 1.6*ISYM= 20.129 IASYM Based on X/R ratio = 13.154
 Max. Low Voltage Power Circuit Breaker Duty = 12.58 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 12.58 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 12.58 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPB L		T3LDPB H	0.00	0.00	Branch	1	1	T3LDPB
3HDPA		T3LDPB H	12.58	-60.69	Branch	1	1	C T3LDPB

*Bus T3LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 11.929 kA (4.30 MVA) At -71.16DEG, X/R = 2.93
 Z1 = 8.656797 +j 24.767645 pu, Z0 = 5.232563 +j 16.531632 pu
 1.6*ISYM= 19.086 IASYM Based on X/R ratio = 13.535
 Max. Low Voltage Power Circuit Breaker Duty = 11.93 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 11.93 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 11.93 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPB H		T3LDPB L	11.93	-71.16	Branch	1	1	T3LDPB
3LDPB		T3LDPB L	0.00	0.00	Branch	1	1	C 3LDPB

*Bus T4DP1 H 0.480 kV, Zone 1, Area 1
 E/Z = 17.364 kA (14.44 MVA) At -52.90DEG, X/R = 1.32
 Z1 = 2.250415 +j 3.912853 pu, Z0 = 8.033345 +j 8.749288 pu
 1.6*ISYM= 27.783 IASYM Based on X/R ratio = 17.666
 Max. Low Voltage Power Circuit Breaker Duty = 17.36 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 17.36 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 17.36 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1 L		T4DP1 H	0.00	0.00	Branch	1	1	T4DP1
4HAIH		T4DP1 H	17.36	-52.90	Branch	1	1	C T4DP1

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Driving Point Voltage (P.U.) = 1.00000

*Bus T4DP1 L 0.208 kV, Zone 1, Area 1
 E/Z = 4.184 kA (1.51 MVA) At -60.38DEG, X/R = 1.76
 Z1 = 35.188052 +j 61.874527 pu, Z0 = 27.996715 +j 49.267257 pu
 1.6*ISYM= 6.694 IASYM Based on X/R ratio = 4.368
 Max. Low Voltage Power Circuit Breaker Duty = 4.18 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 4.18 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 4.18 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1	H	T4DP1 L	4.18	-60.38	Branch	1	1	T4DP1
4DP1		T4DP1 L	0.00	0.00	Branch	1	1	C 4DP1

*Bus T4LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 23.021 kA (19.14 MVA) At -65.51DEG, X/R = 2.20
 Z1 = 1.243919 +j 3.527161 pu, Z0 = 4.010211 +j 7.209850 pu
 1.6*ISYM= 36.834 IASYM Based on X/R ratio = 24.788
 Max. Low Voltage Power Circuit Breaker Duty = 23.02 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 23.02 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 23.02 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPA	L	T4LDPA H	0.09	-71.20	Branch	1	1	T4LDPA
4HDPA		T4LDPA H	22.94	-65.49	Branch	1	1	C T4LDPA

*Bus T4LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 20.906 kA (7.53 MVA) At -76.43DEG, X/R = 4.14
 Z1 = 3.627892 +j 14.541365 pu, Z0 = 2.092333 +j 9.635432 pu
 1.6*ISYM= 33.450 IASYM Based on X/R ratio = 25.503
 Max. Low Voltage Power Circuit Breaker Duty = 20.91 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 20.91 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 22.20 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPA	H	T4LDPA L	20.59	-76.42	Branch	1	1	T4LDPA
4LDPA		T4LDPA L	0.32	-76.67	Branch	1	1	C 4LDPA

*Bus T4LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 31.519 kA (26.20 MVA) At -69.48DEG, X/R = 2.67
 Z1 = 0.834496 +j 2.942473 pu, Z0 = 2.345036 +j 4.836938 pu
 1.6*ISYM= 50.430 IASYM Based on X/R ratio = 35.125
 Max. Low Voltage Power Circuit Breaker Duty = 31.52 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 31.52 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 31.52 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB	L	T4LDPB H	0.00	0.00	Branch	1	1	T4LDPB
4HDPB		T4LDPB H	31.52	-69.48	Branch	1	1	C T4LDPB

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Driving Point Voltage (P.U.) = 1.00000

*Bus T4LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 12.960 kA (4.67 MVA) At -72.60DEG, X/R = 3.19
 Z1 = 6.990473 +j 22.391482 pu, Z0 = 5.232563 +j 16.531632 pu
 1.6*ISYM= 20.735 IASYM Based on X/R ratio = 14.961
 Max. Low Voltage Power Circuit Breaker Duty = 12.96 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 12.96 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 12.97 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB H		T4LDPB L	12.96	-72.60	Branch	1	1	T4LDPB
4LDPB		T4LDPB L	0.00	0.00	Branch	1	1	C 4LDPB

*Bus T8LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 21.024 kA (17.48 MVA) At -60.22DEG, X/R = 1.75
 Z1 = 1.581899 +j 3.632814 pu, Z0 = 5.361827 +j 7.630565 pu
 1.6*ISYM= 33.638 IASYM Based on X/R ratio = 21.931
 Max. Low Voltage Power Circuit Breaker Duty = 21.02 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 21.02 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 21.02 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA L		T8LDPA H	0.00	0.00	Branch	1	1	T8LDPA
3HDPA		T8LDPA H	21.02	-60.22	Branch	1	1	C T8LDPA

*Bus T8LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.925 kA (3.58 MVA) At -62.48DEG, X/R = 1.92
 Z1 = 14.074962 +j 27.191982 pu, Z0 = 10.619061 +j 20.025263 pu
 1.6*ISYM= 15.880 IASYM Based on X/R ratio = 10.476
 Max. Low Voltage Power Circuit Breaker Duty = 9.92 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.92 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.92 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA H		T8LDPA L	9.92	-62.48	Branch	1	1	T8LDPA
8LDPA		T8LDPA L	0.00	0.00	Branch	1	1	C 8LDPA

*Bus T8LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 8.397 kA (6.98 MVA) At -37.77DEG, X/R = 0.77
 Z1 = 5.822953 +j 5.536588 pu, Z0 = 22.325976 +j 15.245708 pu
 1.6*ISYM= 13.435 IASYM Based on X/R ratio = 8.407
 Max. Low Voltage Power Circuit Breaker Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 8.40 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 8.40 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB L		T8LDPB H	0.00	0.00	Branch	1	1	T8LDPB
3HDPA		T8LDPB H	8.40	-37.77	Branch	1	1	C T8LDPB

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus T8LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 9.113 kA (3.28 MVA) At -58.86DEG, X/R = 1.66
 Z1 = 18.316016 +j 29.095755 pu, Z0 = 10.619061 +j 20.025263 pu
 1.6*ISYM= 14.580 IASYM Based on X/R ratio = 9.448
 Max. Low Voltage Power Circuit Breaker Duty = 9.11 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 9.11 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 9.11 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB H		T8LDPB L	9.11	-58.86	Branch	1	1	T8LDPB
8LDPB		T8LDPB L	0.00	0.00	Branch	1	1	C 8LDPB

*Bus TX NPC L 0.480 kV, Zone 1, Area 1
 E/Z = 56.788 kA (47.21 MVA) At -81.83DEG, X/R = 6.97
 Z1 = 0.317308 +j 2.206167 pu, Z0 = 0.268201 +j 1.877407 pu
 1.6*ISYM= 90.861 IASYM Based on X/R ratio = 77.055
 Max. Low Voltage Power Circuit Breaker Duty = 57.30 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 60.51 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 66.55 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
NPC		TX NPC L	56.45	-81.87	Util	1	1	
MDA		TX NPC L	0.34	-75.80	Branch	1	1	C MDA

*Bus TX T6LAC1A H 0.480 kV, Zone 1, Area 1
 E/Z = 13.930 kA (11.58 MVA) At -45.31DEG, X/R = 1.01
 Z1 = 3.202672 +j 4.226806 pu, Z0 = 11.811241 +j 9.962796 pu
 1.6*ISYM= 22.288 IASYM Based on X/R ratio = 14.007
 Max. Low Voltage Power Circuit Breaker Duty = 13.93 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 13.93 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 13.93 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A L		TX T6LAC1A H	0.00	0.00	Branch	1	1	TX T6LAC1A
6HDPA		TX T6LAC1A H	13.93	-45.31	Branch	1	1	C TX T6LAC1A

*Bus TX T6LAC1A L 0.208 kV, Zone 1, Area 1
 E/Z = 4.153 kA (1.50 MVA) At -59.99DEG, X/R = 1.73
 Z1 = 36.140310 +j 62.188479 pu, Z0 = 27.996715 +j 49.267257 pu
 1.6*ISYM= 6.644 IASYM Based on X/R ratio = 4.327
 Max. Low Voltage Power Circuit Breaker Duty = 4.15 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 4.15 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 4.15 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A H		TX T6LAC1A L	4.15	-59.99	Branch	1	1	TX T6LAC1A
6LAC1A		TX T6LAC1A L	0.00	0.00	Branch	1	1	C 6LAC1A

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Driving Point Voltage (P.U.) = 1.00000

*Bus TX T6LAIA H 0.480 kV, Zone 1, Area 1
 E/Z = 13.930 kA (11.58 MVA) At -45.31DEG, X/R = 1.01
 Z1 = 3.202672 +j 4.226806 pu, Z0 = 11.811241 +j 9.962796 pu
 1.6*ISYM= 22.288 IASYM Based on X/R ratio = 14.007
 Max. Low Voltage Power Circuit Breaker Duty = 13.93 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 13.93 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 13.93 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA L		TX T6LAIA H	0.00	0.00	Branch	1	1	TX T6LAIA
6HDPA		TX T6LAIA H	13.93	-45.31	Branch	1	1	C TX T6LAIA

*Bus TX T6LAIA L 0.208 kV, Zone 1, Area 1
 E/Z = 4.666 kA (1.68 MVA) At -59.94DEG, X/R = 1.73
 Z1 = 32.319543 +j 55.464927 pu, Z0 = 24.749125 +j 43.552274 pu
 1.6*ISYM= 7.465 IASYM Based on X/R ratio = 4.861
 Max. Low Voltage Power Circuit Breaker Duty = 4.67 kA SYM
 Max. LV MCCB or ICCB (Rated >20kA INT.) Duty = 4.67 kA SYM
 Max. LV MCCB or ICCB (Rated 10-20kA INT.)Duty = 4.67 kA SYM

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA H		TX T6LAIA L	4.67	-59.94	Branch	1	1	TX T6LAIA
6LAIA		TX T6LAIA L	0.00	0.00	Branch	1	1	C 6LAIA

Ground Fault

Low Voltage Interrupting Report

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Interrupting Report

Interrupting Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 3DP1 0.208 kV, Zone 1, Area 1
 E/Z = 3.872 kA (1.395 MVA) At -57.29DEG, X/R = 1.85
 Z1 = 40.855977 +j 64.045359 pu, Z0 = 34.511299 +j 52.886617 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1 L		3DP1	3.87	-57.29	Branch	1	1	C 3DP1

*Bus 3HA1A 0.480 kV, Zone 1, Area 1
 E/Z = 19.686 kA (16.366 MVA) At -60.12DEG, X/R = 2.02
 Z1 = 1.690928 +j 3.825530 pu, Z0 = 5.759695 +j 8.274254 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HA1A	19.69	-60.12	Branch	1	1	C 3HA1A
T3DP1 H		3HA1A	0.00	0.00	Branch	1	1	C T3DP1

*Bus 3HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 20.423 kA (16.979 MVA) At -64.34DEG, X/R = 2.32
 Z1 = 1.444118 +j 3.830988 pu, Z0 = 4.772459 +j 8.296081 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAIB	20.42	-64.34	Branch	1	1	C 3HAIB

*Bus 3HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 19.516 kA (16.225 MVA) At -59.88DEG, X/R = 2.00
 Z1 = 1.715179 +j 3.842230 pu, Z0 = 5.856703 +j 8.341052 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAIC	19.52	-59.88	Branch	1	1	C 3HAIC

*Bus 3HAID 0.480 kV, Zone 1, Area 1
 E/Z = 19.686 kA (16.366 MVA) At -60.12DEG, X/R = 2.02
 Z1 = 1.690928 +j 3.825530 pu, Z0 = 5.759699 +j 8.274254 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		3HAID	19.69	-60.12	Branch	1	1	C 3HAID

*Bus 3HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 23.709 kA (19.712 MVA) At -65.87DEG, X/R = 2.45
 Z1 = 1.205910 +j 3.491538 pu, Z0 = 3.819630 +j 6.938281 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDA		3HDPA	23.66	-65.86	Branch	1	1	C 3HDPA
3HA1A		3HDPA	0.00	0.00	Branch	1	1	C 3HA1A
3HAIB		3HDPA	0.00	0.00	Branch	1	1	C 3HAIB
8HA2A		3HDPA	0.00	0.00	Branch	1	1	C 8HA2A
8HA2B		3HDPA	0.00	0.00	Branch	1	1	C 8HA2B
T8LDPA H		3HDPA	0.00	0.00	Branch	1	1	C T8LDPA
T8LDPB H		3HDPA	0.00	0.00	Branch	1	1	C T8LDPB
T3LDPA H		3HDPA	0.00	0.00	Branch	1	1	C T3LDPA
T3LDPB H		3HDPA	0.00	0.00	Branch	1	1	C T3LDPB
ELEV		3HDPA	0.05	-72.41	Branch	1	1	C ELEV
3HAIC		3HDPA	0.00	0.00	Branch	1	1	C 3HAIC
3HAID		3HDPA	0.00	0.00	Branch	1	1	C 3HAID

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Interrupting Report

Interrupting Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 3LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.442 kA (3.041 MVA) At -59.44DEG, X/R = 1.97
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LA1A	8.44	-59.44	Branch	1	1	C 3LA1A

*Bus 3LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.442 kA (3.041 MVA) At -59.44DEG, X/R = 1.97
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LAC1A	8.44	-59.44	Branch	1	1	C 3LAC1A

*Bus 3LAC1B 0.208 kV, Zone 1, Area 1
 E/Z = 8.442 kA (3.041 MVA) At -59.44DEG, X/R = 1.97
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPA		3LAC1B	8.44	-59.44	Branch	1	1	C 3LAC1B

*Bus 3LB1A 0.208 kV, Zone 1, Area 1
 E/Z = 10.321 kA (3.718 MVA) At -66.54DEG, X/R = 2.52
 Z1 = 10.259866 +j 26.119177 pu, Z0 = 11.606581 +j 21.810593 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LB1A	10.32	-66.54	Branch	1	1	C 3LB1A

*Bus 3LB1B 0.208 kV, Zone 1, Area 1
 E/Z = 10.321 kA (3.718 MVA) At -66.54DEG, X/R = 2.52
 Z1 = 10.259866 +j 26.119177 pu, Z0 = 11.606581 +j 21.810593 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LB1B	10.32	-66.54	Branch	1	1	C 3LB1B

*Bus 3LBC1A 0.208 kV, Zone 1, Area 1
 E/Z = 10.321 kA (3.718 MVA) At -66.54DEG, X/R = 2.52
 Z1 = 10.259866 +j 26.119177 pu, Z0 = 11.606581 +j 21.810593 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1A	10.32	-66.54	Branch	1	1	C 3LBC1A

*Bus 3LBC1B 0.208 kV, Zone 1, Area 1
 E/Z = 10.321 kA (3.718 MVA) At -66.54DEG, X/R = 2.52
 Z1 = 10.259866 +j 26.119177 pu, Z0 = 11.606581 +j 21.810593 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1B	10.32	-66.54	Branch	1	1	C 3LBC1B

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Interrupting Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 3LBC1C 0.208 kV, Zone 1, Area 1
 E/Z = 10.321 kA (3.718 MVA) At -66.54DEG, X/R = 2.52
 Z1 = 10.259866 +j 26.119177 pu, Z0 = 11.606581 +j 21.810593 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LDPB		3LBC1C	10.32	-66.54	Branch	1	1	C 3LBC1C

*Bus 3LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 9.232 kA (3.326 MVA) At -61.96DEG, X/R = 2.13
 Z1 = 14.688601 +j 28.084595 pu, Z0 = 13.035366 +j 23.468541 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA L		3LDPA	9.23	-61.96	Branch	1	1	C 3LDPA
3LAC1A		3LDPA	0.00	0.00	Branch	1	1	C 3LAC1A
3LAC1B		3LDPA	0.00	0.00	Branch	1	1	C 3LAC1B
3LA1A		3LDPA	0.00	0.00	Branch	1	1	C 3LA1A

*Bus 3LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 11.426 kA (4.117 MVA) At -70.47DEG, X/R = 2.99
 Z1 = 8.968397 +j 25.229849 pu, Z0 = 6.440715 +j 18.253271 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3LB1B		3LDPB	0.00	0.00	Branch	1	1	C 3LB1B
T3LDPB L		3LDPB	11.43	-70.47	Branch	1	1	C 3LDPB
3LBC1A		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1A
3LBC1B		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1B
3LBC1C		3LDPB	0.00	0.00	Branch	1	1	C 3LBC1C
3LB1A		3LDPB	0.00	0.00	Branch	1	1	C 3LB1A

*Bus 4DP1 0.208 kV, Zone 1, Area 1
 E/Z = 4.012 kA (1.445 MVA) At -59.25DEG, X/R = 1.96
 Z1 = 36.488442 +j 62.795289 pu, Z0 = 33.162580 +j 52.824580 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1 L		4DP1	4.01	-59.25	Branch	1	1	C 4DP1

*Bus 4HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 28.738 kA (23.892 MVA) At -63.93DEG, X/R = 2.29
 Z1 = 1.087587 +j 3.055051 pu, Z0 = 3.346361 +j 5.192347 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPB		4HAIA	28.74	-63.93	Branch	1	1	C 4HAIA

*Bus 4HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 20.500 kA (17.044 MVA) At -61.14DEG, X/R = 2.08
 Z1 = 1.584850 +j 3.745800 pu, Z0 = 5.335403 +j 7.955342 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIB	20.50	-61.14	Branch	1	1	C 4HAIB

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Driving Point Voltage (P.U.) = 1.00000

*Bus 4HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 20.500 kA (17.044 MVA) At -61.14DEG, X/R = 2.08
 Z1 = 1.584850 +j 3.745800 pu, Z0 = 5.335403 +j 7.955342 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIC	20.50	-61.14	Branch	1	1	C 4HAIC

*Bus 4HAID 0.480 kV, Zone 1, Area 1
 E/Z = 20.318 kA (16.892 MVA) At -60.88DEG, X/R = 2.06
 Z1 = 1.609101 +j 3.762500 pu, Z0 = 5.432406 +j 8.022141 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAID	20.32	-60.88	Branch	1	1	C 4HAID

*Bus 4HAIE 0.480 kV, Zone 1, Area 1
 E/Z = 28.389 kA (23.602 MVA) At -63.54DEG, X/R = 2.26
 Z1 = 1.111838 +j 3.071750 pu, Z0 = 3.443364 +j 5.259145 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPB		4HAIE	28.39	-63.54	Branch	1	1	C 4HAIE

*Bus 4HAIF 0.480 kV, Zone 1, Area 1
 E/Z = 28.047 kA (23.318 MVA) At -63.16DEG, X/R = 2.23
 Z1 = 1.136089 +j 3.088450 pu, Z0 = 3.540368 +j 5.325944 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPB		4HAIF	28.05	-63.16	Branch	1	1	C 4HAIF

*Bus 4HAIG 0.480 kV, Zone 1, Area 1
 E/Z = 20.318 kA (16.892 MVA) At -60.88DEG, X/R = 2.06
 Z1 = 1.609101 +j 3.762500 pu, Z0 = 5.432406 +j 8.022141 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIG	20.32	-60.88	Branch	1	1	C 4HAIG

*Bus 4HAIH 0.480 kV, Zone 1, Area 1
 E/Z = 20.500 kA (17.044 MVA) At -61.14DEG, X/R = 2.08
 Z1 = 1.584850 +j 3.745800 pu, Z0 = 5.335400 +j 7.955342 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HDPA		4HAIH	20.50	-61.14	Branch	1	1	C 4HAIH
T4DP1 H		4HAIH	0.00	0.00	Branch	1	1	C T4DP1

*Bus 4HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 23.854 kA (19.832 MVA) At -65.94DEG, X/R = 2.46
 Z1 = 1.196836 +j 3.478606 pu, Z0 = 3.783347 +j 6.886564 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4HAIG		4HDPA	0.00	0.00	Branch	1	1	C 4HAIG
T4LDPA H		4HDPA	0.04	-71.21	Branch	1	1	C T4LDPA
4HAIH		4HDPA	0.00	0.00	Branch	1	1	C 4HAIH
4HAIB		4HDPA	0.00	0.00	Branch	1	1	C 4HAIB
4HAIC		4HDPA	0.00	0.00	Branch	1	1	C 4HAIC
4HAID		4HDPA	0.00	0.00	Branch	1	1	C 4HAID
MDA		4HDPA	23.81	-65.93	Branch	1	1	C 4HDPA

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Driving Point Voltage (P.U.) = 1.00000

*Bus 4HDPB 0.480 kV, Zone 1, Area 1
 E/Z = 34.934 kA (29.043 MVA) At -71.16DEG, X/R = 3.11
 Z1 = 0.723823 +j 2.804557 pu, Z0 = 1.891309 +j 4.190368 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB	H	4HDPB	0.00	0.00	Branch	1	1	C T4LDPB
MDA		4HDPB	34.90	-71.16	Branch	1	1	C4HDPB
4HAIA		4HDPB	0.00	0.00	Branch	1	1	C 4HAIA
4HAIE		4HDPB	0.00	0.00	Branch	1	1	C 4HAIE
4HAIF		4HDPB	0.00	0.00	Branch	1	1	C 4HAIF
CA		4HDPB	0.03	-68.22	Branch	1	1	C CA

*Bus 4LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 16.783 kA (6.046 MVA) At -67.89DEG, X/R = 2.66
 Z1 = 5.256546 +j 16.045632 pu, Z0 = 8.258045 +j 14.237142 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LA1A	16.78	-67.89	Branch	1	1	C 4LA1A

*Bus 4LA1C 0.208 kV, Zone 1, Area 1
 E/Z = 16.520 kA (5.952 MVA) At -67.30DEG, X/R = 2.59
 Z1 = 5.385693 +j 16.134565 pu, Z0 = 8.774632 +j 14.592875 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LA1C	16.52	-67.30	Branch	1	1	C 4LA1C

*Bus 4LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 16.014 kA (5.769 MVA) At -66.18DEG, X/R = 2.48
 Z1 = 5.643986 +j 16.312431 pu, Z0 = 9.807805 +j 15.304339 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAC1A	16.01	-66.18	Branch	1	1	C 4LAC1A

*Bus 4LAC1B 0.208 kV, Zone 1, Area 1
 E/Z = 5.220 kA (1.881 MVA) At -44.39DEG, X/R = 1.41
 Z1 = 21.141610 +j 26.984370 pu, Z0 = 71.798189 +j 57.992209 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAC1B	5.22	-44.39	Branch	1	1	C 4LAC1B

*Bus 4LAIKA 0.208 kV, Zone 1, Area 1
 E/Z = 9.262 kA (3.337 MVA) At -52.21DEG, X/R = 1.65
 Z1 = 11.326449 +j 20.225475 pu, Z0 = 32.537614 +j 30.956559 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKA	9.26	-52.21	Branch	1	1	C 4LAIKA

*Bus 4LAIKB 0.208 kV, Zone 1, Area 1
 E/Z = 9.170 kA (3.304 MVA) At -52.03DEG, X/R = 1.64
 Z1 = 11.455595 +j 20.314408 pu, Z0 = 33.054199 +j 31.312291 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKB	9.17	-52.03	Branch	1	1	C 4LAIKB

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Driving Point Voltage (P.U.) = 1.00000

*Bus 4LAIKC 0.208 kV, Zone 1, Area 1
 E/Z = 8.993 kA (3.240 MVA) At -51.68DEG, X/R = 1.63
 Z1 = 11.713890 +j 20.492274 pu, Z0 = 34.087373 +j 32.023757 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKC	8.99	-51.68	Branch	1	1	C 4LAIKC

*Bus 4LAIKD 0.208 kV, Zone 1, Area 1
 E/Z = 8.906 kA (3.209 MVA) At -51.51DEG, X/R = 1.62
 Z1 = 11.843036 +j 20.581206 pu, Z0 = 34.603960 +j 32.379488 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKD	8.91	-51.51	Branch	1	1	C 4LAIKD

*Bus 4LAIKE 0.208 kV, Zone 1, Area 1
 E/Z = 1.978 kA (0.712 MVA) At -17.92DEG, X/R = 1.05
 Z1 = 68.918175 +j 29.983807 pu, Z0 = 262.903810 +j 69.989684 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKE	1.98	-17.92	Branch	1	1	C 4LAIKE

*Bus 4LAIKF 0.208 kV, Zone 1, Area 1
 E/Z = 1.610 kA (0.580 MVA) At -16.99DEG, X/R = 1.05
 Z1 = 84.570862 +j 33.571304 pu, Z0 = 325.514406 +j 84.339636 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPA		4LAIKF	1.61	-16.99	Branch	1	1	C 4LAIKF

*Bus 4LBCIB 0.208 kV, Zone 1, Area 1
 E/Z = 11.103 kA (4.000 MVA) At -67.44DEG, X/R = 2.61
 Z1 = 8.586740 +j 23.734946 pu, Z0 = 11.606581 +j 21.810593 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBCIB	11.10	-67.44	Branch	1	1	C 4LBCIB

*Bus 4LBIB 0.208 kV, Zone 1, Area 1
 E/Z = 8.633 kA (3.110 MVA) At -59.52DEG, X/R = 1.99
 Z1 = 11.944558 +j 26.047200 pu, Z0 = 25.037832 +j 31.059632 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBIB	8.63	-59.52	Branch	1	1	C 4LBIB

*Bus 4LBID 0.208 kV, Zone 1, Area 1
 E/Z = 5.019 kA (1.808 MVA) At -48.76DEG, X/R = 1.53
 Z1 = 22.018013 +j 32.983960 pu, Z0 = 65.331577 +j 58.806745 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBID	5.02	-48.76	Branch	1	1	C 4LBID

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Driving Point Voltage (P.U.) = 1.00000

*Bus 4LBIE 0.208 kV, Zone 1, Area 1
 E/Z = 11.103 kA (4.000 MVA) At -67.44DEG, X/R = 2.61
 Z1 = 8.586740 +j 23.734946 pu, Z0 = 11.606581 +j 21.810593 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LDPB		4LBIE	11.10	-67.44	Branch	1	1	C 4LBIE

*Bus 4LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 20.132 kA (7.253 MVA) At -75.79DEG, X/R = 4.04
 Z1 = 3.835930 +j 15.067371 pu, Z0 = 2.575594 +j 10.324088 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LAIKA		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKA
4LAIKB		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKB
4LAIKC		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKC
4LAIKD		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKD
4LAIKE		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKE
4LAIKF		4LDPA	0.00	0.00	Branch	1	1	C 4LAIKF
T4LDPA L		4LDPA	19.98	-75.78	Branch	1	1	C 4LDPA
4LAC1A		4LDPA	0.00	0.00	Branch	1	1	C 4LAC1A
4LAC1B		4LDPA	0.00	0.00	Branch	1	1	C 4LAC1B
4LA1A		4LDPA	0.00	0.00	Branch	1	1	C 4LA1A
4LA1C		4LDPA	0.00	0.00	Branch	1	1	C 4LA1C
BH		4LDPA	0.16	-76.31	Branch	1	1	C BH E-146

*Bus 4LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 12.375 kA (4.458 MVA) At -71.79DEG, X/R = 3.20
 Z1 = 7.295271 +j 22.845618 pu, Z0 = 6.440715 +j 18.253271 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4LBCIB		4LDPB	0.00	0.00	Branch	1	1	C 4LBCIB
4LBID		4LDPB	0.00	0.00	Branch	1	1	C 4LBID
4LBIB		4LDPB	0.00	0.00	Branch	1	1	C 4LBIB
4LBIE		4LDPB	0.00	0.00	Branch	1	1	C 4LBIE
T4LDPB L		4LDPB	12.37	-71.79	Branch	1	1	C 4LDPB

*Bus 6HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 14.221 kA (11.823 MVA) At -48.34DEG, X/R = 1.51
 Z1 = 2.978653 +j 4.334415 pu, Z0 = 10.910620 +j 10.309804 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIA	14.22	-48.34	Branch	1	1	C 6HAIA

*Bus 6HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 14.125 kA (11.743 MVA) At -48.25DEG, X/R = 1.51
 Z1 = 3.002904 +j 4.351114 pu, Z0 = 11.007624 +j 10.376603 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIB	14.12	-48.25	Branch	1	1	C 6HAIB

*Bus 6HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 14.125 kA (11.743 MVA) At -48.25DEG, X/R = 1.51
 Z1 = 3.002904 +j 4.351114 pu, Z0 = 11.007624 +j 10.376603 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		6HAIC	14.12	-48.25	Branch	1	1	C 6HAIC

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*Bus 6HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 15.939 kA (13.251 MVA) At -50.05DEG, X/R = 1.57
 Z1 = 2.590638 +j 4.067221 pu, Z0 = 9.358565 +j 9.241026 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDA		6HDPA	15.94	-50.05	Branch	1	1	C 6HDPA
6HAIA		6HDPA	0.00	0.00	Branch	1	1	C 6HAIA
6HAIB		6HDPA	0.00	0.00	Branch	1	1	C 6HAIB
6HAIC		6HDPA	0.00	0.00	Branch	1	1	C 6HAIC
TX T6LAIA H		6HDPA	0.00	0.00	Branch	1	1	C TX T6LAIA
TX T6LAC1A H		6HDPA	0.00	0.00	Branch	1	1	C TX T6LAC1A

*Bus 6LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 3.983 kA (1.435 MVA) At -58.89DEG, X/R = 1.94
 Z1 = 37.432913 +j 63.098665 pu, Z0 = 33.162580 +j 52.824580 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A L		6LAC1A	3.98	-58.89	Branch	1	1	C 6LAC1A

*Bus 6LAIA 0.208 kV, Zone 1, Area 1
 E/Z = 4.452 kA (1.604 MVA) At -58.71DEG, X/R = 1.93
 Z1 = 33.612146 +j 56.375113 pu, Z0 = 29.914990 +j 47.109596 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA L		6LAIA	4.45	-58.71	Branch	1	1	C 6LAIA

*Bus 8HA2A 0.480 kV, Zone 1, Area 1
 E/Z = 22.024 kA (18.310 MVA) At -65.08DEG, X/R = 2.38
 Z1 = 1.319342 +j 3.653181 pu, Z0 = 4.273358 +j 7.584853 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		8HA2A	22.02	-65.08	Branch	1	1	C 8HA2A

*Bus 8HA2B 0.480 kV, Zone 1, Area 1
 E/Z = 21.538 kA (17.906 MVA) At -62.73DEG, X/R = 2.19
 Z1 = 1.448419 +j 3.658534 pu, Z0 = 4.789665 +j 7.606268 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3HDPA		8HA2B	21.54	-62.73	Branch	1	1	C 8HA2B

*Bus 8LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.442 kA (3.041 MVA) At -59.44DEG, X/R = 1.97
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LA2A	8.44	-59.44	Branch	1	1	C 8LA2A

*Bus 8LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.442 kA (3.041 MVA) At -59.44DEG, X/R = 1.97
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LAC2A	8.44	-59.44	Branch	1	1	C 8LAC2A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 8LAC2B 0.208 kV, Zone 1, Area 1
 E/Z = 8.442 kA (3.041 MVA) At -59.44DEG, X/R = 1.97
 Z1 = 15.980069 +j 28.973924 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPA		8LAC2B	8.44	-59.44	Branch	1	1	C 8LAC2B

*Bus 8LB2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.829 kA (2.820 MVA) At -56.55DEG, X/R = 1.81
 Z1 = 20.221124 +j 30.877697 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LB2A	7.83	-56.55	Branch	1	1	C 8LB2A

*Bus 8LBC2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.829 kA (2.820 MVA) At -56.55DEG, X/R = 1.81
 Z1 = 20.221124 +j 30.877697 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LBC2A	7.83	-56.55	Branch	1	1	C 8LBC2A

*Bus 8LBC2B 0.208 kV, Zone 1, Area 1
 E/Z = 7.829 kA (2.820 MVA) At -56.55DEG, X/R = 1.81
 Z1 = 20.221124 +j 30.877697 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
8LDPB		8LBC2B	7.83	-56.55	Branch	1	1	C 8LBC2B

*Bus 8LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 9.232 kA (3.326 MVA) At -61.96DEG, X/R = 2.13
 Z1 = 14.688601 +j 28.084595 pu, Z0 = 13.035366 +j 23.468541 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA L		8LDPA	9.23	-61.96	Branch	1	1	C 8LDPA
8LAC2A		8LDPA	0.00	0.00	Branch	1	1	C 8LAC2A
8LAC2B		8LDPA	0.00	0.00	Branch	1	1	C 8LAC2B
8LA2A		8LDPA	0.00	0.00	Branch	1	1	C 8LA2A

*Bus 8LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 8.522 kA (3.070 MVA) At -58.62DEG, X/R = 1.92
 Z1 = 18.929655 +j 29.988369 pu, Z0 = 13.035366 +j 23.468541 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB L		8LDPB	8.52	-58.62	Branch	1	1	C 8LDPB
8LBC2A		8LDPB	0.00	0.00	Branch	1	1	C 8LBC2A
8LBC2B		8LDPB	0.00	0.00	Branch	1	1	C 8LBC2B
8LB2A		8LDPB	0.00	0.00	Branch	1	1	C 8LB2A

*Bus BH 0.208 kV, Zone 1, Area 1
 E/Z = 6.252 kA (2.252 MVA) At -32.09DEG, X/R = 1.19
 Z1 = 21.142399 +j 20.160341 pu, Z0 = 71.802187 +j 30.695841 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M BH E-146		BH	0.09	-64.70	Motor	1	1	
4LDPA		BH	6.18	-31.64	Branch	1	1	C BH E-146

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Driving Point Voltage (P.U.) = 1.00000

*Bus CA 0.480 kV, Zone 1, Area 1
 E/Z = 4.986 kA (4.146 MVA) At -15.94DEG, X/R = 1.04
 Z1 = 11.786545 +j 4.472960 pu, Z0 = 46.142487 +j 10.863923 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M CA		CA	0.02	-67.76	Motor	1	1	
4HDPB		CA	4.97	-15.76	Branch	1	1	C CA

*Bus ELEV 0.480 kV, Zone 1, Area 1
 E/Z = 14.847 kA (12.344 MVA) At -42.92DEG, X/R = 1.37
 Z1 = 3.139610 +j 3.934730 pu, Z0 = 11.554418 +j 8.711046 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M ELEV 360		ELEV	0.04	-69.02	Motor	1	1	
3HDPA		ELEV	14.81	-42.86	Branch	1	1	C ELEV

*Bus MDA 0.480 kV, Zone 1, Area 1
 E/Z = 54.552 kA (45.353 MVA) At -80.80DEG, X/R = 6.25
 Z1 = 0.343825 +j 2.263053 pu, Z0 = 0.371320 +j 2.024355 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
6HDPA		MDA	0.00	0.00	Branch	1	1	C 6HDPA
3HDPA		MDA	0.06	-76.91	Branch	1	1	C 3HDPA
4HDPA		MDA	0.06	-75.70	Branch	1	1	C 4HDPA
4HDPB		MDA	0.04	-72.00	Branch	1	1	C 4HDPB
TX NPC L		MDA	54.39	-80.81	Branch	1	1	C MDA

*Bus T3DP1 H 0.480 kV, Zone 1, Area 1
 E/Z = 8.224 kA (6.837 MVA) At -33.18DEG, X/R = 1.20
 Z1 = 6.289692 +j 5.178847 pu, Z0 = 24.154757 +j 13.687546 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1 L		T3DP1 H	0.00	0.00	Branch	1	1	T3DP1
3HA1A		T3DP1 H	8.22	-33.18	Branch	1	1	C T3DP1

*Bus T3DP1 L 0.208 kV, Zone 1, Area 1
 E/Z = 4.057 kA (1.461 MVA) At -58.77DEG, X/R = 1.93
 Z1 = 39.227329 +j 63.140521 pu, Z0 = 27.996715 +j 49.267257 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3DP1 H		T3DP1 L	4.06	-58.77	Branch	1	1	T3DP1
3DP1		T3DP1 L	0.00	0.00	Branch	1	1	C 3DP1

*Bus T3LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 20.984 kA (17.446 MVA) At -60.24DEG, X/R = 2.02
 Z1 = 1.591460 +j 3.664608 pu, Z0 = 5.361827 +j 7.630565 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA L		T3LDPA H	0.00	0.00	Branch	1	1	T3LDPA
3HDPA		T3LDPA H	20.98	-60.24	Branch	1	1	C T3LDPA

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*Bus T3LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.921 kA (3.574 MVA) At -62.48DEG, X/R = 2.16
 Z1 = 14.084523 +j 27.223776 pu, Z0 = 10.619061 +j 20.025263 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPA H		T3LDPA L	9.92	-62.48	Branch	1	1	T3LDPA
3LDPA		T3LDPA L	0.00	0.00	Branch	1	1	C 3LDPA

*Bus T3LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 12.567 kA (10.448 MVA) At -60.71DEG, X/R = 2.05
 Z1 = 2.510382 +j 5.350430 pu, Z0 = 9.037485 +j 14.373842 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPB L		T3LDPB H	0.00	0.00	Branch	1	1	T3LDPB
3HDPA		T3LDPB H	12.57	-60.71	Branch	1	1	C T3LDPB

*Bus T3LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 11.923 kA (4.295 MVA) At -71.16DEG, X/R = 3.10
 Z1 = 8.666358 +j 24.799439 pu, Z0 = 5.232563 +j 16.531632 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T3LDPB H		T3LDPB L	11.92	-71.16	Branch	1	1	T3LDPB
3LDPB		T3LDPB L	0.00	0.00	Branch	1	1	C 3LDPB

*Bus T4DP1 H 0.480 kV, Zone 1, Area 1
 E/Z = 17.339 kA (14.415 MVA) At -52.94DEG, X/R = 1.67
 Z1 = 2.259336 +j 3.944287 pu, Z0 = 8.033345 +j 8.749288 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1 L		T4DP1 H	0.00	0.00	Branch	1	1	T4DP1
4HA1H		T4DP1 H	17.34	-52.94	Branch	1	1	C T4DP1

*Bus T4DP1 L 0.208 kV, Zone 1, Area 1
 E/Z = 4.183 kA (1.507 MVA) At -60.38DEG, X/R = 2.02
 Z1 = 35.196973 +j 61.905960 pu, Z0 = 27.996715 +j 49.267257 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4DP1 H		T4DP1 L	4.18	-60.38	Branch	1	1	T4DP1
4DP1		T4DP1 L	0.00	0.00	Branch	1	1	C 4DP1

*Bus T4LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 22.972 kA (19.099 MVA) At -65.53DEG, X/R = 2.42
 Z1 = 1.253552 +j 3.559428 pu, Z0 = 4.010211 +j 7.209850 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPA L		T4LDPA H	0.04	-71.22	Branch	1	1	T4LDPA
4HDPA		T4LDPA H	22.93	-65.51	Branch	1	1	C T4LDPA

*Bus T4LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 20.717 kA (7.464 MVA) At -76.42DEG, X/R = 4.22
 Z1 = 3.715115 +j 14.895208 pu, Z0 = 2.092333 +j 9.635432 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPA H		T4LDPA L	20.56	-76.42	Branch	1	1	T4LDPA
4LDPA		T4LDPA L	0.16	-76.67	Branch	1	1	C 4LDPA

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*Bus T4LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 31.455 kA (26.151 MVA) At -69.50DEG, X/R = 2.87
 Z1 = 0.837256 +j 2.966199 pu, Z0 = 2.345036 +j 4.836938 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB L		T4LDPB H	0.00	0.00	Branch	1	1	T4LDPB
4HDPB		T4LDPB H	31.45	-69.50	Branch	1	1	C T4LDPB

*Bus T4LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 12.955 kA (4.667 MVA) At -72.61DEG, X/R = 3.34
 Z1 = 6.993233 +j 22.415208 pu, Z0 = 5.232563 +j 16.531632 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T4LDPB H		T4LDPB L	12.95	-72.61	Branch	1	1	T4LDPB
4LDPB		T4LDPB L	0.00	0.00	Branch	1	1	C 4LDPB

*Bus T8LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 20.984 kA (17.446 MVA) At -60.24DEG, X/R = 2.02
 Z1 = 1.591460 +j 3.664608 pu, Z0 = 5.361827 +j 7.630565 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA L		T8LDPA H	0.00	0.00	Branch	1	1	T8LDPA
3HDPA		T8LDPA H	20.98	-60.24	Branch	1	1	C T8LDPA

*Bus T8LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.921 kA (3.574 MVA) At -62.48DEG, X/R = 2.16
 Z1 = 14.084523 +j 27.223776 pu, Z0 = 10.619061 +j 20.025263 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPA H		T8LDPA L	9.92	-62.48	Branch	1	1	T8LDPA
8LDPA		T8LDPA L	0.00	0.00	Branch	1	1	C 8LDPA

*Bus T8LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 8.391 kA (6.977 MVA) At -37.79DEG, X/R = 1.27
 Z1 = 5.832515 +j 5.568382 pu, Z0 = 22.325976 +j 15.245708 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB L		T8LDPB H	0.00	0.00	Branch	1	1	T8LDPB
3HDPA		T8LDPB H	8.39	-37.79	Branch	1	1	C T8LDPB

*Bus T8LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 9.109 kA (3.282 MVA) At -58.87DEG, X/R = 1.94
 Z1 = 18.325578 +j 29.127550 pu, Z0 = 10.619061 +j 20.025263 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
T8LDPB H		T8LDPB L	9.11	-58.87	Branch	1	1	T8LDPB
8LDPB		T8LDPB L	0.00	0.00	Branch	1	1	C 8LDPB

*Bus TX NPC L 0.480 kV, Zone 1, Area 1
 E/Z = 56.610 kA (47.064 MVA) At -81.85DEG, X/R = 7.05
 Z1 = 0.318045 +j 2.226317 pu, Z0 = 0.268201 +j 1.877407 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
NPC		TX NPC L	56.44	-81.87	Util	1	1	
MDA		TX NPC L	0.17	-75.82	Branch	1	1	C MDA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.01 Rev. 9

Comment: Ground Fault - Low Voltage Interrupting Report

Interrupting Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus TX T6LAC1A H 0.480 kV, Zone 1, Area 1
 E/Z = 13.922 kA (11.574 MVA) At -45.34DEG, X/R = 1.43
 Z1 = 3.203807 +j 4.247663 pu, Z0 = 11.811241 +j 9.962796 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A L		TX T6LAC1A H	0.00	0.00	Branch	1	1	TX T6LAC1A
6HDPA		TX T6LAC1A H	13.92	-45.34	Branch	1	1	C TX T6LAC1A

*Bus TX T6LAC1A L 0.208 kV, Zone 1, Area 1
 E/Z = 4.152 kA (1.496 MVA) At -60.00DEG, X/R = 2.00
 Z1 = 36.141444 +j 62.209337 pu, Z0 = 27.996715 +j 49.267257 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAC1A H		TX T6LAC1A L	4.15	-60.00	Branch	1	1	TX T6LAC1A
6LAC1A		TX T6LAC1A L	0.00	0.00	Branch	1	1	C 6LAC1A

*Bus TX T6LAIA H 0.480 kV, Zone 1, Area 1
 E/Z = 13.922 kA (11.574 MVA) At -45.34DEG, X/R = 1.43
 Z1 = 3.203807 +j 4.247663 pu, Z0 = 11.811241 +j 9.962796 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA L		TX T6LAIA H	0.00	0.00	Branch	1	1	TX T6LAIA
6HDPA		TX T6LAIA H	13.92	-45.34	Branch	1	1	C TX T6LAIA

*Bus TX T6LAIA L 0.208 kV, Zone 1, Area 1
 E/Z = 4.665 kA (1.681 MVA) At -59.95DEG, X/R = 2.00
 Z1 = 32.320678 +j 55.485784 pu, Z0 = 24.749125 +j 43.552274 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T6LAIA H		TX T6LAIA L	4.67	-59.95	Branch	1	1	TX T6LAIA
6LAIA		TX T6LAIA L	0.00	0.00	Branch	1	1	C 6LAIA

E Sheet 5.02

Database Report

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Buses

	ID Name	Status	Base kV	Area	Zone	AF Type	AF Option	Comment
1	1EH1	On	0.48	1	1	Panelboard	Specified	
2	1EL1	On	0.208	1	1	Panelboard	Specified	
3	1HAIA	On	0.48	1	1	Panelboard	Specified	
4	1HAIB	On	0.48	1	1	Panelboard	Specified	
5	1HAIC	On	0.48	1	1	Panelboard	Specified	14k to 22k
6	1HDPA	On	0.48	1	1	Panelboard	Specified	
7	1LA1A	On	0.208	1	1	Panelboard	Specified	
8	1LA2A	On	0.208	1	1	Panelboard	Specified	
9	1LAC1A	On	0.208	1	1	Panelboard	Specified	
10	1LAC2A	On	0.208	1	1	Panelboard	Specified	
11	1LDPA	On	0.208	1	1	Panelboard	Specified	
12	2EH1	On	0.48	1	1	Panelboard	Specified	14k to 42k
13	2EHDP	On	0.48	1	1	Panelboard	Specified	
14	2EL1	On	0.208	1	1	Panelboard	Specified	
15	2HAIA	On	0.48	1	1	Panelboard	Specified	
16	2HAIB	On	0.48	1	1	Panelboard	Specified	
17	2HAIC	On	0.48	1	1	Panelboard	Specified	
18	2HDPA	On	0.48	1	1	Panelboard	Specified	
19	2LA1A	On	0.208	1	1	Panelboard	Specified	
20	2LA1B	On	0.208	1	1	Panelboard	Specified	
21	2LA1KA	On	0.208	1	1	Panelboard	Specified	
22	2LA1KB	On	0.208	1	1	Panelboard	Specified	
23	2LA1KC	On	0.208	1	1	Panelboard	Specified	
24	2LAC1A	On	0.208	1	1	Panelboard	Specified	
25	2LDPA	On	0.208	1	1	Panelboard	Specified	
26	3EH1	On	0.48	1	1	Panelboard	Specified	
27	3EL1	On	0.208	1	1	Panelboard	Specified	
28	4EDP1	On	0.208	1	1	Panelboard	Specified	
29	4EH1	On	0.48	1	1	Panelboard	Specified	
30	4EH2	On	0.48	1	1	Panelboard	Specified	
31	4EL1	On	0.208	1	1	Panelboard	Specified	
32	4EL2	On	0.208	1	1	Panelboard	Specified	
33	5EH1	On	0.48	1	1	Panelboard	Specified	
34	5EL1	On	0.208	1	1	Panelboard	Specified	
35	5HA1A	On	0.48	1	1	Panelboard	Specified	14k to 42k
36	5HA1B	On	0.48	1	1	Panelboard	Specified	14k to 42k
37	5HA1C	On	0.48	1	1	Panelboard	Specified	14k to 42k
38	5HA1D	On	0.48	1	1	Panelboard	Specified	14k to 42k
39	5HA1E	On	0.48	1	1	Panelboard	Specified	10k to 42k
40	5HDPA	On	0.48	1	1	Switchboard	Specified	42k to 65k
41	5LA1A	On	0.208	1	1	Panelboard	Specified	
42	5LAC1A	On	0.208	1	1	Panelboard	Specified	
43	5LAC1B	On	0.208	1	1	Panelboard	Specified	
44	5LB1A	On	0.208	1	1	Panelboard	Specified	
45	5LB1B	On	0.208	1	1	Panelboard	Specified	
46	5LB1C	On	0.208	1	1	Panelboard	Specified	
47	5LBC1A	On	0.208	1	1	Panelboard	Specified	
48	5LBC1B	On	0.208	1	1	Panelboard	Specified	
49	5LDPA	On	0.208	1	1	Panelboard	Specified	
50	5LDPB	On	0.208	1	1	Panelboard	Specified	
51	6EH1	On	0.48	1	1	Panelboard	Specified	
52	6EL1	On	0.208	1	1	Panelboard	Specified	
53	9HA2A	On	0.48	1	1	Panelboard	Specified	10k to 42k
54	9HA2B	On	0.48	1	1	Panelboard	Specified	14k to 42k
55	9LA2A	On	0.208	1	1	Panelboard	Specified	
56	9LAC2A	On	0.208	1	1	Panelboard	Specified	
57	9LAC2B	On	0.208	1	1	Panelboard	Specified	
58	9LB2A	On	0.208	1	1	Panelboard	Specified	
59	9LBC2A	On	0.208	1	1	Panelboard	Specified	
60	9LBC2B	On	0.208	1	1	Panelboard	Specified	
61	9LDPA	On	0.208	1	1	Panelboard	Specified	
62	9LDPB	On	0.208	1	1	Panelboard	Specified	
63	CA	On	0.48	1	1	Other	Specified	
64	EGH1	On	0.48	1	1	Other	Specified	
65	ELEV 160	On	0.48	1	1	Other	Specified	
66	ELEV 560	On	0.48	1	1	Other	Specified	
67	MCCA	On	0.48	1	1	MCC	Specified	
68	MDB	On	0.48	1	1	Switchboard	Specified	
69	MSB	On	0.48	1	1	Switchboard	Specified	
70	TX 1EL1 H	On	0.48	1	1	Other	Specified	
71	TX 1EL1 L	On	0.208	1	1	Other	Specified	
72	TX 2EL1 H	On	0.48	1	1	Other	Specified	
73	TX 2EL1 L	On	0.208	1	1	Other	Specified	
74	TX 3EL1 H	On	0.48	1	1	Other	Specified	
75	TX 3EL1 L	On	0.208	1	1	Other	Specified	
76	TX 4EL1 H	On	0.48	1	1	Other	Specified	
77	TX 4EL1 L	On	0.208	1	1	Other	Specified	
78	TX 4EL2 H	On	0.48	1	1	Other	Specified	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Buses

	ID Name	Status	Base kV	Area	Zone	AF Type	AF Option	Comment
79	TX 4EL2 L	On	0.208	1	1	Other	Specified	
80	TX 5EL1 H	On	0.48	1	1	Other	Specified	
81	TX 5EL1 L	On	0.208	1	1	Other	Specified	
82	TX 6EL1 H	On	0.48	1	1	Other	Specified	
83	TX 6EL1 L	On	0.208	1	1	Other	Specified	
84	TX NPC H	Off	12.47	1	1	Other	Specified	
85	TX NPC L	On	0.48	1	1	Other	Specified	
86	TX T1LDPA H	On	0.48	1	1	Other	Specified	
87	TX T1LDPA T1	On	0.208	1	1	Other	Specified	
88	TX T2LDPA H	On	0.48	1	1	Other	Specified	
89	TX T2LDPA T2	On	0.208	1	1	Other	Specified	
90	TX T5LDPA H	On	0.48	1	1	Other	Specified	
91	TX T5LDPA L	On	0.208	1	1	Other	Specified	
92	TX T5LDPB H	On	0.48	1	1	Other	Specified	
93	TX T5LDPB L	On	0.208	1	1	Other	Specified	
94	TX T9LDPA H	On	0.48	1	1	Other	Specified	
95	TX T9LDPA L	On	0.208	1	1	Other	Specified	
96	TX T9LDPB H	On	0.48	1	1	Other	Specified	
97	TX T9LDPB L	On	0.208	1	1	Other	Specified	
98	UPS 5I	On	0.208	1	1	UPS	Specified	
99	UPS 5O	On	0.208	1	1	UPS	Specified	
100	UPS 8I	On	0.208	1	1	UPS	Specified	
101	UPS 8O	On	0.208	1	1	UPS	Specified	
102	UPS3A	On	0.208	1	1	Panelboard	Specified	
103	UPS5A	On	0.208	1	1	Panelboard	Specified	
104	UPS8A	On	0.208	1	1	Panelboard	Specified	
105	UPS9A	On	0.208	1	1	Panelboard	Specified	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Utilities

	ID Name	Status	To bus	Base kV	Util kV	Fault Unit	3Ph SC1	3Ph SC2	SLG SC1	SLG SC2	Model	MW	MVAR	CTL kV pu	MVAR Min	MVAR Max	kV pu Min	kV pu Max
1	NPC	On	TX NPC L	0.48	0.48	kA	53.484	7	56.432	7	Swing	0	0	1	-100000	100000	0.8	1.2

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Utilities

	ID Name	Ctl Angle	Ctl Bus	Ctl Base kV	R1 pu	X1 pu	R0 pu	X0 pu	Hrm RC Factor	Hrm RC Value	I Hrm Rating	Comment
1	NPC	0	TX NPC L	0.48	0.31804	2.22631	0.26820	1.87741	R-EXP	0.5	120281.	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Generators

	ID Name	Status	To bus	Base kV	Gen kV	Conn	MVA	Type	Power Factor	Efficiency	RPM	X/R	Model	MW	MVAR	Ctl kV pu	MVAR Min	MVAR Max
1	GEN EGH1	On	EGH1	0.48	0.48	YG	0.125	SYN-SP	0.8	0.95	3600	9.79946	PV	0	0	1	-100000	100000

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Generators

	ID Name	kV pu Min	kV pu Max	Ctl Angle	Ctl Bus	Ctl Base kV	X''dv	X'dv	X0	Xlr	RG OHM	XG OHM	R1 pu	X1 pu	R0 pu	X0 pu	R Gnd pu	X Gnd pu
1	GEN EGH1	0.8	1.2	0	EGH1	0.48	8.8	14.7	1		0	0	7.18406	70.4	0.81637	8	0	0

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
Comment: Equipment Database

Generators

	ID Name	Hrm RC Factor	Hrm RC Value	I Hrm Rating	Comment
1	GEN EGH1	R-EXP	0.5	150.351	Specs Based on Typ

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

UPSs

	ID Name	Status	Input Bus	Output Bus	kVA	X/R	1/2 Cycle SC	Int SC	30 Cycle SC	Ctl kV PU	Ctl Angle	% Efficiency	% Battery	Input PF	Comment
1	UPS 5	On	UPS 5I	UPS 5O	40	4.55842	3	0	0	1	0	90	1	0.8	
2	UPS 8	On	UPS 8I	UPS 8O	40	4.55842	3	0	0	1	0	90	1	0.8	

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Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Motors

	ID Name	Status	To Bus	Base kV	Unit	Model	Motor kV	Hp or kW	Type	Load Class	RPM	FLA	Power Factor	Eff	kVA/HP	ANSI Code	Connected
1	M CA	On	CA	0.48	U.S.	Individual	0.46	25	Induction	Non-essential	1800		0.82	0.91		< 50	100
2	M ELEV 160	On	ELEV 160	0.48	U.S.	Individual	0.46	40	Induction	Non-essential	1800		0.82	0.91		< 50	100
3	M ELEV 560	On	ELEV 560	0.48	U.S.	Individual	0.46	40	Induction	Non-essential	1800		0.82	0.91		< 50	100

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Equipment Database

Motors

	ID Name	X ^{dv} or Xlr	X/R	Load Model	Motor kVA	Load Type	Load Scaling	SCADA kW	SCADA jkVar	SCADA Type	SCADA Scaling	Hrm RC Value	Hrm RC Factor	R1 pu	X1 pu	Int MF	Hrm R1 pu	Hrm X1 pu
1	M CA	16.7	3.28834	Spec	24.9933	kVA	100	0	0	kVA	100	0.5	R-EXP	298.166	980.473	10000	178.542	587.109
2	M ELEV 160	16.7	4.55842	Spec	39.9892	kVA	100	0	0	kVA	100	0.5	R-EXP	137.246	625.627	10000	82.1836	374.627
3	M ELEV 560	16.7	4.55842	Spec	39.9892	kVA	100	0	0	kVA	100	0.5	R-EXP	137.246	625.627	10000	82.1836	374.627

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Motors

	ID Name	I Hrm Rating	TCC Starter	Plot TCC	Service Factor	Locked Rotor Mult	Asym Offset	Reduced Inrush Mult	Accel Time	Stall Time	Stall Time To	Largest Motor HP	Comment
1	M CA	30.0622	Full Volt		1	6	1.6	100	5	6	200	25	
2	M ELEV 160	48.0996	Full Volt		1	6	1.6	100	5	6	200	40	
3	M ELEV 560	48.0996	Full Volt		1	6	1.6	100	5	6	200	40	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

2W-Xformers

	ID Name	Status	From bus	From Base kV	From Conn	To Bus	To Base kV	To Conn	Type	Class	Temp	Form	From Nom kV	From Tap kV	From Gnd R	From Gnd jX	To Nom kV
1	TX 1EL1	On	TX 1EL1 H	0.48	D	TX 1EL1 L	0.208	YG	Dry	OA	150	Core	0.48	0.48	0	0	0.208
2	TX 2EL1	On	TX 2EL1 H	0.48	D	TX 2EL1 L	0.208	YG	Dry	OA	150	Core	0.48	0.48	0	0	0.208
3	TX 3EL1	On	TX 3EL1 H	0.48	D	TX 3EL1 L	0.208	YG	Dry	OA	150	Core	0.48	0.48	0	0	0.208
4	TX 4EL1	On	TX 4EL1 H	0.48	D	TX 4EL1 L	0.208	YG	Dry	OA	150	Core	0.48	0.48	0	0	0.208
5	TX 4EL2	On	TX 4EL2 H	0.48	D	TX 4EL2 L	0.208	YG	Dry	OA	150	Core	0.48	0.48	0	0	0.208
6	TX 5EL1	On	TX 5EL1 H	0.48	D	TX 5EL1 L	0.208	YG	Dry	OA	150	Core	0.48	0.48	0	0	0.208
7	TX 6EL1	On	TX 6EL1 H	0.48	D	TX 6EL1 L	0.208	YG	Dry	OA	150	Core	0.48	0.48	0	0	0.208
8	TX NPC	Off	TX NPC H	12.47	D	TX NPC L	0.48	YG	Oil	OA	65	Core	12.47	12.47	0	0	0.48
9	TX T1LDPA	On	TX T1LDPA H	0.48	D	TX T1LDPA T1L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
10	TX T2LDPA	On	TX T2LDPA H	0.48	D	TX T2LDPA T2L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
11	TX T5LDPA	On	TX T5LDPA H	0.48	D	TX T5LDPA L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
12	TX T5LDPB	On	TX T5LDPB H	0.48	D	TX T5LDPB L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
13	TX T9LDPA	On	TX T9LDPA H	0.48	D	TX T9LDPA L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208
14	TX T9LDPB	On	TX T9LDPB H	0.48	D	TX T9LDPB L	0.208	YG	Dry	OA	115	Core	0.48	0.48	0	0	0.208

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

2W-Xformers

	ID Name	To Tap kV	To Gnd R	To Gnd jX	MVA	MVA O/L	Z	Z0	X/R	LTC Tap	LTC Step	LTC Min Tap	LTC Max Tap	Ctl Type	Ctl Value	Zps R1 pu	Zps X1 pu	Zps R0 pu	Zps X0 pu
1	TX 1EL1	0.208	0	0	0.015	0.015	2.75	2.3375	1.55252	None	0.625	0.1	1500	V (PU)	1	99.2759	154.127	10000	1e+007
2	TX 2EL1	0.208	0	0	0.015	0.015	2.75	2.3375	1.55252	None	0.625	0.1	1500	V (PU)	1	99.2759	154.127	10000	1e+007
3	TX 3EL1	0.208	0	0	0.03	0.03	2.75	2.3375	1.60219	None	0.625	0.1	1500	V (PU)	1	48.5354	77.7630	10000	1e+007
4	TX 4EL1	0.208	0	0	0.03	0.03	2.75	2.3375	1.60219	None	0.625	0.1	1500	V (PU)	1	48.5354	77.7630	10000	1e+007
5	TX 4EL2	0.208	0	0	0.03	0.03	2.75	2.3375	1.60219	None	0.625	0.1	1500	V (PU)	1	48.5354	77.7630	10000	1e+007
6	TX 5EL1	0.208	0	0	0.03	0.03	2.75	2.3375	1.60219	None	0.625	0.1	1500	V (PU)	1	48.5354	77.7630	10000	1e+007
7	TX 6EL1	0.208	0	0	0.015	0.015	2.75	2.3375	1.55252	None	0.625	0.1	1500	V (PU)	1	99.2759	154.127	10000	1e+007
8	TX NPC	0.48	0	0	2.5	2.5	5.31	4.5135	7.12772	None	0.625	0.1	1500	V (PU)	1	0.29510	2.1034	10000	1e+007
9	TX T1LDPA	0.208	0	0	0.1125	0.1125	3.59	3.0515	1.88578	None	0.625	0.1	1500	V (PU)	1	14.9500	28.1924	10000	1e+007
10	TX T2LDPA	0.208	0	0	0.225	0.225	4.59	3.9015	3.15937	None	0.625	0.1	1500	V (PU)	1	6.15597	19.4490	10000	1e+007
11	TX T5LDPA	0.208	0	0	0.1125	0.1125	3	2.55	1.88578	None	0.625	0.1	1500	V (PU)	1	12.4930	23.5591	10000	1e+007
12	TX T5LDPB	0.208	0	0	0.225	0.225	4.59	3.9015	3.15937	None	0.625	0.1	1500	V (PU)	1	6.15597	19.4490	10000	1e+007
13	TX T9LDPA	0.208	0	0	0.1125	0.1125	3	2.55	1.88578	None	0.625	0.1	1500	V (PU)	1	12.4930	23.5591	10000	1e+007
14	TX T9LDPB	0.208	0	0	0.15	0.15	4.3	3.655	2.41647	None	0.625	0.1	1500	V (PU)	1	10.9615	26.4881	10000	1e+007

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

2W-Xformers

	ID Name	Rps0+3Rpsg	Xps0+3Xpsg	From Gnd R1 pu	From Gnd jX pu	To Gnd R1 pu	To Gnd jX pu	TCC Standard	TCC FLA Based On	Freq Fault Curve	TCC Max Plot Time	TCC Inrush FLA Mult	TCC Inrush Cycles	Hrm RC Factor	Hrm RC Value
1	TX 1EL1	84.38454	131.0087	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
2	TX 2EL1	84.38454	131.0087	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
3	TX 3EL1	41.25514	66.09857	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
4	TX 4EL1	41.25514	66.09857	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
5	TX 4EL2	41.25514	66.09857	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
6	TX 5EL1	41.25514	66.09857	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
7	TX 6EL1	84.38454	131.0087	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
8	TX NPC	0.2508362	1.78789	0	0	0	0	ANSI C57.109	MVA O/L	Yes	500	8	6	R-EXP	0
9	TX T1LDPA	12.70753	23.9636	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
10	TX T2LDPA	5.23258	16.53166	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
11	TX T5LDPA	10.6191	20.02529	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
12	TX T5LDPB	5.23258	16.53166	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
13	TX T9LDPA	10.6191	20.02529	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0
14	TX T9LDPB	9.317286	22.51494	0	0	0	0	ANSI C57.12.59	kVA O/L	Yes	500	8	6	R-EXP	0

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

2W-Xformers

	ID Name	Hrm Pec-r %	Hrm From I Rating	Hrm To I Rating	Comment
1	TX 1EL1	15	18.0422	41.6358	
2	TX 2EL1	15	18.0422	41.6358	
3	TX 3EL1	15	36.0844	83.2716	
4	TX 4EL1	15	36.0844	83.2716	
5	TX 4EL2	15	36.0844	83.2716	
6	TX 5EL1	15	36.0844	83.2716	
7	TX 6EL1	15	18.0422	41.6358	
8	TX NPC	15	115.747	3007.03	
9	TX T1LDPA	15	135.316	312.268	Based PS e-Saver Tx
10	TX T2LDPA	15	270.633	624.537	Based PS e-Saver Tx
11	TX T5LDPA	15	135.316	312.268	Based PS e-Saver Tx
12	TX T5LDPB	15	270.633	624.537	Based PS e-Saver Tx
13	TX T9LDPA	15	135.316	312.268	Based PS e-Saver Tx
14	TX T9LDPB	15	180.422	416.358	Based PS e-Saver Tx

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Cables

	ID Name	Status	From Bus ID	From Base kV	To Bus ID	To Base kV	Unit	Type	No/Ph	Size	Length	Temp	Insulation	Rating (A)	Material
1	C 1EH1	On	2EHDP	0.48	1EH1	0.48	U.S.	1/C	1	2	373	50	THWN	115	Copper
2	C 1EL1	On	1EH1	0.48	TX 1EL1 H	0.48	U.S.	1/C	1	10	10	50	THWN	35	Copper
3	C 1HAIA	On	1HDPA	0.48	1HAIA	0.48	U.S.	1/C	1	4/0	14	50	THWN	230	Copper
4	C 1HAIB	On	1HDPA	0.48	1HAIB	0.48	U.S.	1/C	1	4/0	15	50	THWN	230	Copper
5	C 1HAIC	On	1HDPA	0.48	1HAIC	0.48	U.S.	1/C	1	4/0	16	50	THWN	230	Copper
6	C 1HDPA	On	MSB	0.48	1HDPA	0.48	U.S.	1/C	2	500	383	50	THWN	760	Copper
7	C 1LA1A	On	1LDPA	0.208	1LA1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
8	C 1LA2A	On	1LDPA	0.208	1LA2A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
9	C 1LAC1A	On	1LDPA	0.208	1LAC1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
10	C 1LAC2A	On	1LDPA	0.208	1LAC2A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
11	C 1LDPA	On	TX T1LDPA T1L	0.208	1LDPA	0.208	U.S.	1/C	1	500	10	50	THWN	380	Copper
12	C 2EH1	On	2EHDP	0.48	2EH1	0.48	U.S.	1/C	1	2	11	50	THWN	115	Copper
13	C 2EHDP	On	ATS EH2A1	0.48	2EHDP	0.48	U.S.	1/C	1	350	10	50	THWN	310	Copper
14	C 2EL1	On	2EH1	0.48	TX 2EL1 H	0.48	U.S.	1/C	1	10	10	50	THWN	35	Copper
15	C 2HAIA	On	2HDPA	0.48	2HAIA	0.48	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
16	C 2HAIB	On	2HDPA	0.48	2HAIB	0.48	U.S.	1/C	1	500	15	50	THWN	380	Copper
17	C 2HAIC	On	2HDPA	0.48	2HAIC	0.48	U.S.	1/C	1	4/0	16	50	THWN	230	Copper
18	C 2HDPA	On	MSB	0.48	2HDPA	0.48	U.S.	1/C	4	250	10	50	THWN	1020	Copper
19	C 2LA1A	On	2LDPA	0.208	2LA1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
20	C 2LA1B	On	2LDPA	0.208	2LA1B	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
21	C 2LA1KA	On	2LDPA	0.208	2LA1KA	0.208	U.S.	1/C	1	4/0	39	50	THWN	230	Copper
22	C 2LA1KB	On	2LDPA	0.208	2LA1KB	0.208	U.S.	1/C	1	4/0	39	50	THWN	230	Copper
23	C 2LA1KC	On	2LDPA	0.208	2LA1KC	0.208	U.S.	1/C	1	4/0	39	50	THWN	230	Copper
24	C 2LAC1A	On	2LDPA	0.208	2LAC1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
25	C 2LDPA	On	TX T2LDPA T2L	0.208	2LDPA	0.208	U.S.	1/C	2	500	10	50	THWN	760	Copper
26	C 3EH1	On	2EHDP	0.48	3EH1	0.48	U.S.	1/C	1	2	176	50	THWN	115	Copper
27	C 3EL1	On	3EH1	0.48	TX 3EL1 H	0.48	U.S.	1/C	1	6	10	50	THWN	65	Copper
28	C 4EDP1	On	4EL2	0.208	4EDP1	0.208	U.S.	1/C	1	6	10	50	THWN	65	Copper
29	C 4EH1	On	2EHDP	0.48	4EH1	0.48	U.S.	1/C	1	2	326	50	THWN	115	Copper
30	C 4EH2	On	2EHDP	0.48	4EH2	0.48	U.S.	1/C	1	1	421	50	THWN	130	Copper
31	C 4EL1	On	4EH1	0.48	TX 4EL1 H	0.48	U.S.	1/C	1	6	10	50	THWN	65	Copper
32	C 4EL2	On	4EH2	0.48	TX 4EL2 H	0.48	U.S.	1/C	1	6	10	50	THWN	65	Copper
33	C 5EH1	On	2EHDP	0.48	5EH1	0.48	U.S.	1/C	1	2	212	50	THWN	115	Copper
34	C 5EL1	On	5EH1	0.48	TX 5EL1 H	0.48	U.S.	1/C	1	6	10	50	THWN	65	Copper
35	C 5HA1A	On	5HDPA	0.48	5HA1A	0.48	U.S.	1/C	1	4/0	20	50	THWN	230	Copper
36	C 5HA1B	On	5HDPA	0.48	5HA1B	0.48	U.S.	1/C	1	350	20	50	THWN	310	Copper
37	C 5HA1C	On	5HDPA	0.48	5HA1C	0.48	U.S.	1/C	1	350	22	50	THWN	310	Copper
38	C 5HA1D	On	5HDPA	0.48	5HA1D	0.48	U.S.	1/C	1	4/0	23	50	THWN	230	Copper
39	C 5HA1E	On	5HDPA	0.48	5HA1E	0.48	U.S.	1/C	1	4/0	20	50	THWN	230	Copper
40	C 5HDPA	On	MSB	0.48	5HDPA	0.48	U.S.	1/C	6	500	212	50	THWN	2280	Copper
41	C 5LA1A	On	5LDPA	0.208	5LA1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
42	C 5LAC1A	On	5LDPA	0.208	5LAC1A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
43	C 5LAC1B	On	5LDPA	0.208	5LAC1B	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
44	C 5LB1A	On	5LDPB	0.208	5LB1A	0.208	U.S.	1/C	1	4/0	11	50	THWN	230	Copper
45	C 5LB1B	On	5LDPB	0.208	5LB1B	0.208	U.S.	1/C	1	4/0	13	50	THWN	230	Copper
46	C 5LB1C	On	5LDPB	0.208	5LB1C	0.208	U.S.	1/C	1	4/0	121	50	THWN	230	Copper
47	C 5LBC1A	On	5LDPB	0.208	5LBC1A	0.208	U.S.	1/C	1	4/0	18	50	THWN	230	Copper
48	C 5LBC1B	On	5LDPB	0.208	5LBC1B	0.208	U.S.	1/C	1	4/0	12	50	THWN	230	Copper
49	C 5LDPA	On	TX T5LDPA L	0.208	5LDPA	0.208	U.S.	1/C	1	500	10	50	THWN	380	Copper
50	C 5LDPB	On	TX T5LDPB L	0.208	5LDPB	0.208	U.S.	1/C	2	500	10	50	THWN	760	Copper
51	C 6EH1	On	2EHDP	0.48	6EH1	0.48	U.S.	1/C	1	1	691	50	THWN	130	Copper
52	C 6EL1	On	6EH1	0.48	TX 6EL1 H	0.48	U.S.	1/C	1	10	10	50	THWN	35	Copper
53	C 9HA2A	On	5HDPA	0.48	9HA2A	0.48	U.S.	1/C	1	350	50	50	THWN	310	Copper
54	C 9HA2B	On	5HDPA	0.48	9HA2B	0.48	U.S.	1/C	1	4/0	18	50	THWN	230	Copper
55	C 9LA2A	On	9LDPA	0.208	9LA2A	0.208	U.S.	1/C	1	4/0	17	50	THWN	230	Copper
56	C 9LAC2A	On	9LDPA	0.208	9LAC2A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
57	C 9LAC2B	On	9LDPA	0.208	9LAC2B	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
58	C 9LB2A	On	9LDPB	0.208	9LB2A	0.208	U.S.	1/C	1	4/0	17	50	THWN	230	Copper
59	C 9LBC2A	On	9LDPB	0.208	9LBC2A	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
60	C 9LBC2B	On	9LDPB	0.208	9LBC2B	0.208	U.S.	1/C	1	4/0	10	50	THWN	230	Copper
61	C 9LDPA	On	TX T9LDPA L	0.208	9LDPA	0.208	U.S.	1/C	1	500	10	50	THWN	380	Copper
62	C 9LDPB	On	TX T9LDPB L	0.208	9LDPB	0.208	U.S.	1/C	2	250	10	50	THWN	510	Copper
63	C CA	On	5HDPA	0.48	CA	0.48	U.S.	1/C	1	4	90	50	THWN	85	Copper
64	C EGH1-ATS E	On	EGH1	0.48	ATS EH2A1	0.48	U.S.	1/C	1	350	45	50	THWN	310	Copper
65	C ELEV 160	On	1HDPA	0.48	ELEV 160	0.48	U.S.	1/C	1	2	146	50	THWN	115	Copper
66	C ELEV 560	On	5HDPA	0.48	ELEV 560	0.48	U.S.	1/C	1	2	25	50	THWN	115	Copper
67	C MCCA	On	MSB	0.48	MCCA	0.48	U.S.	1/C	1	500	26	50	THWN	380	Copper
68	C MDB	On	TX NPC L	0.48	MDB	0.48	U.S.	1/C	11	500	25	50	THWN	4180	Copper
69	C MSB	On	MDB	0.48	MSB	0.48	U.S.	1/C	11	500	10	50	THWN	4180	Copper
70	C MSB-ATS EH	On	MSB	0.48	ATS EH2A1	0.48	U.S.	1/C	1	350	25	50	THWN	310	Copper
71	C TX T1LDPA	On	1HDPA	0.48	TX T1LDPA H	0.48	U.S.	1/C	1	2/0	10	50	THWN	175	Copper
72	C TX T2LDPA	On	2HDPA	0.48	TX T2LDPA H	0.48	U.S.	1/C	1	500	23	50	THWN	380	Copper
73	C TX T5LDPA	On	5HDPA	0.48	TX T5LDPA H	0.48	U.S.	1/C	1	2/0	10	50	THWN	175	Copper
74	C TX T5LDPB	On	5HDPA	0.48	TX T5LDPB H	0.48	U.S.	1/C	1	500	103	50	THWN	380	Copper
75	C TX T9LDPA	On	5HDPA	0.48	TX T9LDPA H	0.48	U.S.	1/C	1	2/0	16	50	THWN	175	Copper
76	C TX T9LDPB	On	5HDPA	0.48	TX T9LDPB H	0.48	U.S.	1/C	1	4/0	108	50	THWN	230	Copper
77	C UPS 5	On	5EL1	0.208	UPS 5I	0.208	U.S.	1/C	1	2	10	50	THWN	115	Copper

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Cables

	ID Name	Raceway Type	Raceway Mtl	R1	X1	R0	X0	Xc	Xc0	Gnd Num	Gnd Size	Gnd Mtl	Gnd Type	Gnd Insul	Neutral Num	Neutral Size	Neutral Rating
1	C 1EH1	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	1	2	10
2	C 1EL1	Conduit	Steel	1.13918	0.04271	4.55673	0.17084	0.00814	0.00814	1	10	Copper	Separate	Yes	0	Other	10
3	C 1HAIA	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
4	C 1HAIB	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
5	C 1HAIC	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
6	C 1HDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	2	1/0	Copper	Separate	Yes	2	500	10
7	C 1LA1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
8	C 1LA2A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
9	C 1LAC1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
10	C 1LAC2A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
11	C 1LDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	2	500	10
12	C 2EH1	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	1	2	10
13	C 2EHDP	Conduit	Steel	0.03565	0.03809	0.14262	0.15236	0.00446	0.00446	1	4	Copper	Separate	Yes	1	350	10
14	C 2EL1	Conduit	Steel	1.13918	0.04271	4.55673	0.17084	0.00814	0.00814	1	10	Copper	Separate	Yes	0	Other	10
15	C 2HAIA	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
16	C 2HAIB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	1	500	10
17	C 2HAIC	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
18	C 2HDPA	Conduit	Steel	0.04860	0.03903	0.19442	0.15612	0.00521	0.00521	4	2/0	Copper	Separate	Yes	4	250	10
19	C 2LA1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
20	C 2LA1B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
21	C 2LA1KA	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
22	C 2LA1KB	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
23	C 2LA1KC	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
24	C 2LAC1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
25	C 2LDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	2	1/0	Copper	Separate	Yes	4	500	10
26	C 3EH1	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	1	2	10
27	C 3EL1	Conduit	Steel	0.45045	0.04222	1.80182	0.16890	0.00776	0.00776	1	10	Copper	Separate	Yes	0	Other	10
28	C 4EDP1	Conduit	Steel	0.45045	0.04222	1.80182	0.16890	0.00776	0.00776	1	10	Copper	Separate	Yes	1	6	10
29	C 4EH1	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	1	2	10
30	C 4EH2	Conduit	Steel	0.14127	0.04157	0.56509	0.16629	0.00723	0.00723	1	6	Copper	Separate	Yes	1	1	10
31	C 4EL1	Conduit	Steel	0.45045	0.04222	1.80182	0.16890	0.00776	0.00776	1	10	Copper	Separate	Yes	0	Other	10
32	C 4EL2	Conduit	Steel	0.45045	0.04222	1.80182	0.16890	0.00776	0.00776	1	10	Copper	Separate	Yes	0	Other	10
33	C 5EH1	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	1	2	10
34	C 5EL1	Conduit	Steel	0.45045	0.04222	1.80182	0.16890	0.00776	0.00776	1	10	Copper	Separate	Yes	0	Other	10
35	C 5HA1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
36	C 5HA1B	Conduit	Steel	0.03565	0.03809	0.14262	0.15236	0.00446	0.00446	1	4	Copper	Separate	Yes	1	350	10
37	C 5HA1C	Conduit	Steel	0.03565	0.03809	0.14262	0.15236	0.00446	0.00446	1	4	Copper	Separate	Yes	1	350	10
38	C 5HA1D	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
39	C 5HA1E	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
40	C 5HDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	6	250	Copper	Separate	Yes	6	500	10
41	C 5LA1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
42	C 5LAC1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
43	C 5LAC1B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
44	C 5LB1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
45	C 5LB1B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
46	C 5LB1C	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
47	C 5LBC1A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
48	C 5LBC1B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
49	C 5LDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	2	500	10
50	C 5LDPB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	2	1/0	Copper	Separate	Yes	4	500	10
51	C 6EH1	Conduit	Steel	0.14127	0.04157	0.56509	0.16629	0.00723	0.00723	1	6	Copper	Separate	Yes	1	1	10
52	C 6EL1	Conduit	Steel	1.13918	0.04271	4.55673	0.17084	0.00814	0.00814	1	10	Copper	Separate	Yes	0	Other	10
53	C 9HA2A	Conduit	Steel	0.03565	0.03809	0.14262	0.15236	0.00446	0.00446	1	4	Copper	Separate	Yes	1	350	10
54	C 9HA2B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
55	C 9LA2A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
56	C 9LAC2A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
57	C 9LAC2B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
58	C 9LB2A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	1	4/0	10
59	C 9LBC2A	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
60	C 9LBC2B	Conduit	Steel	0.05587	0.03847	0.22349	0.15390	0.00476	0.00476	1	4	Copper	Separate	Yes	2	4/0	10
61	C 9LDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	2	500	10
62	C 9LDPB	Conduit	Steel	0.04860	0.03903	0.19442	0.15612	0.00521	0.00521	2	2	Copper	Separate	Yes	4	250	10
63	C 9CA	Conduit	Steel	0.28320	0.04271	1.13283	0.17084	0.00814	0.00814	1	8	Copper	Separate	Yes	1	4	10
64	C EGH1-ATS E	Conduit	Steel	0.03565	0.03809	0.14262	0.15236	0.00446	0.00446	1	4	Copper	Separate	Yes	1	350	10
65	C ELEV 160	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	1	2	10
66	C ELEV 560	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	1	2	10
67	C MCCA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	0	Other	10
68	C MDB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	11	500	Copper	Separate	Yes	11	500	10
69	C MSB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	11	500	Copper	Separate	Yes	11	500	10
70	C MSB-ATS EH	Conduit	Steel	0.03565	0.03809	0.14262	0.15236	0.00446	0.00446	1	4	Copper	Separate	Yes	1	350	10
71	C TX T1LDPA	Conduit	Steel	0.08883	0.03987	0.35532	0.15950	0.00588	0.00588	1	6	Copper	Separate	Yes	0	Other	10
72	C TX T2LDPA	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	0	Other	10
73	C TX T5LDPA	Conduit	Steel	0.08883	0.03987	0.35532	0.15950	0.00588	0.00588	1	6	Copper	Separate	Yes	0	Other	10
74	C TX T5LDPB	Conduit	Steel	0.02613	0.03724	0.10453	0.14897	0.00378	0.00378	1	2	Copper	Separate	Yes	0	Other	10
75	C TX T9LDPA	Conduit	Steel	0.08883	0.03987	0.35532	0.15950	0.00588	0.00588	1	6	Copper	Separate	Yes	0	Other	10
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Comment: Equipment Database

Cables

	ID Name	Neutral Mtl	Neutral Insul	Conductor Lay	Conductor Form	Spacing	R1 pu	X1 pu	R0 pu	X0 pu	B1 pu	B0 pu	Hrm RC Factor	Hrm RC Value	I Hrm Rating	Comment
1	C 1EH1	Copper	Yes	Triangle	Round	0	28.8508	6.61243	115.403	26.4496	1.29072	1.29072	R-EXP	0.5	115	
2	C 1EL1	Copper	Yes	Triangle	Round	0	4.94435	0.18537	19.7774	0.74150	2.82819	2.82819	R-EXP	0.5	35	
3	C 1HAIA	Copper	Yes	Triangle	Round	0	0.33951	0.23379	1.35804	0.93518	6.76332	6.76332	R-EXP	0.5	230	
4	C 1HAIB	Copper	Yes	Triangle	Round	0	0.36376	0.25049	1.45505	1.00197	7.24642	7.24642	R-EXP	0.5	230	
5	C 1HAIC	Copper	Yes	Triangle	Round	0	0.38801	0.26719	1.55205	1.06877	7.72951	7.72951	R-EXP	0.5	230	
6	C 1HDPA	Copper	Yes	Triangle	Round	0	2.17222	3.09546	8.68889	12.3818	4.66195	4.66195	R-EXP	0.5	760	
7	C 1LA1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
8	C 1LA2A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
9	C 1LAC1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
10	C 1LAC2A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
11	C 1LDPA	Copper	Yes	Triangle	Round	0	0.60407	0.86081	2.41630	3.44327	1.14283	1.14283	R-EXP	0.5	380	
12	C 2EH1	Copper	Yes	Triangle	Round	0	0.85082	0.19500	3.40330	0.78001	3.80642	3.80642	R-EXP	0.5	115	
13	C 2EHDP	Copper	Yes	Triangle	Round	0	0.15476	0.16532	0.61904	0.66131	5.16270	5.16270	R-EXP	0.5	310	
14	C 2EL1	Copper	Yes	Triangle	Round	0	4.94435	0.18537	19.7774	0.74150	2.82819	2.82819	R-EXP	0.5	35	
15	C 2HAIA	Copper	Yes	Triangle	Round	0	0.24250	0.16699	0.97003	0.66798	4.83094	4.83094	R-EXP	0.5	230	
16	C 2HAIB	Copper	Yes	Triangle	Round	0	0.17014	0.24246	0.68059	0.96985	9.12916	9.12916	R-EXP	0.5	380	
17	C 2HAIC	Copper	Yes	Triangle	Round	0	0.38801	0.26719	1.55205	1.06877	7.72951	7.72951	R-EXP	0.5	230	
18	C 2HDPA	Copper	Yes	Triangle	Round	0	0.05274	0.04235	0.21096	0.16940	1.76826	1.76826	R-EXP	0.5	1020	
19	C 2LA1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
20	C 2LA1B	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
21	C 2LA1KA	Copper	Yes	Triangle	Round	0	5.03672	3.46838	20.1468	13.8735	3.53786	3.53786	R-EXP	0.5	230	
22	C 2LA1KB	Copper	Yes	Triangle	Round	0	5.03672	3.46838	20.1468	13.8735	3.53786	3.53786	R-EXP	0.5	230	
23	C 2LA1KC	Copper	Yes	Triangle	Round	0	5.03672	3.46838	20.1468	13.8735	3.53786	3.53786	R-EXP	0.5	230	
24	C 2LAC1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
25	C 2LDPA	Copper	Yes	Triangle	Round	0	0.30203	0.43040	1.20815	1.72163	2.28567	2.28567	R-EXP	0.5	760	
26	C 3EH1	Copper	Yes	Triangle	Round	0	13.6132	3.12007	54.4529	12.4802	6.09028	6.09028	R-EXP	0.5	115	
27	C 3EL1	Copper	Yes	Triangle	Round	0	1.95510	0.18327	7.8204	0.73310	2.96882	2.96882	R-EXP	0.5	65	
28	C 4EDP1	Copper	Yes	Triangle	Round	0	10.4118	0.97603	41.6471	3.90412	5.57479	5.57479	R-EXP	0.5	65	
29	C 4EH1	Copper	Yes	Triangle	Round	0	25.2154	5.77922	100.861	23.1168	1.12808	1.12808	R-EXP	0.5	115	
30	C 4EH2	Copper	Yes	Triangle	Round	0	25.8143	7.59662	103.257	30.3863	1.33979	1.33979	R-EXP	0.5	130	
31	C 4EL1	Copper	Yes	Triangle	Round	0	1.95510	0.18327	7.8204	0.73310	2.96882	2.96882	R-EXP	0.5	65	
32	C 4EL2	Copper	Yes	Triangle	Round	0	1.95510	0.18327	7.8204	0.73310	2.96882	2.96882	R-EXP	0.5	65	
33	C 5EH1	Copper	Yes	Triangle	Round	0	16.3978	3.75827	65.591	15.0330	7.33602	7.33602	R-EXP	0.5	115	
34	C 5EL1	Copper	Yes	Triangle	Round	0	1.95510	0.18327	7.8204	0.73310	2.96882	2.96882	R-EXP	0.5	65	
35	C 5HA1A	Copper	Yes	Triangle	Round	0	0.48501	0.33399	1.94007	1.33597	9.66189	9.66189	R-EXP	0.5	230	
36	C 5HA1B	Copper	Yes	Triangle	Round	0	0.30952	0.33065	1.23808	1.32262	1.03254	1.03254	R-EXP	0.5	310	
37	C 5HA1C	Copper	Yes	Triangle	Round	0	0.34047	0.36372	1.36189	1.45488	1.13579	1.13579	R-EXP	0.5	310	
38	C 5HA1D	Copper	Yes	Triangle	Round	0	0.55777	0.38409	2.23108	1.53636	1.11111	1.11111	R-EXP	0.5	230	
39	C 5HA1E	Copper	Yes	Triangle	Round	0	0.48501	0.33399	1.94007	1.33597	9.66189	9.66189	R-EXP	0.5	230	
40	C 5HDPA	Copper	Yes	Triangle	Round	0	0.40079	0.57113	1.60317	2.28455	7.74153	7.74153	R-EXP	0.5	2280	
41	C 5LA1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
42	C 5LAC1A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
43	C 5LAC1B	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
44	C 5LB1A	Copper	Yes	Triangle	Round	0	1.42061	0.97826	5.68245	3.91305	9.97859	9.97859	R-EXP	0.5	230	
45	C 5LB1B	Copper	Yes	Triangle	Round	0	1.67890	1.15612	6.71562	4.62451	1.17928	1.17928	R-EXP	0.5	230	
46	C 5LB1C	Copper	Yes	Triangle	Round	0	15.6267	10.7608	62.5069	43.0436	1.09764	1.09764	R-EXP	0.5	230	
47	C 5LBC1A	Copper	Yes	Triangle	Round	0	2.32464	1.60079	9.29855	6.40318	1.63286	1.63286	R-EXP	0.5	230	
48	C 5LBC1B	Copper	Yes	Triangle	Round	0	1.54976	1.06719	6.19903	4.26878	1.08857	1.08857	R-EXP	0.5	230	
49	C 5LDPA	Copper	Yes	Triangle	Round	0	0.60407	0.86081	2.41630	3.44327	1.14283	1.14283	R-EXP	0.5	380	
50	C 5LDPB	Copper	Yes	Triangle	Round	0	0.30203	0.43040	1.20815	1.72163	2.28567	2.28567	R-EXP	0.5	760	
51	C 6EH1	Copper	Yes	Triangle	Round	0	42.3699	12.4685	169.480	49.8740	2.19904	2.19904	R-EXP	0.5	130	
52	C 6EL1	Copper	Yes	Triangle	Round	0	4.94435	0.18537	19.7774	0.74150	2.82819	2.82819	R-EXP	0.5	35	
53	C 9HA2A	Copper	Yes	Triangle	Round	0	0.77380	0.82664	3.09520	3.30655	2.58135	2.58135	R-EXP	0.5	310	
54	C 9HA2B	Copper	Yes	Triangle	Round	0	0.43651	0.30059	1.74606	1.20237	8.69570	8.69570	R-EXP	0.5	230	
55	C 9LA2A	Copper	Yes	Triangle	Round	0	2.19549	1.51185	8.78197	6.04744	1.54214	1.54214	R-EXP	0.5	230	
56	C 9LAC2A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
57	C 9LAC2B	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
58	C 9LB2A	Copper	Yes	Triangle	Round	0	2.19549	1.51185	8.78197	6.04744	1.54214	1.54214	R-EXP	0.5	230	
59	C 9LBC2A	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
60	C 9LBC2B	Copper	Yes	Triangle	Round	0	1.29146	0.88932	5.16586	3.55732	9.07144	9.07144	R-EXP	0.5	230	
61	C 9LDPA	Copper	Yes	Triangle	Round	0	0.60407	0.86081	2.41630	3.44327	1.14283	1.14283	R-EXP	0.5	380	
62	C 9LDPB	Copper	Yes	Triangle	Round	0	0.56174	0.45107	2.24700	1.80431	1.66020	1.66020	R-EXP	0.5	510	
63	C CA	Copper	Yes	Triangle	Round	0	11.0627	1.66839	44.2511	6.67355	2.54537	2.54537	R-EXP	0.5	85	
64	C EGH1-ATS E	Copper	Yes	Triangle	Round	0	0.69642	0.74397	2.78568	2.97589	2.32321	2.32321	R-EXP	0.5	310	
65	C ELEV 160	Copper	Yes	Triangle	Round	0	11.2928	2.58824	45.1711	10.3529	5.05216	5.05216	R-EXP	0.5	115	
66	C ELEV 560	Copper	Yes	Triangle	Round	0	1.93370	0.44319	7.73478	1.77276	8.65097	8.65097	R-EXP	0.5	115	
67	C MCCA	Copper	Yes	Triangle	Round	0	0.29492	0.42027	1.17969	1.68108	1.58238	1.58238	R-EXP	0.5	380	
68	C MDB	Copper	Yes	Triangle	Round	0	0.02578	0.03673	0.10312	0.14694	1.67368	1.67368	R-EXP	0.5	4180	
69	C MSB	Copper	Yes	Triangle	Round	0	0.01031	0.01469	0.04124	0.05877	6.69471	6.69471	R-EXP	0.5	4180	
70	C MSB-ATS EH	Copper	Yes	Triangle	Round	0	0.38690	0.41332	1.54760	1.65327	1.29067	1.29067	R-EXP	0.5	310	
71	C TX T1LDPA	Copper	Yes	Triangle	Round	0	0.38555	0.17307	1.54220	0.69228	3.91481	3.91481	R-EXP	0.5	175	
72	C TX T2LDPA	Copper	Yes	Triangle	Round	0	0.26089	0.37177	1.04357	1.48711	1.39980	1.39980	R-EXP	0.5	380	
73	C TX T5LDPA	Copper	Yes	Triangle	Round	0	0.38555	0.17307	1.54220	0.69228	3.91481	3.91481	R-EXP	0.5	175	
74	C TX T5LDPB	Copper	Yes	Triangle	Round	0	1.16835	1.66492	4.67340	6.65968	6.26869	6.26869	R-EXP	0.5	380	
75	C TX T9LDPA	Copper	Yes	Triangle	Round	0	0.61688	0.27691	2.46752	1.10765	6.26369	6.26369	R-EXP	0.5	175	
76	C TX T9LDPB	Copper	Yes	Triangle	Round	0	2.61909	1.80355	10.4763	7.21425	5.21742	5.21742	R-EXP	0.5	230	
77	C UPS 5	Copper	Yes	Triangle	Round	0	4.11912	0.94407	16.4764	3.77630	6.49784	6.49784	R-EXP	0.5	115	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Cables

	ID Name	Status	From Bus ID	From Base kV	To Bus ID	To Base kV	Unit	Type	No/Ph	Size	Length	Temp	Insulation	Rating (A)	Material
78	C UPS 8	On	3EL1	0.208	UPS 8I	0.208	U.S.	1/C	1	2	10	50	THWN	115	Copper
79	C UPS3A	On	UPS5A	0.208	UPS3A	0.208	U.S.	1/C	1	2	12	50	THWN	115	Copper
80	C UPS5A	On	UPS 5O	0.208	UPS5A	0.208	U.S.	1/C	1	2	80	50	THWN	115	Copper
81	C UPS8A	On	UPS 8O	0.208	UPS8A	0.208	U.S.	1/C	1	2	176	50	THWN	115	Copper
82	C UPS9A	On	UPS8A	0.208	UPS9A	0.208	U.S.	1/C	1	2	12	50	THWN	115	Copper

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Cables

	ID Name	Raceway Type	Raceway Mtl	R1	X1	R0	X0	Xc	Xc0	Gnd Num	Gnd Size	Gnd Mtl	Gnd Type	Gnd Insul	Neutral Num	Neutral Size	Neutral Rating
78	C UPS 8	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	2	Other	10
79	C UPS3A	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	2	Other	10
80	C UPS5A	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	2	2	10
81	C UPS8A	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	8	Copper	Separate	Yes	2	Other	10
82	C UPS9A	Conduit	Steel	0.17821	0.04084	0.71283	0.16337	0.00665	0.00665	1	6	Copper	Separate	Yes	2	Other	10

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Cables

	ID Name	Neutral Mtl	Neutral Insul	Conductor Lay	Conductor Form	Spacing	R1 pu	X1 pu	R0 pu	X0 pu	B1 pu	B0 pu	Hrm RC Factor	Hrm RC Value	I Hrm Rating	Comment
78	C UPS 8	Copper	Yes	Triangle	Round	0	4.11912	0.94407	16.4764	3.77630	6.49784	6.49784	R-EXP	0.5	115	
79	C UPS3A	Copper	Yes	Triangle	Round	0	4.94295	1.13289	19.7717	4.53156	7.79741	7.79741	R-EXP	0.5	115	
80	C UPS5A	Copper	Yes	Triangle	Round	0	32.9530	7.55262	131.811	30.2104	5.19827	5.19827	R-EXP	0.5	115	
81	C UPS8A	Copper	Yes	Triangle	Round	0	72.4966	16.6157	289.985	66.4629	1.14362	1.14362	R-EXP	0.5	115	
82	C UPS9A	Copper	Yes	Triangle	Round	0	4.94295	1.13289	19.7717	4.53156	7.79741	7.79741	R-EXP	0.5	115	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Status	On Bus	Base kV	Conn Type	Class	Options	Breaker Mfr	Breaker Type	Breaker Style	Cont Current (A)	SC Int kA	SC Test Std
1	B 1EH1	On	2EHDP	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FCN	100	65	ANSI-SYM
2	B 1EH1-BR	On	1EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
3	B 1EH1-MAIN	On	1EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	60	14	ANSI-SYM
4	B 1EL1	On	1EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	25	14	ANSI-SYM
5	B 1EL1- HI MAI	On	TX 1EL1 H	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TED (600V)	40	18	ANSI-SYM
6	B 1EL1-BR	On	1EL1	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQL	20	10	ANSI-SYM
7	B 1EL1-MAIN	On	1EL1	0.208	Bus Tie	MCCB	Breaker Onl	GE	Q Line	THQL	50	10	ANSI-SYM
8	B 1HAIA	On	1HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
9	B 1HAIA-BR	On	1HAIA	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
10	B 1HAIB	On	1HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
11	B 1HAIB-BR	On	1HAIB	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
12	B 1HAIC	On	1HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
13	B 1HAIC-BR	On	1HAIC	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	15	65	ANSI-SYM
14	B 1HDPA	On	MSB	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SKL8	800	65	ANSI-SYM
15	B 1HDPA-MAIN	On	1HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SKH8	800	50	ANSI-SYM
16	B 1LA1A	On	1LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	TQD	225	10	ANSI-SYM
17	B 1LA1A-BR	On	1LA1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
18	B 1LA2A	On	1LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	TQD	225	10	ANSI-SYM
19	B 1LA2A-BR	On	1LA2A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
20	B 1LAC1A	On	1LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	TQD	225	10	ANSI-SYM
21	B 1LAC1A-BR	On	1LAC1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
22	B 1LAC2A	On	1LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	TQD	225	10	ANSI-SYM
23	B 1LAC2A-BR	On	1LAC2A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
24	B 1LDPA-BR	On	1LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEB	100	10	ANSI-SYM
25	B 1LDPA-MAIN	On	1LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SGD	400	65	ANSI-SYM
26	B 2EH1	On	2EHDP	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FCN	60	65	ANSI-SYM
27	B 2EH1-BR	On	2EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
28	B 2EH1-MAIN	On	2EH1	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	100	65	ANSI-SYM
29	B 2EHDP-MAIN	On	2EHDP	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	300	65	ANSI-SYM
30	B 2EL1	On	2EH1	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	25	65	ANSI-SYM
31	B 2EL1- HI MAI	On	TX 2EL1 H	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TED (600V)	40	18	ANSI-SYM
32	B 2EL1-BR	On	2EL1	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQL	20	10	ANSI-SYM
33	B 2EL1-MAIN	On	2EL1	0.208	Bus Tie	MCCB	Breaker Onl	GE	Q Line	THQL	50	10	ANSI-SYM
34	B 2HAIA	On	2HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
35	B 2HAIA-BR	On	2HAIA	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
36	B 2HAIB	On	2HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	400	65	ANSI-SYM
37	B 2HAIB-BR1	On	2HAIB	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	15	65	ANSI-SYM
38	B 2HAIB-BR2	On	2HAIB	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
39	B 2HAIC	On	2HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
40	B 2HAIC-BR1	On	2HAIC	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SEL	15	65	ANSI-SYM
41	B 2HAIC-BR2	On	2HAIC	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
42	B 2HDPA	On	MSB	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SKL12	1000	65	ANSI-SYM
43	B 2HDPA-MAIN	On	2HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SKL12	1000	65	ANSI-SYM
44	B 2LA1A	On	2LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
45	B 2LA1A-BR	On	2LA1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
46	B 2LA1B	On	2LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
47	B 2LA1B-BR	On	2LA1B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
48	B 2LA1KA	On	2LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
49	B 2LA1KA-BR	On	2LA1KA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
50	B 2LA1KB	On	2LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
51	B 2LA1KB-BR	On	2LA1KB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
52	B 2LA1KC	On	2LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
53	B 2LAC1A	On	2LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
54	B 2LAC1A-BR	On	2LAC1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
55	B 2LDPA-BR	On	2LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	150	22	ANSI-SYM
56	B 2LDPA-MAIN	On	2LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SKH8	800	65	ANSI-SYM
57	B 3EH1	On	2EHDP	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FCN	100	65	ANSI-SYM
58	B 3EH1-BR	On	3EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
59	B 3EH1-MAIN	On	3EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	100	14	ANSI-SYM
60	B 3EL1	On	3EH1	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	45	65	ANSI-SYM
61	B 3EL1- HI MAI	On	TX 3EL1 H	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TED (600V)	40	18	ANSI-SYM
62	B 3EL1-BR	On	3EL1	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQL	20	10	ANSI-SYM
63	B 3EL1-MAIN	On	3EL1	0.208	Bus Tie	MCCB	Breaker Onl	GE	Q Line	THQL	50	10	ANSI-SYM
64	B 4EDP1	On	4EL2	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQL	50	10	ANSI-SYM
65	B 4EH1	On	2EHDP	0.48	Feeder	MCCB	Breaker Onl	<None>	<None>	<None>	60	65	ANSI-SYM
66	B 4EH1-BR	On	4EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	20	14	ANSI-SYM
67	B 4EH1-MAIN	On	4EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	100	14	ANSI-SYM
68	B 4EH2	On	2EHDP	0.48	Feeder	MCCB	Breaker Onl	<None>	<None>	<None>	60	65	ANSI-SYM
69	B 4EH2-BR	On	4EH2	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	20	14	ANSI-SYM
70	B 4EH2-MAIN	On	4EH2	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	100	14	ANSI-SYM
71	B 4EL1	On	4EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	45	14	ANSI-SYM
72	B 4EL1- HI MAI	On	TX 4EL1 H	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TED (600V)	70	18	ANSI-SYM
73	B 4EL1-BR	On	4EL1	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQL	20	10	ANSI-SYM
74	B 4EL1-MAIN	On	4EL1	0.208	Bus Tie	MCCB	Breaker Onl	GE	Q Line	THQL	70	10	ANSI-SYM
75	B 4EL2	On	4EH2	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	45	14	ANSI-SYM
76	B 4EL2- HI MAI	On	TX 4EL2 H	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TED (600V)	70	18	ANSI-SYM
77	B 4EL2-BR	On	4EL2	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQL	20	10	ANSI-SYM

(Serial #34798)

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Comment: Equipment Database

LV Breakers

	ID Name	Normal State	Trip	Trip Mfr	Trip Type	Trip Style	Sensor/Frame	Plug/Tap/Trip	LTPU Setting	LTPU Mult	LTPU (A)	LTD Band
1	B 1EH1	Closed	TMGN	GE	Record Plus	FCN	100A (100AT)	100				
2	B 1EH1-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
3	B 1EH1-MAIN	Closed	TMGN	GE	E150	TEY	100A (60A)	60				
4	B 1EL1	Closed	TMGN	GE	E150	TEY	100A (30A)	30				
5	B 1EL1- HI MAI	Closed	TMGN	GE	E150	TED (600V)	150A(15-50AT)	40				
6	B 1EL1-BR	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	20				
7	B 1EL1-MAIN	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	50				
8	B 1HAIA	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
9	B 1HAIA-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
10	B 1HAIB	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
11	B 1HAIB-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
12	B 1HAIC	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
13	B 1HAIC-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	15				
14	B 1HDP A	Closed	SST	GE	Spectra RMS	MCCB SK	800	800	1		800	Fixed
15	B 1HDP A-MAIN	Closed	SST	GE	Spectra RMS	MCCB SK	800	800	1		800	Fixed
16	B 1LA1A	Closed	TMGN	GE	Q Line	TQD	225A(100-225AT)	225				
17	B 1LA1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
18	B 1LA2A	Closed	TMGN	GE	Q Line	TQD	225A(100-225AT)	225				
19	B 1LA2A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
20	B 1LAC1A	Closed	TMGN	GE	Q Line	TQD	225A(100-225AT)	225				
21	B 1LAC1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
22	B 1LAC2A	Closed	TMGN	GE	Q Line	TQD	225A(100-225AT)	225				
23	B 1LAC2A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
24	B 1LDPA-BR	Closed	TMGN	GE	E150	TEB	150A(90-100AT)	100				
25	B 1LDPA-MAIN	Closed	SST	GE	Spectra RMS	MCCB SG	400	400	1	1	400	Fixed
26	B 2EH1	Closed	TMGN	GE	Record Plus	FCN	100A (60AT)	60				
27	B 2EH1-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
28	B 2EH1-MAIN	Closed	SST	GE	Spectra RMS	MCCB SE	100A (100AT)	100	1	1	100	Fixed
29	B 2EHDP-MAIN	Closed	SST	GE	Spectra RMS	MCCB SG	400	300	1	1	300	Fixed
30	B 2EL1	Closed	SST	GE	Spectra RMS	MCCB SE	30A (25AT)	25	1	1	25	Fixed
31	B 2EL1- HI MAI	Closed	TMGN	GE	E150	TED (600V)	150A(15-50AT)	40				
32	B 2EL1-BR	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	20				
33	B 2EL1-MAIN	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	50				
34	B 2HAIA	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
35	B 2HAIA-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
36	B 2HAIB	Closed	SST	GE	Spectra RMS	MCCB SG	400	400	1	1	400	Fixed
37	B 2HAIB-BR1	Closed	SST	GE	Spectra RMS	MCCB SE	30A (15AT)	15	1	1	15	Fixed
38	B 2HAIB-BR2	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
39	B 2HAIC	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
40	B 2HAIC-BR1	Closed	SST	GE	Spectra RMS	MCCB SE	30A (15AT)	15	1	1	15	Fixed
41	B 2HAIC-BR2	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
42	B 2HDP A	Closed	SST	GE	Spectra RMS	MCCB SK	1200	1000	1		1000	Fixed
43	B 2HDP A-MAIN	Closed	SST	GE	Spectra RMS	MCCB SK	1200	1000	1		1000	Fixed
44	B 2LA1A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
45	B 2LA1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
46	B 2LA1B	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
47	B 2LA1B-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
48	B 2LA1KA	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
49	B 2LA1KA-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
50	B 2LA1KB	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
51	B 2LA1KB-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
52	B 2LA1KC	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
53	B 2LAC1A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
54	B 2LAC1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
55	B 2LDPA-BR	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	150				
56	B 2LDPA-MAIN	Closed	SST	GE	Spectra RMS	MCCB SK	800	800	1		800	Fixed
57	B 3EH1	Closed	TMGN	GE	Record Plus	FCN	100A (100AT)	100				
58	B 3EH1-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
59	B 3EH1-MAIN	Closed	TMGN	GE	E150	TEY	100A (100A)	100				
60	B 3EL1	Closed	TMGN	GE	Record Plus	FBN	100A (45AT)	45				
61	B 3EL1- HI MAI	Closed	TMGN	GE	E150	TED (600V)	150A(15-50AT)	40				
62	B 3EL1-BR	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	20				
63	B 3EL1-MAIN	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	50				
64	B 4EDP1	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	50				
65	B 4EH1	Closed	TMGN									
66	B 4EH1-BR	Closed	TMGN	GE	E150	TEY	100A (20A)	20				
67	B 4EH1-MAIN	Closed	TMGN	GE	E150	TEY	100A (100A)	100				
68	B 4EH2	Closed	TMGN									
69	B 4EH2-BR	Closed	TMGN	GE	E150	TEY	100A (20A)	20				
70	B 4EH2-MAIN	Closed	TMGN	GE	E150	TEY	100A (100A)	100				
71	B 4EL1	Closed	TMGN	GE	E150	TEY	100A (40A)	40				
72	B 4EL1- HI MAI	Closed	TMGN	GE	E150	TED (600V)	150A(60-80AT)	70				
73	B 4EL1-BR	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	20				
74	B 4EL1-MAIN	Closed	TMGN	GE	Q Line	THQL	100A(60-100AT)	70				
75	B 4EL2	Closed	TMGN	GE	E150	TEY	100A (40A)	40				
76	B 4EL2- HI MAI	Closed	TMGN	GE	E150	TED (600V)	150A(60-80AT)	70				
77	B 4EL2-BR	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	20				

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Comment: Equipment Database

LV Breakers

	ID Name	STPU Setting	STPU Band	STPU I2T	STPU (A)	Inst Setting	Inst Override	Inst (A)	Gnd Pickup	Gnd Delay	Gnd I2T	Gnd (A)	Fuse Mfr	Fuse Type
1	B 1EH1												<None>	<None>
2	B 1EH1-BR												<None>	<None>
3	B 1EH1-MAIN												<None>	<None>
4	B 1EL1												<None>	<None>
5	B 1EL1- HI MAI												<None>	<None>
6	B 1EL1-BR												<None>	<None>
7	B 1EL1-MAIN												<None>	<None>
8	B 1HAIA	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
9	B 1HAIA-BR												<None>	<None>
10	B 1HAIB	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
11	B 1HAIB-BR												<None>	<None>
12	B 1HAIC	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
13	B 1HAIC-BR												<None>	<None>
14	B 1HDP A	Max	Fixed	In	4000	Max	Pickup	8144			Out		<None>	<None>
15	B 1HDP A-MAIN	3	Fixed	In	1960	3	Pickup	3872			Out		<None>	<None>
16	B 1LA1A												<None>	<None>
17	B 1LA1A-BR												<None>	<None>
18	B 1LA2A												<None>	<None>
19	B 1LA2A-BR												<None>	<None>
20	B 1LAC1A												<None>	<None>
21	B 1LAC1A-BR												<None>	<None>
22	B 1LAC2A												<None>	<None>
23	B 1LAC2A-BR												<None>	<None>
24	B 1LDP A-BR												<None>	<None>
25	B 1LDP A-MAIN	3	Fixed	In	980	3	Pickup	1940			Out		<None>	<None>
26	B 2EH1												<None>	<None>
27	B 2EH1-BR												<None>	<None>
28	B 2EH1-MAIN	Max	Fixed	In	660	Max	Pickup	1250			Out		<None>	<None>
29	B 2EHDP-MAIN	Max	Fixed	In	1500	Max	Pickup	3036			Out		<None>	<None>
30	B 2EL1	Max	Fixed	In	187.5	Max	Pickup	250			Out		<None>	<None>
31	B 2EL1- HI MAI												<None>	<None>
32	B 2EL1-BR												<None>	<None>
33	B 2EL1-MAIN												<None>	<None>
34	B 2HAIA	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
35	B 2HAIA-BR												<None>	<None>
36	B 2HAIB	5	Fixed	In	1520	5	Pickup	3136			Out		<None>	<None>
37	B 2HAIB-BR1	Max	Fixed	In	90	Max	Pickup	187.5			Out		<None>	<None>
38	B 2HAIB-BR2												<None>	<None>
39	B 2HAIC	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
40	B 2HAIC-BR1	Max	Fixed	In	90	Max	Pickup	187.5			Out		<None>	<None>
41	B 2HAIC-BR2												<None>	<None>
42	B 2HDP A	Max	Fixed	In	5000	Max	Pickup	10180			Out		<None>	<None>
43	B 2HDP A-MAIN	3	Fixed	In	2450	3	Pickup	4840			Out		<None>	<None>
44	B 2LA1A												<None>	<None>
45	B 2LA1A-BR												<None>	<None>
46	B 2LA1B												<None>	<None>
47	B 2LA1B-BR												<None>	<None>
48	B 2LA1KA												<None>	<None>
49	B 2LA1KA-BR												<None>	<None>
50	B 2LA1KB												<None>	<None>
51	B 2LA1KB-BR												<None>	<None>
52	B 2LA1KC												<None>	<None>
53	B 2LAC1A												<None>	<None>
54	B 2LAC1A-BR												<None>	<None>
55	B 2LDP A-BR												<None>	<None>
56	B 2LDP A-MAIN	Max	Fixed	In	4000	Max	Pickup	8144			Out		<None>	<None>
57	B 3EH1												<None>	<None>
58	B 3EH1-BR												<None>	<None>
59	B 3EH1-MAIN												<None>	<None>
60	B 3EL1												<None>	<None>
61	B 3EL1- HI MAI												<None>	<None>
62	B 3EL1-BR												<None>	<None>
63	B 3EL1-MAIN												<None>	<None>
64	B 4EDP1												<None>	<None>
65	B 4EH1												<None>	<None>
66	B 4EH1-BR												<None>	<None>
67	B 4EH1-MAIN												<None>	<None>
68	B 4EH2												<None>	<None>
69	B 4EH2-BR												<None>	<None>
70	B 4EH2-MAIN												<None>	<None>
71	B 4EL1												<None>	<None>
72	B 4EL1- HI MAI												<None>	<None>
73	B 4EL1-BR												<None>	<None>
74	B 4EL1-MAIN												<None>	<None>
75	B 4EL2												<None>	<None>
76	B 4EL2- HI MAI												<None>	<None>
77	B 4EL2-BR												<None>	<None>

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Fuse Style	Fuse Size	Mtr O/L Mfr	Mtr O/L Type	Mtr O/L Style	Motor FLA	Service Factor	PCC kVA Demand	PCC Isc/Iload	Comment
1	B 1EH1	<None>	<None>	<None>	<None>	<None>		1			
2	B 1EH1-BR	<None>	<None>	<None>	<None>	<None>		1			
3	B 1EH1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
4	B 1EL1	<None>	<None>	<None>	<None>	<None>		1			
5	B 1EL1- HI MAI	<None>	<None>	<None>	<None>	<None>		1			
6	B 1EL1-BR	<None>	<None>	<None>	<None>	<None>		1			
7	B 1EL1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
8	B 1HAIA	<None>	<None>	<None>	<None>	<None>		1			
9	B 1HAIA-BR	<None>	<None>	<None>	<None>	<None>		1			
10	B 1HAIB	<None>	<None>	<None>	<None>	<None>		1			
11	B 1HAIB-BR	<None>	<None>	<None>	<None>	<None>		1			
12	B 1HAIC	<None>	<None>	<None>	<None>	<None>		1			
13	B 1HAIC-BR	<None>	<None>	<None>	<None>	<None>		1			
14	B 1HDPA	<None>	<None>	<None>	<None>	<None>		1			
15	B 1HDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			
16	B 1LA1A	<None>	<None>	<None>	<None>	<None>		1			
17	B 1LA1A-BR	<None>	<None>	<None>	<None>	<None>		1			
18	B 1LA2A	<None>	<None>	<None>	<None>	<None>		1			
19	B 1LA2A-BR	<None>	<None>	<None>	<None>	<None>		1			
20	B 1LAC1A	<None>	<None>	<None>	<None>	<None>		1			
21	B 1LAC1A-BR	<None>	<None>	<None>	<None>	<None>		1			
22	B 1LAC2A	<None>	<None>	<None>	<None>	<None>		1			
23	B 1LAC2A-BR	<None>	<None>	<None>	<None>	<None>		1			
24	B 1LDPA-BR	<None>	<None>	<None>	<None>	<None>		1			
25	B 1LDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			
26	B 2EH1	<None>	<None>	<None>	<None>	<None>		1			
27	B 2EH1-BR	<None>	<None>	<None>	<None>	<None>		1			
28	B 2EH1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
29	B 2EHDP-MAIN	<None>	<None>	<None>	<None>	<None>		1			
30	B 2EL1	<None>	<None>	<None>	<None>	<None>		1			
31	B 2EL1- HI MAI	<None>	<None>	<None>	<None>	<None>		1			
32	B 2EL1-BR	<None>	<None>	<None>	<None>	<None>		1			
33	B 2EL1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
34	B 2HAIA	<None>	<None>	<None>	<None>	<None>		1			
35	B 2HAIA-BR	<None>	<None>	<None>	<None>	<None>		1			
36	B 2HAIB	<None>	<None>	<None>	<None>	<None>		1			
37	B 2HAIB-BR1	<None>	<None>	<None>	<None>	<None>		1			
38	B 2HAIB-BR2	<None>	<None>	<None>	<None>	<None>		1			
39	B 2HAIC	<None>	<None>	<None>	<None>	<None>		1			
40	B 2HAIC-BR1	<None>	<None>	<None>	<None>	<None>		1			
41	B 2HAIC-BR2	<None>	<None>	<None>	<None>	<None>		1			
42	B 2HDPA	<None>	<None>	<None>	<None>	<None>		1			
43	B 2HDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			
44	B 2LA1A	<None>	<None>	<None>	<None>	<None>		1			
45	B 2LA1A-BR	<None>	<None>	<None>	<None>	<None>		1			
46	B 2LA1B	<None>	<None>	<None>	<None>	<None>		1			
47	B 2LA1B-BR	<None>	<None>	<None>	<None>	<None>		1			
48	B 2LA1KA	<None>	<None>	<None>	<None>	<None>		1			
49	B 2LA1KA-BR	<None>	<None>	<None>	<None>	<None>		1			
50	B 2LA1KB	<None>	<None>	<None>	<None>	<None>		1			
51	B 2LA1KB-BR	<None>	<None>	<None>	<None>	<None>		1			
52	B 2LA1KC	<None>	<None>	<None>	<None>	<None>		1			
53	B 2LAC1A	<None>	<None>	<None>	<None>	<None>		1			
54	B 2LAC1A-BR	<None>	<None>	<None>	<None>	<None>		1			
55	B 2LDPA-BR	<None>	<None>	<None>	<None>	<None>		1			
56	B 2LDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			
57	B 3EH1	<None>	<None>	<None>	<None>	<None>		1			
58	B 3EH1-BR	<None>	<None>	<None>	<None>	<None>		1			
59	B 3EH1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
60	B 3EL1	<None>	<None>	<None>	<None>	<None>		1			
61	B 3EL1- HI MAI	<None>	<None>	<None>	<None>	<None>		1			
62	B 3EL1-BR	<None>	<None>	<None>	<None>	<None>		1			
63	B 3EL1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
64	B 4EDP1	<None>	<None>	<None>	<None>	<None>		1			
65	B 4EH1	<None>	<None>	<None>	<None>	<None>		1			
66	B 4EH1-BR	<None>	<None>	<None>	<None>	<None>		1			
67	B 4EH1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
68	B 4EH2	<None>	<None>	<None>	<None>	<None>		1			
69	B 4EH2-BR	<None>	<None>	<None>	<None>	<None>		1			
70	B 4EH2-MAIN	<None>	<None>	<None>	<None>	<None>		1			
71	B 4EL1	<None>	<None>	<None>	<None>	<None>		1			
72	B 4EL1- HI MAI	<None>	<None>	<None>	<None>	<None>		1			
73	B 4EL1-BR	<None>	<None>	<None>	<None>	<None>		1			
74	B 4EL1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
75	B 4EL2	<None>	<None>	<None>	<None>	<None>		1			
76	B 4EL2- HI MAI	<None>	<None>	<None>	<None>	<None>		1			
77	B 4EL2-BR	<None>	<None>	<None>	<None>	<None>		1			

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Status	On Bus	Base kV	Conn Type	Class	Options	Breaker Mfr	Breaker Type	Breaker Style	Cont Current (A)	SC Int kA	SC Test Std
78	B 4EL2-MAIN	On	4EL2	0.208	Bus Tie	MCCB	Breaker Onl	GE	Q Line	THQL	70	10	ANSI-SYM
79	B 4LDPB-SPAR	On	5LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
80	B 5EH1	On	2EHDP	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FCN	60	65	ANSI-SYM
81	B 5EH1-BR	On	5EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	20	14	ANSI-SYM
82	B 5EH1-MAIN	On	5EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	100	14	ANSI-SYM
83	B 5EL1	On	5EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	45	14	ANSI-SYM
84	B 5EL1- HI MAI	On	TX 5EL1 H	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TED (600V)	40	18	ANSI-SYM
85	B 5EL1-BR	On	5EL1	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQL	20	10	ANSI-SYM
86	B 5EL1-MAIN	On	5EL1	0.208	Bus Tie	MCCB	Breaker Onl	GE	Q Line	THQL	70	10	ANSI-SYM
87	B 5HA1A	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
88	B 5HA1A-BR	On	5HA1A	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
89	B 5HA1B	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	300	65	ANSI-SYM
90	B 5HA1B-BR	On	5HA1B	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	20	65	ANSI-SYM
91	B 5HA1C	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	300	65	ANSI-SYM
92	B 5HA1C-BR	On	5HA1C	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	20	65	ANSI-SYM
93	B 5HA1D	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
94	B 5HA1D-BR	On	5HA1D	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	15	65	ANSI-SYM
95	B 5HA1D-BR2	On	5HA1D	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	15	65	ANSI-SYM
96	B 5HA1E	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
97	B 5HA1E-BR	On	5HA1E	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	20	65	ANSI-SYM
98	B 5HA1E-BR2	On	5HA1E	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	15	65	ANSI-SYM
99	B 5HDPA	On	MSB	0.48	Feeder	ICCB	Breaker Onl	GE	Power Break II	SS-20	2000	65	ANSI-SYM
100	B 5HDPA-MAIN	On	5HDPA	0.48	Feeder	ICCB	Breaker Onl	GE	Power Break II	SS-20	2000	65	ANSI-SYM
101	B 5LA1A	On	5LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
102	B 5LA1A-BR	On	5LA1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
103	B 5LAC1A	On	5LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
104	B 5LAC1A-BR	On	5LAC1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
105	B 5LAC1B	On	5LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
106	B 5LAC1B-BR	On	5LAC1B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
107	B 5LB1A	On	5LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	100	ANSI-SYM
108	B 5LB1A-BR	On	5LB1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
109	B 5LB1B	On	5LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	100	ANSI-SYM
110	B 5LB1B-BR	On	5LB1B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
111	B 5LB1C	On	5LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	100	ANSI-SYM
112	B 5LB1C-BR	On	5LB1C	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	15	10	ANSI-SYM
113	B 5LBC1A	On	5LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	100	ANSI-SYM
114	B 5LBC1A-BR	On	5LBC1A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
115	B 5LBC1B	On	5LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	100	ANSI-SYM
116	B 5LBC1B-BR	On	5LBC1B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THHQB	20	22	ANSI-SYM
117	B 5LDPB-BR	On	5LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	E150	TEY	100	65	ANSI-SYM
118	B 5LDPB-MAIN	On	5LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SGD	400	65	ANSI-SYM
119	B 5LDPB-MAIN	On	5LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SKH8	800	65	ANSI-SYM
120	B 6EH1	On	2EHDP	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FCN	60	65	ANSI-SYM
121	B 6EH1-BR	On	6EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	20	14	ANSI-SYM
122	B 6EL1	On	6EH1	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TEY	25	14	ANSI-SYM
123	B 6EL1- HI MAI	On	TX 6EL1 H	0.48	Feeder	MCCB	Breaker Onl	GE	E150	TED (600V)	40	18	ANSI-SYM
124	B 6EL1-BR	On	6EL1	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQL	20	10	ANSI-SYM
125	B 6EL1-MAIN	On	6EL1	0.208	Bus Tie	MCCB	Breaker Onl	GE	Q Line	THQL	70	10	ANSI-SYM
126	B 9HA2A	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	300	65	ANSI-SYM
127	B 9HA2A-BR	On	9HA2A	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	15	65	ANSI-SYM
128	B 9HA2B	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
129	B 9HA2B-BR	On	9HA2B	0.48	Feeder	MCCB	Breaker Onl	GE	E150	THED (277V)	15	65	ANSI-SYM
130	B 9HA2B-BR2	On	9HA2B	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBN	15	65	ANSI-SYM
131	B 9LA2A	On	9LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
132	B 9LA2A-BR	On	9LA2A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
133	B 9LAC2A	On	9LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
134	B 9LAC2A-BR	On	9LAC2A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
135	B 9LAC2B	On	9LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQD	225	22	ANSI-SYM
136	B 9LAC2B-BR	On	9LAC2B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
137	B 9LB2A	On	9LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
138	B 9LB2A-BR	On	9LB2A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
139	B 9LBC2A	On	9LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
140	B 9LBC2A-BR	On	9LBC2A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
141	B 9LBC2B	On	9LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	225	65	ANSI-SYM
142	B 9LBC2B-BR	On	9LBC2B	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
143	B 9LDPA-MAIN	On	9LDPA	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SGD	400	65	ANSI-SYM
144	B 9LDPB	On	9LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SFH	150	65	ANSI-SYM
145	B 9LDPB-MAIN	On	9LDPB	0.208	Feeder	MCCB	Breaker Onl	GE	Spectra	SGH6	500	65	ANSI-SYM
146	B CA	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBH	70	100	ANSI-SYM
147	B EGH1-ATS E	On	EGH1	0.48	Feeder	MCCB	Breaker Onl	<None>	<None>	<None>	0	0	ANSI-SYM
148	B ELEV 160	On	1HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FCN	100	65	ANSI-SYM
149	B ELEV 560	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Record Plus	FBH	100	100	ANSI-SYM
150	B LBIC MAIN	On	5LB1C	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	TQD	225	10	ANSI-SYM
151	B MCCA	On	MSB	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	400	65	ANSI-SYM
152	B MDB	On	MDB	0.48	Feeder	ICCB	Breaker Onl	GE	Power Break II	SS-40	4000	100	ANSI-SYM
153	B MSB-ATS EH	On	MSB	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	300	65	ANSI-SYM
154	B MSB-SPARE	On	MSB	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Normal State	Trip	Trip Mfr	Trip Type	Trip Style	Sensor/Frame	Plug/Tap/Trip	LTPU Setting	LTPU Mult	LTPU (A)	LTD Band
78	B 4EL2-MAIN	Closed	TMGN	GE	Q Line	THQL	100A(60-100AT)	70				
79	B 4LDPB-SPAR	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
80	B 5EH1	Closed	TMGN	GE	Record Plus	FCN	100A (60AT)	60				
81	B 5EH1-BR	Closed	TMGN	GE	E150	TEY	100A (20A)	20				
82	B 5EH1-MAIN	Closed	TMGN	GE	E150	TEY	100A (100A)	100				
83	B 5EL1	Closed	TMGN	GE	E150	TEY	100A (50A)	50				
84	B 5EL1- HI MAI	Closed	TMGN	GE	E150	TED (600V)	150A(15-50AT)	40				
85	B 5EL1-BR	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	20				
86	B 5EL1-MAIN	Closed	TMGN	GE	Q Line	THQL	100A(60-100AT)	70				
87	B 5HA1A	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
88	B 5HA1A-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
89	B 5HA1B	Closed	SST	GE	Spectra RMS	MCCB SG	400	300	1	1	300	Fixed
90	B 5HA1B-BR	Closed	TMGN	GE	Record Plus	FBN	100A (20AT)	20				
91	B 5HA1C	Closed	SST	GE	Spectra RMS	MCCB SG	400	300	1	1	300	Fixed
92	B 5HA1C-BR	Closed	TMGN	GE	Record Plus	FBN	100A (20AT)	20				
93	B 5HA1D	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
94	B 5HA1D-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	15				
95	B 5HA1D-BR2	Closed	TMGN	GE	Record Plus	FBN	100A (15AT)	15				
96	B 5HA1E	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
97	B 5HA1E-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	20				
98	B 5HA1E-BR2	Closed	TMGN	GE	Record Plus	FBN	100A (15AT)	15				
99	B 5HDP A	Closed	SST	GE	Power+	ICCB	2000	2000	1		2000	2
100	B 5HDP A-MAIN	Closed	SST	GE	Power+	ICCB	2000	2000	1		2000	1
101	B 5LA1A	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
102	B 5LA1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
103	B 5LAC1A	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
104	B 5LAC1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
105	B 5LAC1B	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
106	B 5LAC1B-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
107	B 5LB1A	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
108	B 5LB1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
109	B 5LB1B	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
110	B 5LB1B-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
111	B 5LB1C	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
112	B 5LB1C-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	15				
113	B 5LBC1A	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
114	B 5LBC1A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
115	B 5LBC1B	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
116	B 5LBC1B-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
117	B 5LDP A-BR	Closed	TMGN	GE	E150	TEY	100A (100A)	100				
118	B 5LDP A-MAIN	Closed	SST	GE	Spectra RMS	MCCB SG	400	400	1	1	400	Fixed
119	B 5LDP B-MAIN	Closed	SST	GE	Spectra RMS	MCCB SK	800	800	1		800	Fixed
120	B 6EH1	Closed	TMGN	GE	Record Plus	FCN	100A (60AT)	60				
121	B 6EH1-BR	Closed	TMGN	GE	E150	TEY	100A (20A)	20				
122	B 6EL1	Closed	TMGN	GE	E150	TEY	100A (30A)	30				
123	B 6EL1- HI MAI	Closed	TMGN	GE	E150	TED (600V)	150A(15-50AT)	40				
124	B 6EL1-BR	Closed	TMGN	GE	Q Line	THQL	100A (15-50AT)	20				
125	B 6EL1-MAIN	Closed	TMGN	GE	Q Line	THQL	100A(60-100AT)	70				
126	B 9HA2A	Closed	SST	GE	Spectra RMS	MCCB SG	400	300	1	1	300	Fixed
127	B 9HA2A-BR	Closed	TMGN	GE	Record Plus	FBN	100A (15AT)	15				
128	B 9HA2B	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
129	B 9HA2B-BR	Closed	TMGN	GE	E150	THED (277V)	150A(15-30AT)	15				
130	B 9HA2B-BR2	Closed	TMGN	GE	Record Plus	FBN	100A (15AT)	15				
131	B 9LA2A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
132	B 9LA2A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
133	B 9LAC2A	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
134	B 9LAC2A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
135	B 9LAC2B	Closed	TMGN	GE	Q Line	THQD	225A(100-225AT)	225				
136	B 9LAC2B-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
137	B 9LB2A	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
138	B 9LB2A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
139	B 9LBC2A	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
140	B 9LBC2A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
141	B 9LBC2B	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
142	B 9LBC2B-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
143	B 9LDP A-MAIN	Closed	SST	GE	Spectra RMS	MCCB SG	400	400	1	1	400	Fixed
144	B 9LDP B	Closed	SST	GE	Spectra RMS	MCCB SF	250	150	1		150	Fixed
145	B 9LDP B-MAIN	Closed	SST	GE	Spectra RMS	MCCB SG	600	500	1	1	500	Fixed
146	B CA	Closed	TMGN	GE	Record Plus	FBH	100A (70AT)	70				
147	B EGH1-ATS E	Closed	SST									
148	B ELEV 160	Closed	TMGN	GE	Record Plus	FCN	100A (100AT)	100				
149	B ELEV 560	Closed	TMGN	GE	Record Plus	FBH	100A (100AT)	100				
150	B LBIC MAIN	Closed	TMGN	GE	Q Line	TQD	225A(100-225AT)	225				
151	B MCCA	Closed	SST	GE	Spectra RMS	MCCB SG	400	400	1	1	400	Fixed
152	B MDB	Closed	SST	GE	Power+	ICCB	4000	4000	1		4000	1
153	B MSB-ATS EH	Closed	SST	GE	Spectra RMS	MCCB SG	400	300	1	1	300	Fixed
154	B MSB-SPARE	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed

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Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	STPU Setting	STPU Band	STPU I2T	STPU (A)	Inst Setting	Inst Override	Inst (A)	Gnd Pickup	Gnd Delay	Gnd I2T	Gnd (A)	Fuse Mfr	Fuse Type
78	B 4EL2-MAIN												<None>	<None>
79	B 4LDPB-SPAR												<None>	<None>
80	B 5EH1												<None>	<None>
81	B 5EH1-BR												<None>	<None>
82	B 5EH1-MAIN												<None>	<None>
83	B 5EL1												<None>	<None>
84	B 5EL1- HI MAI												<None>	<None>
85	B 5EL1-BR												<None>	<None>
86	B 5EL1-MAIN												<None>	<None>
87	B 5HA1A	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
88	B 5HA1A-BR												<None>	<None>
89	B 5HA1B	Max	Fixed	In	1500	Max	Pickup	3036			Out		<None>	<None>
90	B 5HA1B-BR												<None>	<None>
91	B 5HA1C	Max	Fixed	In	1500	Max	Pickup	3036			Out		<None>	<None>
92	B 5HA1C-BR												<None>	<None>
93	B 5HA1D	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
94	B 5HA1D-BR												<None>	<None>
95	B 5HA1D-BR2												<None>	<None>
96	B 5HA1E	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
97	B 5HA1E-BR												<None>	<None>
98	B 5HA1E-BR2												<None>	<None>
99	B 5HDP A			Out		9	Pickup	18000			Out		<None>	<None>
100	B 5HDP A-MAIN			Out		7	Pickup	14000			Out		<None>	<None>
101	B 5LA1A	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
102	B 5LA1A-BR												<None>	<None>
103	B 5LAC1A	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
104	B 5LAC1A-BR												<None>	<None>
105	B 5LAC1B	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
106	B 5LAC1B-BR												<None>	<None>
107	B 5LB1A	Min	Fixed	In	337.5	Min	Pickup	675			Out		<None>	<None>
108	B 5LB1A-BR												<None>	<None>
109	B 5LB1B	Min	Fixed	In	337.5	Min	Pickup	675			Out		<None>	<None>
110	B 5LB1B-BR												<None>	<None>
111	B 5LB1C	Min	Fixed	In	337.5	Min	Pickup	675			Out		<None>	<None>
112	B 5LB1C-BR												<None>	<None>
113	B 5LBC1A	Min	Fixed	In	337.5	Min	Pickup	675			Out		<None>	<None>
114	B 5LBC1A-BR												<None>	<None>
115	B 5LBC1B	Min	Fixed	In	337.5	Min	Pickup	675			Out		<None>	<None>
116	B 5LBC1B-BR												<None>	<None>
117	B 5LDP A-BR												<None>	<None>
118	B 5LDP A-MAIN	3	Fixed	In	980	3	Pickup	1940			Out		<None>	<None>
119	B 5LDP B-MAIN	3	Fixed	In	1960	3	Pickup	3872			Out		<None>	<None>
120	B 6EH1												<None>	<None>
121	B 6EH1-BR												<None>	<None>
122	B 6EL1												<None>	<None>
123	B 6EL1- HI MAI												<None>	<None>
124	B 6EL1-BR												<None>	<None>
125	B 6EL1-MAIN												<None>	<None>
126	B 9HA2A	Max	Fixed	In	1500	Max	Pickup	3036			Out		<None>	<None>
127	B 9HA2A-BR												<None>	<None>
128	B 9HA2B	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
129	B 9HA2B-BR												<None>	<None>
130	B 9HA2B-BR2												<None>	<None>
131	B 9LA2A												<None>	<None>
132	B 9LA2A-BR												<None>	<None>
133	B 9LAC2A												<None>	<None>
134	B 9LAC2A-BR												<None>	<None>
135	B 9LAC2B												<None>	<None>
136	B 9LAC2B-BR												<None>	<None>
137	B 9LB2A	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
138	B 9LB2A-BR												<None>	<None>
139	B 9LBC2A	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
140	B 9LBC2A-BR												<None>	<None>
141	B 9LBC2B	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
142	B 9LBC2B-BR												<None>	<None>
143	B 9LDP A-MAIN	3	Fixed	In	980	3	Pickup	1940			Out		<None>	<None>
144	B 9LDP B	Max	Fixed	In	750	Max	Pickup	1500			Out		<None>	<None>
145	B 9LDP B-MAIN	3	Fixed	In	1225	3	Pickup	2425			Out		<None>	<None>
146	B CA												<None>	<None>
147	B EGH1-ATS E						Pickup						<None>	<None>
148	B ELEV 160												<None>	<None>
149	B ELEV 560												<None>	<None>
150	B LBIC MAIN												<None>	<None>
151	B MCCA	Max	Fixed	In	2000	Max	Pickup	4048			Out		<None>	<None>
152	B MDB			Out		7	Pickup	28000	0.2	Min	Out	800	<None>	<None>
153	B MSB-ATS EH	Max	Fixed	In	1500	Max	Pickup	3036			Out		<None>	<None>
154	B MSB-SPARE	Min	Fixed	In	337.5	Min	Pickup	675			Out		<None>	<None>

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Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Fuse Style	Fuse Size	Mtr O/L Mfr	Mtr O/L Type	Mtr O/L Style	Motor FLA	Service Factor	PCC kVA Demand	PCC Isc/Iload	Comment
78	B 4EL2-MAIN	<None>	<None>	<None>	<None>	<None>		1			
79	B 4LDPB-SPAR	<None>	<None>	<None>	<None>	<None>		1			
80	B 5EH1	<None>	<None>	<None>	<None>	<None>		1			
81	B 5EH1-BR	<None>	<None>	<None>	<None>	<None>		1			
82	B 5EH1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
83	B 5EL1	<None>	<None>	<None>	<None>	<None>		1			
84	B 5EL1- HI MAI	<None>	<None>	<None>	<None>	<None>		1			
85	B 5EL1-BR	<None>	<None>	<None>	<None>	<None>		1			
86	B 5EL1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
87	B 5HA1A	<None>	<None>	<None>	<None>	<None>		1			
88	B 5HA1A-BR	<None>	<None>	<None>	<None>	<None>		1			
89	B 5HA1B	<None>	<None>	<None>	<None>	<None>		1			
90	B 5HA1B-BR	<None>	<None>	<None>	<None>	<None>		1			
91	B 5HA1C	<None>	<None>	<None>	<None>	<None>		1			
92	B 5HA1C-BR	<None>	<None>	<None>	<None>	<None>		1			
93	B 5HA1D	<None>	<None>	<None>	<None>	<None>		1			
94	B 5HA1D-BR	<None>	<None>	<None>	<None>	<None>		1			
95	B 5HA1D-BR2	<None>	<None>	<None>	<None>	<None>		1			
96	B 5HA1E	<None>	<None>	<None>	<None>	<None>		1			
97	B 5HA1E-BR	<None>	<None>	<None>	<None>	<None>		1			
98	B 5HA1E-BR2	<None>	<None>	<None>	<None>	<None>		1			
99	B 5HDPA	<None>	<None>	<None>	<None>	<None>		1			
100	B 5HDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			
101	B 5LA1A	<None>	<None>	<None>	<None>	<None>		1			
102	B 5LA1A-BR	<None>	<None>	<None>	<None>	<None>		1			
103	B 5LAC1A	<None>	<None>	<None>	<None>	<None>		1			
104	B 5LAC1A-BR	<None>	<None>	<None>	<None>	<None>		1			
105	B 5LAC1B	<None>	<None>	<None>	<None>	<None>		1			
106	B 5LAC1B-BR	<None>	<None>	<None>	<None>	<None>		1			
107	B 5LB1A	<None>	<None>	<None>	<None>	<None>		1			
108	B 5LB1A-BR	<None>	<None>	<None>	<None>	<None>		1			
109	B 5LB1B	<None>	<None>	<None>	<None>	<None>		1			
110	B 5LB1B-BR	<None>	<None>	<None>	<None>	<None>		1			
111	B 5LB1C	<None>	<None>	<None>	<None>	<None>		1			
112	B 5LB1C-BR	<None>	<None>	<None>	<None>	<None>		1			
113	B 5LBC1A	<None>	<None>	<None>	<None>	<None>		1			
114	B 5LBC1A-BR	<None>	<None>	<None>	<None>	<None>		1			
115	B 5LBC1B	<None>	<None>	<None>	<None>	<None>		1			
116	B 5LBC1B-BR	<None>	<None>	<None>	<None>	<None>		1			
117	B 5LDPA-BR	<None>	<None>	<None>	<None>	<None>		1			
118	B 5LDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			
119	B 5LDPB-MAIN	<None>	<None>	<None>	<None>	<None>		1			
120	B 6EH1	<None>	<None>	<None>	<None>	<None>		1			
121	B 6EH1-BR	<None>	<None>	<None>	<None>	<None>		1			
122	B 6EL1	<None>	<None>	<None>	<None>	<None>		1			
123	B 6EL1- HI MAI	<None>	<None>	<None>	<None>	<None>		1			
124	B 6EL1-BR	<None>	<None>	<None>	<None>	<None>		1			
125	B 6EL1-MAIN	<None>	<None>	<None>	<None>	<None>		1			
126	B 9HA2A	<None>	<None>	<None>	<None>	<None>		1			
127	B 9HA2A-BR	<None>	<None>	<None>	<None>	<None>		1			
128	B 9HA2B	<None>	<None>	<None>	<None>	<None>		1			
129	B 9HA2B-BR	<None>	<None>	<None>	<None>	<None>		1			
130	B 9HA2B-BR2	<None>	<None>	<None>	<None>	<None>		1			
131	B 9LA2A	<None>	<None>	<None>	<None>	<None>		1			
132	B 9LA2A-BR	<None>	<None>	<None>	<None>	<None>		1			
133	B 9LAC2A	<None>	<None>	<None>	<None>	<None>		1			
134	B 9LAC2A-BR	<None>	<None>	<None>	<None>	<None>		1			
135	B 9LAC2B	<None>	<None>	<None>	<None>	<None>		1			
136	B 9LAC2B-BR	<None>	<None>	<None>	<None>	<None>		1			
137	B 9LB2A	<None>	<None>	<None>	<None>	<None>		1			
138	B 9LB2A-BR	<None>	<None>	<None>	<None>	<None>		1			
139	B 9LBC2A	<None>	<None>	<None>	<None>	<None>		1			
140	B 9LBC2A-BR	<None>	<None>	<None>	<None>	<None>		1			
141	B 9LBC2B	<None>	<None>	<None>	<None>	<None>		1			
142	B 9LBC2B-BR	<None>	<None>	<None>	<None>	<None>		1			
143	B 9LDPA-MAIN	<None>	<None>	<None>	<None>	<None>		1			
144	B 9LDPB	<None>	<None>	<None>	<None>	<None>		1			
145	B 9LDPB-MAIN	<None>	<None>	<None>	<None>	<None>		1			
146	B CA	<None>	<None>	<None>	<None>	<None>		1			
147	B EGH1-ATS E	<None>	<None>	<None>	<None>	<None>		1			
148	B ELEV 160	<None>	<None>	<None>	<None>	<None>		1			
149	B ELEV 560	<None>	<None>	<None>	<None>	<None>		1			
150	B LBIC MAIN	<None>	<None>	<None>	<None>	<None>		1			
151	B MCCA	<None>	<None>	<None>	<None>	<None>		1			
152	B MDB	<None>	<None>	<None>	<None>	<None>		1			LIG Power+ Trip Unit
153	B MSB-ATS EH	<None>	<None>	<None>	<None>	<None>		1			
154	B MSB-SPARE	<None>	<None>	<None>	<None>	<None>		1			

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Status	On Bus	Base kV	Conn Type	Class	Options	Breaker Mfr	Breaker Type	Breaker Style	Cont Current (A)	SC Int kA	SC Test Std
155	B TX T1LDPA	On	1HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	175	65	ANSI-SYM
156	B TX T2LDPA	On	2HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	350	65	ANSI-SYM
157	B TX T5LDPA	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	175	65	ANSI-SYM
158	B TX T5LDPB	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SGL4	350	65	ANSI-SYM
159	B TX T9LDPA	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	175	65	ANSI-SYM
160	B TX T9LDPB	On	5HDPA	0.48	Feeder	MCCB	Breaker Onl	GE	Spectra	SFL	225	65	ANSI-SYM
161	B UPS 3A-MAI	On	UPS3A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	100	10	ANSI-SYM
162	B UPS 5	On	5EL1	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQL	100	10	ANSI-SYM
163	B UPS 5A-MAI	On	UPS5A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	100	10	ANSI-SYM
164	B UPS 8	On	3EL1	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQL	100	10	ANSI-SYM
165	B UPS 8A-MAI	On	UPS8A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	100	10	ANSI-SYM
166	B UPS 9A-MAI	On	UPS9A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	100	10	ANSI-SYM
167	B UPS3A-BR	On	UPS3A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
168	B UPS8A-BR	On	UPS8A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
169	B UPS9A-BR	On	UPS9A	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	10	ANSI-SYM
170	KC 2LA1KC-BR	On	2LA1KC	0.208	Feeder	MCCB	Breaker Onl	GE	Q Line	THQB	20	22	ANSI-SYM

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Normal State	Trip	Trip Mfr	Trip Type	Trip Style	Sensor/Frame	Plug/Tap/Trip	LTPU Setting	LTPU Mult	LTPU (A)	LTD Band
155	B TX T1LDPA	Closed	SST	GE	Spectra RMS	MCCB SF	250	175	1		175	Fixed
156	B TX T2LDPA	Closed	SST	GE	Spectra RMS	MCCB SG	400	350	1	1	350	Fixed
157	B TX T5LDPA	Closed	SST	GE	Spectra RMS	MCCB SF	250	175	1		175	Fixed
158	B TX T5LDPB	Closed	SST	GE	Spectra RMS	MCCB SG	400	350	1	1	350	Fixed
159	B TX T9LDPA	Closed	SST	GE	Spectra RMS	MCCB SF	250	175	1		175	Fixed
160	B TX T9LDPB	Closed	SST	GE	Spectra RMS	MCCB SF	250	225	1		225	Fixed
161	B UPS 3A-MAI	Closed	TMGN	GE	Q Line	THQB	100A(60-100AT)	100				
162	B UPS 5	Closed	TMGN	GE	Q Line	THQL	100A(60-100AT)	100				
163	B UPS 5A-MAI	Closed	TMGN	GE	Q Line	THQB	100A(60-100AT)	100				
164	B UPS 8	Closed	TMGN	GE	Q Line	THQL	100A(60-100AT)	100				
165	B UPS 8A-MAI	Closed	TMGN	GE	Q Line	THQB	100A(60-100AT)	100				
166	B UPS 9A-MAI	Closed	TMGN	GE	Q Line	THQB	100A(60-100AT)	100				
167	B UPS3A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
168	B UPS8A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
169	B UPS9A-BR	Closed	TMGN	GE	Q Line	THQB	100A (15-50AT)	20				
170	KC 2LA1KC-BR	Closed	TMGN	GE	Q Line	THHQB	100A (15-50AT)	20				

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	STPU Setting	STPU Band	STPU I2T	STPU (A)	Inst Setting	Inst Override	Inst (A)	Gnd Pickup	Gnd Delay	Gnd I2T	Gnd (A)	Fuse Mfr	Fuse Type
155	B TX T1LDPA	Max	Fixed	In	875	Max	Pickup	1750			Out		<None>	<None>
156	B TX T2LDPA	2	Fixed	In	665	2	Pickup	1347.5			Out		<None>	<None>
157	B TX T5LDPA	Max	Fixed	In	875	Max	Pickup	1750			Out		<None>	<None>
158	B TX T5LDPB	Max	Fixed	In	1750	Max	Pickup	3542			Out		<None>	<None>
159	B TX T9LDPA	Max	Fixed	In	875	Max	Pickup	1750			Out		<None>	<None>
160	B TX T9LDPB	Max	Fixed	In	1125	Max	Pickup	2250			Out		<None>	<None>
161	B UPS 3A-MAI												<None>	<None>
162	B UPS 5												<None>	<None>
163	B UPS 5A-MAI												<None>	<None>
164	B UPS 8												<None>	<None>
165	B UPS 8A-MAI												<None>	<None>
166	B UPS 9A-MAI												<None>	<None>
167	B UPS3A-BR												<None>	<None>
168	B UPS8A-BR												<None>	<None>
169	B UPS9A-BR												<None>	<None>
170	KC 2LA1KC-BR												<None>	<None>

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

LV Breakers

	ID Name	Fuse Style	Fuse Size	Mtr O/L Mfr	Mtr O/L Type	Mtr O/L Style	Motor FLA	Service Factor	PCC kVA Demand	PCC Isc/Iload	Comment
155	B TX T1LDPA	<None>	<None>	<None>	<None>	<None>		1			
156	B TX T2LDPA	<None>	<None>	<None>	<None>	<None>		1			
157	B TX T5LDPA	<None>	<None>	<None>	<None>	<None>		1			
158	B TX T5LDPB	<None>	<None>	<None>	<None>	<None>		1			
159	B TX T9LDPA	<None>	<None>	<None>	<None>	<None>		1			
160	B TX T9LDPB	<None>	<None>	<None>	<None>	<None>		1			
161	B UPS 3A-MAI	<None>	<None>	<None>	<None>	<None>		1			
162	B UPS 5	<None>	<None>	<None>	<None>	<None>		1			
163	B UPS 5A-MAI	<None>	<None>	<None>	<None>	<None>		1			
164	B UPS 8	<None>	<None>	<None>	<None>	<None>		1			
165	B UPS 8A-MAI	<None>	<None>	<None>	<None>	<None>		1			
166	B UPS 9A-MAI	<None>	<None>	<None>	<None>	<None>		1			
167	B UPS3A-BR	<None>	<None>	<None>	<None>	<None>		1			
168	B UPS8A-BR	<None>	<None>	<None>	<None>	<None>		1			
169	B UPS9A-BR	<None>	<None>	<None>	<None>	<None>		1			
170	KC 2LA1KC-BR	<None>	<None>	<None>	<None>	<None>		1			

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Equipment Database

Switches

	ID Name	Status	On Bus	Base kV	Conn Type	Normal State	Manufacturer	Type	Style	Cont Current (A)	SC Mom kA	SC Test Std	PCC kVA Demand
1	ATS EH2A1:Sw	On	ATS EH2A1	0.48	Feeder	Closed	<None>	<None>	<None>	0	0	ANSI-SYM	

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
Comment: Equipment Database

Switches

	ID Name	PCC Isc/ILoad	Comment
1	ATS EH2A1:Sw		

ATs

	ID Name	Status	Base kV	Area	Zone	AF Type	AF Option	Source Connection	Model	Comment
1	ATS EH2A1	On	0.48	1	1	ATS	Specified	Source 2 Bus	Switch	

Three Phase Bolted Fault
Equipment Duty Ratings

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
 Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

1EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 1EH1-BR	GE /THED (277V)	ANSI-SYM	65.00			3.85	(-94.1%)	
B 1EL1	GE /TEY	ANSI-SYM	14.00			3.85	(-72.5%)	
B 1EH1-MAIN	GE /TEY	ANSI-SYM	14.00			3.85	(-72.5%)	
1EH1	/	ANSI-SYM	14.00			3.85	(-72.5%)	

Equipment Duty Comparison Report For Bus:

1EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 1EL1-BR	GE /THQL	ANSI-SYM	10.00			1.31	(-86.9%)	
B 1EL1-MAIN	GE /THQL	ANSI-SYM	10.00			1.31	(-86.9%)	
1EL1	/	ANSI-SYM	22.00			1.31	(-94.0%)	

Equipment Duty Comparison Report For Bus:

1HAIA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 1HAIA-BR	GE /THED (277V)	ANSI-SYM	65.00			19.30	(-70.3%)	
1HAIA	/	ANSI-SYM	22.00			19.30	(-12.3%)	

Equipment Duty Comparison Report For Bus:

1HAIB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 1HAIB-BR	GE /THED (277V)	ANSI-SYM	65.00			19.22	(-70.4%)	
1HAIB	/	ANSI-SYM	22.00			19.22	(-12.6%)	

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
 Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

1HAIC Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 1HAIC-BR	GE	/THED (277V)	ANSI-SYM	65.00			19.14 (-70.6%)		
1HAIC		/	ANSI-SYM	22.00			19.14 (-13.0%)		

Equipment Duty Comparison Report For Bus:

1HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 1HDPA-MAIN	GE	/SKH8	ANSI-SYM	50.00			20.30 (-59.4%)		
B 1HAIA	GE	/SFL	ANSI-SYM	65.00			20.48 (-68.5%)		
B 1HAIB	GE	/SFL	ANSI-SYM	65.00			20.48 (-68.5%)		
B 1HAIC	GE	/SFL	ANSI-SYM	65.00			20.48 (-68.5%)		
B ELEV 160	GE	/FCN	ANSI-SYM	65.00			20.30 (-68.8%)		
B TX T1LDPA	GE	/SFL	ANSI-SYM	65.00			20.48 (-68.5%)		
1HDPA		/	ANSI-SYM	65.00			20.48 (-68.5%)		

Equipment Duty Comparison Report For Bus:

1LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 1LA1A-BR	GE	/THQB	ANSI-SYM	10.00			6.84 (-31.6%)		
1LA1A		/	ANSI-SYM	10.00			6.84 (-31.6%)		

Equipment Duty Comparison Report For Bus:

1LA2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	
B 1LA2A-BR	GE	/THQB	ANSI-SYM	10.00			6.84 (-31.6%)		
1LA2A		/	ANSI-SYM	10.00			6.84 (-31.6%)		

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
 Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

1LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 1LAC1A-BR	GE	/THQB	ANSI-SYM	10.00			6.84 (-31.6%)		
1LAC1A		/	ANSI-SYM	10.00			6.84 (-31.6%)		

Equipment Duty Comparison Report For Bus:

1LAC2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 1LAC2A-BR	GE	/THQB	ANSI-SYM	10.00			6.84 (-31.6%)		
1LAC2A		/	ANSI-SYM	10.00			6.84 (-31.6%)		

Equipment Duty Comparison Report For Bus:

1LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 1LDPA-MAIN	GE	/SGD	ANSI-SYM	65.00			7.09 (-89.1%)		
B 1LDPA-BR	GE	/TEB	ANSI-SYM	10.00			7.09 (-29.1%)		
B 1LAC1A	GE	/TQD	ANSI-SYM	10.00			7.09 (-29.1%)		
B 1LAC2A	GE	/TQD	ANSI-SYM	10.00			7.09 (-29.1%)		
B 1LA1A	GE	/TQD	ANSI-SYM	10.00			7.09 (-29.1%)		
B 1LA2A	GE	/TQD	ANSI-SYM	10.00			7.09 (-29.1%)		
1LDPA		/	ANSI-SYM	10.00			7.09 (-29.1%)		

Equipment Duty Comparison Report For Bus:

2EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 2EH1-BR	GE	/THED (277V)	ANSI-SYM	65.00			34.40 (-47.1%)		
B 2EL1	GE	/SEL	ANSI-SYM	65.00			34.40 (-47.1%)		
B 2EH1-MAIN	GE	/SEL	ANSI-SYM	65.00			34.40 (-47.1%)		
2EH1		/	ANSI-SYM	42.00			34.40 (-18.1%)		

^ (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

2EHDP Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2EHDP-MAIN	GE /SGL4	ANSI-SYM	65.00			40.46	(-37.8%)	
B 1EH1	GE /FCN	ANSI-SYM	65.00			40.46	(-37.8%)	
B 3EH1	GE /FCN	ANSI-SYM	65.00			40.46	(-37.8%)	
B 2EH1	GE /FCN	ANSI-SYM	65.00			40.46	(-37.8%)	
B 4EH1	/	ANSI-SYM	65.00			40.46	(-37.8%)	
B 5EH1	GE /FCN	ANSI-SYM	65.00			40.46	(-37.8%)	
B 6EH1	GE /FCN	ANSI-SYM	65.00			40.46	(-37.8%)	
B 4EH2	/	ANSI-SYM	65.00			40.46	(-37.8%)	
2EHDP	/	ANSI-SYM	65.00			40.46	(-37.8%)	

Equipment Duty Comparison Report For Bus:

2EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2EL1-BR	GE /THQL	ANSI-SYM	10.00			1.46	(-85.4%)	
B 2EL1-MAIN	GE /THQL	ANSI-SYM	10.00			1.46	(-85.4%)	
2EL1	/	ANSI-SYM	22.00			1.46	(-93.3%)	

Equipment Duty Comparison Report For Bus:

2HAIA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2HAIA-BR	GE /THED (277V)	ANSI-SYM	65.00			47.18	(-27.4%)	
2HAIA	/	ANSI-SYM	65.00			47.18	(-27.4%)	

Equipment Duty Comparison Report For Bus:

2HAIB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2HAIB-BR2	GE /THED (277V)	ANSI-SYM	65.00			46.16	(-29.0%)	
B 2HAIB-BR1	GE /SEL	ANSI-SYM	65.00			46.16	(-29.0%)	

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
 Driving Point Voltage (P.U.) = 1.00000

2HAIB / ANSI-SYM 65.00 46.16(-29.0%)

Equipment Duty Comparison Report For Bus:

2HAIC Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	/ Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2HAIC-BR2	GE	/THED (277V)	ANSI-SYM	65.00			44.78(-31.1%)		
B 2HAIC-BR1	GE	/SEL	ANSI-SYM	65.00			44.78(-31.1%)		
2HAIC		/	ANSI-SYM	65.00			44.78(-31.1%)		

Equipment Duty Comparison Report For Bus:

2HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	/ Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2HDPA-MAIN	GE	/SKL12	ANSI-SYM	65.00			52.99(-18.5%)		
B 2HAIA	GE	/SFL	ANSI-SYM	65.00			52.99(-18.5%)		
B 2HAIB	GE	/SGL4	ANSI-SYM	65.00			52.99(-18.5%)		
B 2HAIC	GE	/SFL	ANSI-SYM	65.00			52.99(-18.5%)		
B TX T2LDPA	GE	/SGL4	ANSI-SYM	65.00			52.99(-18.5%)		
2HDPA		/	ANSI-SYM	65.00			51.53(-20.7%)		

Equipment Duty Comparison Report For Bus:

2LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	/ Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2LA1A-BR	GE	/THHQB	ANSI-SYM	22.00			11.15(-49.3%)		
2LA1A		/	ANSI-SYM	22.00			11.15(-49.3%)		

Equipment Duty Comparison Report For Bus:

2LA1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	/ Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2LA1B-BR	GE	/THHQB	ANSI-SYM	22.00			11.15(-49.3%)		
2LA1B		/	ANSI-SYM	22.00			11.15(-49.3%)		

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:
2LA1KA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2LA1KA-BR	GE /THHQB	ANSI-SYM	22.00		9.66 (-56.1%)		
2LA1KA	/	ANSI-SYM	22.00		9.66 (-56.1%)		

Equipment Duty Comparison Report For Bus:
2LA1KB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2LA1KB-BR	GE /THHQB	ANSI-SYM	22.00		9.66 (-56.1%)		
2LA1KB	/	ANSI-SYM	22.00		9.66 (-56.1%)		

Equipment Duty Comparison Report For Bus:
2LA1KC Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
KC 2LA1KC-BR	GE /THHQB	ANSI-SYM	22.00		9.66 (-56.1%)		
2LA1KC	/	ANSI-SYM	22.00		9.66 (-56.1%)		

Equipment Duty Comparison Report For Bus:
2LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2LAC1A-BR	GE /THHQB	ANSI-SYM	22.00		11.15 (-49.3%)		
2LAC1A	/	ANSI-SYM	22.00		11.15 (-49.3%)		

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
 Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:
 2LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA)	(kA)	Cyc	1/2 Cycle Interrupting kA (%)	Interrupting kA (%)		
B 2LDPA-MAIN	GE /SKH8	ANSI-SYM	65.00			11.74 (-81.9%)			
B 2LDPA-BR	GE /THQD	ANSI-SYM	22.00			11.74 (-46.6%)			
B 2LAC1A	GE /THQD	ANSI-SYM	22.00			11.74 (-46.6%)			
B 2LA1A	GE /THQD	ANSI-SYM	22.00			11.74 (-46.6%)			
B 2LA1B	GE /THQD	ANSI-SYM	22.00			11.74 (-46.6%)			
B 2LA1KA	GE /THQD	ANSI-SYM	22.00			11.74 (-46.6%)			
B 2LA1KB	GE /THQD	ANSI-SYM	22.00			11.74 (-46.6%)			
B 2LA1KC	GE /THQD	ANSI-SYM	22.00			11.74 (-46.6%)			
2LDPA	/	ANSI-SYM	22.00			11.74 (-46.6%)			

Equipment Duty Comparison Report For Bus:
 3EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA)	(kA)	Cyc	1/2 Cycle Interrupting kA (%)	Interrupting kA (%)		
B 3EH1-MAIN	GE /TEY	ANSI-SYM	14.00			7.67 (-45.2%)			
B 3EH1-BR	GE /THED (277V)	ANSI-SYM	65.00			7.67 (-88.2%)			
B 3EL1	GE /FBN	ANSI-SYM	65.00			7.67 (-88.2%)			
3EH1	/	ANSI-SYM	42.00			7.67 (-81.7%)			

Equipment Duty Comparison Report For Bus:
 3EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA)	(kA)	Cyc	1/2 Cycle Interrupting kA (%)	Interrupting kA (%)		
B 3EL1-BR	GE /THQL	ANSI-SYM	10.00			2.62 (-73.8%)			
B 3EL1-MAIN	GE /THQL	ANSI-SYM	10.00			2.62 (-73.8%)			
B UPS 8	GE /THQL	ANSI-SYM	10.00			2.62 (-73.8%)			
3EL1	/	ANSI-SYM	22.00			2.62 (-88.1%)			

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4EDP1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%)	Interrupting kA (%)	
4EDP1	/	ANSI-SYM	10.00			2.22 (-77.8%)		

Equipment Duty Comparison Report For Bus:

4EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%)	Interrupting kA (%)	
B 4EH1-MAIN	GE /TEY	ANSI-SYM	14.00			4.37 (-68.8%)		
B 4EH1-BR	GE /TEY	ANSI-SYM	14.00			4.37 (-68.8%)		
B 4EL1	GE /TEY	ANSI-SYM	14.00			4.37 (-68.8%)		
4EH1	/	ANSI-SYM	14.00			4.37 (-68.8%)		

Equipment Duty Comparison Report For Bus:

4EH2 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%)	Interrupting kA (%)	
B 4EH2-MAIN	GE /TEY	ANSI-SYM	14.00			4.19 (-70.0%)		
B 4EH2-BR	GE /TEY	ANSI-SYM	14.00			4.19 (-70.0%)		
B 4EL2	GE /TEY	ANSI-SYM	14.00			4.19 (-70.0%)		
4EH2	/	ANSI-SYM	14.00			4.19 (-70.0%)		

Equipment Duty Comparison Report For Bus:

4EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%)	Interrupting kA (%)	
B 4EL1-BR	GE /THQL	ANSI-SYM	10.00			2.40 (-76.0%)		
B 4EL1-MAIN	GE /THQL	ANSI-SYM	10.00			2.40 (-76.0%)		
4EL1	/	ANSI-SYM	22.00			2.40 (-89.1%)		

^(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4EL2 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 4EDP1	GE /THQL	ANSI-SYM	10.00			2.37	(-76.3%)	
B 4EL2-BR	GE /THQL	ANSI-SYM	10.00			2.37	(-76.3%)	
B 4EL2-MAIN	GE /THQL	ANSI-SYM	10.00			2.37	(-76.3%)	
4EL2	/	ANSI-SYM	22.00			2.37	(-89.2%)	

Equipment Duty Comparison Report For Bus:

5EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5EH1-MAIN	GE /TEY	ANSI-SYM	14.00			6.50	(-53.6%)	
B 5EH1-BR	GE /TEY	ANSI-SYM	14.00			6.50	(-53.6%)	
B 5EL1	GE /TEY	ANSI-SYM	14.00			6.50	(-53.6%)	
5EH1	/	ANSI-SYM	14.00			6.50	(-53.6%)	

Equipment Duty Comparison Report For Bus:

5EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5EL1-BR	GE /THQL	ANSI-SYM	10.00			2.56	(-74.4%)	
B 5EL1-MAIN	GE /THQL	ANSI-SYM	10.00			2.56	(-74.4%)	
B UPS 5	GE /THQL	ANSI-SYM	10.00			2.56	(-74.4%)	
5EL1	/	ANSI-SYM	22.00			2.56	(-88.4%)	

Equipment Duty Comparison Report For Bus:

5HA1A Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5HA1A-BR	GE /THED (277V)	ANSI-SYM	65.00			35.52	(-45.4%)	
5HA1A	/	ANSI-SYM	42.00			35.52	(-15.4%)	

^(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

5HA1B Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5HA1B-BR	GE	/FBN	ANSI-SYM	65.00			36.19	(-44.3%)	
5HA1B		/	ANSI-SYM	42.00			36.19	(-13.8%)	

Equipment Duty Comparison Report For Bus:

5HA1C Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5HA1C-BR	GE	/FBN	ANSI-SYM	65.00			35.75	(-45.0%)	
5HA1C		/	ANSI-SYM	42.00			35.75	(-14.9%)	

Equipment Duty Comparison Report For Bus:

5HA1D Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5HA1D-BR2	GE	/FBN	ANSI-SYM	65.00			34.76	(-46.5%)	
B 5HA1D-BR	GE	/THED (277V)	ANSI-SYM	65.00			34.76	(-46.5%)	
5HA1D		/	ANSI-SYM	42.00			34.76	(-17.2%)	

Equipment Duty Comparison Report For Bus:

5HA1E Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5HA1E-BR2	GE	/FBN	ANSI-SYM	65.00			35.52	(-45.4%)	
B 5HA1E-BR	GE	/THED (277V)	ANSI-SYM	65.00			35.52	(-45.4%)	
5HA1E		/	ANSI-SYM	42.00			35.52	(-15.4%)	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

5HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B 5HA1A	GE /SFL	ANSI-SYM	65.00			41.23		(-36.6%)
B 5HA1B	GE /SGL4	ANSI-SYM	65.00			41.23		(-36.6%)
B 9HA2A	GE /SGL4	ANSI-SYM	65.00			41.23		(-36.6%)
B 9HA2B	GE /SFL	ANSI-SYM	65.00			41.23		(-36.6%)
B TX T9LDPB	GE /SFL	ANSI-SYM	65.00			41.23		(-36.6%)
B TX T9LDPA	GE /SFL	ANSI-SYM	65.00			41.23		(-36.6%)
B TX T5LDPA	GE /SFL	ANSI-SYM	65.00			41.23		(-36.6%)
B TX T5LDPB	GE /SGL4	ANSI-SYM	65.00			41.23		(-36.6%)
B ELEV 560	GE /FBH	ANSI-SYM	100.00			41.04		(-59.0%)
B CA	GE /FBH	ANSI-SYM	100.00			41.11		(-58.9%)
B 5HA1C	GE /SGL4	ANSI-SYM	65.00			41.23		(-36.6%)
B 5HA1D	GE /SFL	ANSI-SYM	65.00			41.23		(-36.6%)
B 5HA1E	GE /SFL	ANSI-SYM	65.00			41.23		(-36.6%)
B 5HDPA-MAIN	GE /SS-20	ANSI-SYM	65.00			40.92		(-37.0%)
5HDPA	/	ANSI-SYM	65.00			41.23		(-36.6%)

Equipment Duty Comparison Report For Bus:

5LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B 5LA1A-BR	GE /THQB	ANSI-SYM	10.00			8.60		(-14.0%)
5LA1A	/	ANSI-SYM	10.00			8.60		(-14.0%)

Equipment Duty Comparison Report For Bus:

5LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (kA)	(%) (%)
B 5LAC1A-BR	GE /THQB	ANSI-SYM	10.00			8.60		(-14.0%)
5LAC1A	/	ANSI-SYM	10.00			8.60		(-14.0%)

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Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

5LAC1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 5LAC1B-BR	GE /THQB	ANSI-SYM	10.00		8.60 (-14.0%)		
5LAC1B	/	ANSI-SYM	10.00		8.60 (-14.0%)		

Equipment Duty Comparison Report For Bus:

5LB1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 5LB1A-BR	GE /THHQB	ANSI-SYM	22.00		10.22 (-53.6%)		
5LB1A	/	ANSI-SYM	22.00		10.22 (-53.6%)		

Equipment Duty Comparison Report For Bus:

5LB1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 5LB1B-BR	GE /THHQB	ANSI-SYM	22.00		10.12 (-54.0%)		
5LB1B	/	ANSI-SYM	22.00		10.12 (-54.0%)		

Equipment Duty Comparison Report For Bus:

5LB1C Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B LB1C MAIN	GE /TQD	ANSI-SYM	10.00		6.52 (-34.8%)		
B 5LB1C-BR	GE /THQB	ANSI-SYM	10.00		6.52 (-34.8%)		
5LB1C	/	ANSI-SYM	10.00		6.52 (-34.8%)		

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

5LBC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%)	Interrupting kA (%)	
B 5LBC1A-BR	GE /THHQB	ANSI-SYM	22.00			9.88 (-55.1%)		
5LBC1A	/	ANSI-SYM	22.00			9.88 (-55.1%)		

Equipment Duty Comparison Report For Bus:

5LBC1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%)	Interrupting kA (%)	
B 5LBC1B-BR	GE /THHQB	ANSI-SYM	22.00			10.17 (-53.8%)		
5LBC1B	/	ANSI-SYM	22.00			10.17 (-53.8%)		

Equipment Duty Comparison Report For Bus:

5LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%)	Interrupting kA (%)	
B 5LDPA-BR	GE /TEY	ANSI-SYM	65.00			8.99 (-86.2%)		
B 5LAC1A	GE /SFH	ANSI-SYM	65.00			8.99 (-86.2%)		
B 5LAC1B	GE /SFH	ANSI-SYM	65.00			8.99 (-86.2%)		
B 5LA1A	GE /SFH	ANSI-SYM	65.00			8.99 (-86.2%)		
B 5LDPA-MAIN	GE /SGD	ANSI-SYM	65.00			8.99 (-86.2%)		
5LDPA	/	ANSI-SYM	65.00			8.99 (-86.2%)		

Equipment Duty Comparison Report For Bus:

5LDPB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%)	Interrupting kA (%)	
B 4LDPB-SPARE	GE /THQD	ANSI-SYM	22.00			10.77 (-51.0%)		
B 5LBC1A	GE /SFL	ANSI-SYM	100.00			10.77 (-89.2%)		
B 5LBC1B	GE /SFL	ANSI-SYM	100.00			10.77 (-89.2%)		
B 5LB1A	GE /SFL	ANSI-SYM	100.00			10.77 (-89.2%)		
B 5LB1C	GE /SFL	ANSI-SYM	100.00			10.77 (-89.2%)		
B 5LB1B	GE /SFL	ANSI-SYM	100.00			10.77 (-89.2%)		

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
 Driving Point Voltage (P.U.) = 1.00000

B 5LDPB-MAIN	GE	/SKH8	ANSI-SYM	65.00	10.77(-83.4%)
5LDPB		/	ANSI-SYM	22.00	10.77(-51.0%)

Equipment Duty Comparison Report For Bus:

6EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 6EH1-BR	GE /TEY	ANSI-SYM	14.00		2.62(-81.3%)			
B 6EL1	GE /TEY	ANSI-SYM	14.00		2.62(-81.3%)			
6EH1	/	ANSI-SYM	14.00		2.62(-81.3%)			

Equipment Duty Comparison Report For Bus:

6EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 6EL1-BR	GE /THQL	ANSI-SYM	10.00		1.23(-87.7%)			
B 6EL1-MAIN	GE /THQL	ANSI-SYM	10.00		1.23(-87.7%)			
6EL1	/	ANSI-SYM	22.00		1.23(-94.4%)			

Equipment Duty Comparison Report For Bus:

9HA2A Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 9HA2A-BR	GE /FBN	ANSI-SYM	65.00		30.44(-53.2%)			
9HA2A	/	ANSI-SYM	42.00		30.44(-27.5%)			

Equipment Duty Comparison Report For Bus:

9HA2B Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 9HA2B-BR2	GE /FBN	ANSI-SYM	65.00		36.03(-44.6%)			
B 9HA2B-BR	GE /THED (277V)	ANSI-SYM	65.00		36.03(-44.6%)			
9HA2B	/	ANSI-SYM	42.00		36.03(-14.2%)			

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

9LA2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LA2A-BR	GE /THQB	ANSI-SYM	10.00		8.29 (-17.1%)		
9LA2A	/	ANSI-SYM	10.00		8.29 (-17.1%)		

Equipment Duty Comparison Report For Bus:

9LAC2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LAC2A-BR	GE /THQB	ANSI-SYM	10.00		8.55 (-14.5%)		
9LAC2A	/	ANSI-SYM	10.00		8.55 (-14.5%)		

Equipment Duty Comparison Report For Bus:

9LAC2B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LAC2B-BR	GE /THQB	ANSI-SYM	10.00		8.55 (-14.5%)		
9LAC2B	/	ANSI-SYM	10.00		8.55 (-14.5%)		

Equipment Duty Comparison Report For Bus:

9LB2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LB2A-BR	GE /THQB	ANSI-SYM	10.00		7.46 (-25.4%)		
9LB2A	/	ANSI-SYM	10.00		7.46 (-25.4%)		

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
 Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:
 9LBC2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LBC2A-BR	GE /THQB	ANSI-SYM	10.00		7.66 (-23.4%)		
9LBC2A	/	ANSI-SYM	10.00		7.65 (-23.5%)		

Equipment Duty Comparison Report For Bus:
 9LBC2B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LBC2B-BR	GE /THQB	ANSI-SYM	10.00		7.66 (-23.4%)		
9LBC2B	/	ANSI-SYM	10.00		7.65 (-23.5%)		

Equipment Duty Comparison Report For Bus:
 9LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LAC2A	GE /THQD	ANSI-SYM	22.00		8.93 (-59.4%)		
B 9LAC2B	GE /THQD	ANSI-SYM	22.00		8.93 (-59.4%)		
B 9LA2A	GE /THQD	ANSI-SYM	22.00		8.93 (-59.4%)		
B 9LDPA-MAIN	GE /SGD	ANSI-SYM	65.00		8.93 (-86.3%)		
9LDPA	/	ANSI-SYM	22.00		8.93 (-59.4%)		

Equipment Duty Comparison Report For Bus:
 9LDPB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LDPB	GE /SFH	ANSI-SYM	65.00		7.95 (-87.8%)		
B 9LBC2A	GE /SFH	ANSI-SYM	65.00		7.95 (-87.8%)		
B 9LBC2B	GE /SFH	ANSI-SYM	65.00		7.95 (-87.8%)		
B 9LB2A	GE /SFH	ANSI-SYM	65.00		7.95 (-87.8%)		
B 9LDPB-MAIN	GE /SGH6	ANSI-SYM	65.00		7.95 (-87.8%)		
9LDPB	/	ANSI-SYM	65.00		7.95 (-87.8%)		

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Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

MCCA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
MCCA	/	ANSI-SYM	65.00		43.68	(-32.8%)	

Equipment Duty Comparison Report For Bus:

MDB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B MDB	GE /SS-40	ANSI-SYM	100.00		55.42	(-44.6%)	
MDB	/	ANSI-SYM	65.00		53.03	(-18.4%)	

Equipment Duty Comparison Report For Bus:

MSB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B MSB-ATS EH2A	GE /SGL4	ANSI-SYM	65.00		55.33	(-14.9%)	
B MSB-SPARE	GE /SFL	ANSI-SYM	65.00		55.33	(-14.9%)	
B 1HDPA	GE /SKL8	ANSI-SYM	65.00		55.13	(-15.2%)	
B 2HDPA	GE /SKL12	ANSI-SYM	65.00		55.33	(-14.9%)	
B MCCA	GE /SGL4	ANSI-SYM	65.00		55.33	(-14.9%)	
B 5HDPA	GE /SS-20	ANSI-SYM	65.00		55.01	(-15.4%)	
MSB	/	ANSI-SYM	65.00		52.67	(-19.0%)	

Equipment Duty Comparison Report For Bus:

TX 1EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 1EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		3.34	(-81.4%)	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

TX 1EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 1EL1-MAIN	GE /THQL	ANSI-SYM	10.00		1.31 (-86.9%)		

Equipment Duty Comparison Report For Bus:

TX 2EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		16.21 (-10.0%)		Warning

Equipment Duty Comparison Report For Bus:

TX 2EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2EL1-MAIN	GE /THQL	ANSI-SYM	10.00		1.46 (-85.4%)		

Equipment Duty Comparison Report For Bus:

TX 3EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 3EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		6.85 (-62.0%)		

Equipment Duty Comparison Report For Bus:

TX 3EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 3EL1-MAIN	GE /THQL	ANSI-SYM	10.00		2.62 (-73.8%)		

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

TX 4EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		4.09 (-77.3%)		

Equipment Duty Comparison Report For Bus:

TX 4EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4EL1-MAIN	GE /THQL	ANSI-SYM	10.00		2.40 (-76.0%)		

Equipment Duty Comparison Report For Bus:

TX 4EL2 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4EL2- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		3.94 (-78.1%)		

Equipment Duty Comparison Report For Bus:

TX 4EL2 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4EL2-MAIN	GE /THQL	ANSI-SYM	10.00		2.37 (-76.3%)		

Equipment Duty Comparison Report For Bus:

TX 5EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 5EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		5.89 (-67.3%)		

^(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

TX 5EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 5EL1-MAIN	GE /THQL	ANSI-SYM	10.00		2.56 (-74.4%)		

Equipment Duty Comparison Report For Bus:

TX 6EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 6EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		2.38 (-86.8%)		

Equipment Duty Comparison Report For Bus:

TX 6EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 6EL1-MAIN	GE /THQL	ANSI-SYM	10.00		1.23 (-87.7%)		

Equipment Duty Comparison Report For Bus:

UPS 5I Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
UPS 5I	/	ANSI-SYM	10.00		2.48 (-75.2%)		

Equipment Duty Comparison Report For Bus:

UPS 50 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
UPS 50	/	ANSI-SYM	10.00		0.33 (-96.7%)		

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

UPS 8I Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
UPS 8I	/	ANSI-SYM	10.00		2.54 (-74.6%)		

Equipment Duty Comparison Report For Bus:

UPS 80 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
UPS 80	/	ANSI-SYM	10.00		0.33 (-96.7%)		

Equipment Duty Comparison Report For Bus:

UPS3A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B UPS3A-BR	GE /THQB	ANSI-SYM	10.00		0.38 (-96.2%)		
B UPS 3A-MAIN	GE /THQB	ANSI-SYM	10.00		0.38 (-96.2%)		
UPS3A	/	ANSI-SYM	10.00		0.33 (-96.7%)		

Equipment Duty Comparison Report For Bus:

UPS5A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B UPS 5A-MAIN	GE /THQB	ANSI-SYM	10.00		0.38 (-96.2%)		
UPS5A	/	ANSI-SYM	10.00		0.33 (-96.7%)		

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
Comment: Three Phase Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

UPS8A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B UPS8A-BR	GE /THQB	ANSI-SYM	10.00			0.36 (-96.4%)		
B UPS 8A-MAIN	GE /THQB	ANSI-SYM	10.00			0.36 (-96.4%)		
UPS8A	/	ANSI-SYM	10.00			0.32 (-96.8%)		

Equipment Duty Comparison Report For Bus:

UPS9A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B UPS 9A-MAIN	GE /THQB	ANSI-SYM	10.00			0.36 (-96.4%)		
B UPS9A-BR	GE /THQB	ANSI-SYM	10.00			0.36 (-96.4%)		
UPS9A	/	ANSI-SYM	10.00			0.32 (-96.8%)		

Three Phase Bolted Fault
Low Voltage Momentary Report

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 1EH1 0.480 kV, Zone 1, Area 1
 E/Z = 3.854 kA (3.20 MVA) At -17.62DEG, X/R = 0.32
 Z1 = 29.745278 +j 9.447475 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 6.166 IASYM Based on X/R ratio = 3.854

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		1EH1	3.85	-17.62	Branch	1	1	C 1EH1
TX 1EL1 H		1EH1	0.00	0.00	Branch	1	1	C 1EL1

*Bus 1EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.312 kA (0.47 MVA) At -50.71DEG, X/R = 1.22
 Z1 = 133.965562 +j 163.760707 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 2.099 IASYM Based on X/R ratio = 1.329

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1 L		1EL1	1.31	-50.71	Branch	1	1	B 1EL1-MAIN

*Bus 1HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 19.302 kA (16.05 MVA) At -62.96DEG, X/R = 1.96
 Z1 = 2.832650 +j 5.550673 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 30.883 IASYM Based on X/R ratio = 20.432

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIA	19.30	-62.96	Branch	1	1	C 1HAIA

*Bus 1HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 19.222 kA (15.98 MVA) At -62.84DEG, X/R = 1.95
 Z1 = 2.856901 +j 5.567373 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 30.755 IASYM Based on X/R ratio = 20.332

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIB	19.22	-62.84	Branch	1	1	C 1HAIB

*Bus 1HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 19.142 kA (15.91 MVA) At -62.71DEG, X/R = 1.94
 Z1 = 2.881152 +j 5.584072 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 30.628 IASYM Based on X/R ratio = 20.233

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIC	19.14	-62.71	Branch	1	1	C 1HAIC

*Bus 1HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 20.483 kA (17.03 MVA) At -64.88DEG, X/R = 2.13
 Z1 = 2.493137 +j 5.316879 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 32.772 IASYM Based on X/R ratio = 21.954

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		1HDPA	20.30	-64.77	Branch	1	1	C 1HDPA
1HAIA		1HDPA	0.00	0.00	Branch	1	1	C 1HAIA
1HAIB		1HDPA	0.00	0.00	Branch	1	1	C 1HAIB
1HAIC		1HDPA	0.00	0.00	Branch	1	1	C 1HAIC
ELEV 160		1HDPA	0.19	-76.70	Branch	1	1	C ELEV 160
TX T1LDPA H		1HDPA	0.00	0.00	Branch	1	1	C TX T1LDPA

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 1LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 6.845 kA (2.47 MVA) At -60.90DEG, X/R = 1.80
 Z1 = 19.724265 +j 35.432567 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 10.952 IASYM Based on X/R ratio = 7.164

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LA1A	6.84	-60.90	Branch	1	1	C 1LA1A

*Bus 1LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 6.845 kA (2.47 MVA) At -60.90DEG, X/R = 1.80
 Z1 = 19.724265 +j 35.432567 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 10.952 IASYM Based on X/R ratio = 7.164

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LA2A	6.84	-60.90	Branch	1	1	C 1LA2A

*Bus 1LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 6.845 kA (2.47 MVA) At -60.90DEG, X/R = 1.80
 Z1 = 19.724265 +j 35.432567 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 10.952 IASYM Based on X/R ratio = 7.164

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LAC1A	6.84	-60.90	Branch	1	1	C 1LAC1A

*Bus 1LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 6.845 kA (2.47 MVA) At -60.90DEG, X/R = 1.80
 Z1 = 19.724265 +j 35.432567 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 10.952 IASYM Based on X/R ratio = 7.164

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LAC2A	6.84	-60.90	Branch	1	1	C 1LAC2A

*Bus 1LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 7.089 kA (2.55 MVA) At -61.91DEG, X/R = 1.87
 Z1 = 18.432796 +j 34.543239 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 11.343 IASYM Based on X/R ratio = 7.459

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA	T1L	1LDPA	7.09	-61.91	Branch	1	1	C 1LDPA
1LAC1A		1LDPA	0.00	0.00	Branch	1	1	C 1LAC1A
1LAC2A		1LDPA	0.00	0.00	Branch	1	1	C 1LAC2A
1LA1A		1LDPA	0.00	0.00	Branch	1	1	C 1LA1A
1LA2A		1LDPA	0.00	0.00	Branch	1	1	C 1LA2A

*Bus 2EH1 0.480 kV, Zone 1, Area 1
 E/Z = 34.398 kA (28.60 MVA) At -60.06DEG, X/R = 1.74
 Z1 = 1.745266 +j 3.030050 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 55.037 IASYM Based on X/R ratio = 35.855

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		2EH1	34.40	-60.06	Branch	1	1	C 2EH1
TX 2EL1	H	2EH1	0.00	0.00	Branch	1	1	C 2EL1

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 2EHDP 0.480 kV, Zone 1, Area 1
 E/Z = 40.461 kA (33.64 MVA) At -72.49DEG, X/R = 3.17
 Z1 = 0.894437 +j 2.835045 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 64.737 IASYM Based on X/R ratio = 46.644

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
ATS EH2A1		2EHDP	40.46	-72.49	Branch	1	1	C 2EHDP
1EH1		2EHDP	0.00	0.00	Branch	1	1	C 1EH1
3EH1		2EHDP	0.00	0.00	Branch	1	1	C 3EH1
2EH1		2EHDP	0.00	0.00	Branch	1	1	C 2EH1
4EH1		2EHDP	0.00	0.00	Branch	1	1	C 4EH1
5EH1		2EHDP	0.00	0.00	Branch	1	1	C 5EH1
6EH1		2EHDP	0.00	0.00	Branch	1	1	C 6EH1
4EH2		2EHDP	0.00	0.00	Branch	1	1	C 4EH2

*Bus 2EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.463 kA (0.53 MVA) At -56.04DEG, X/R = 1.48
 Z1 = 105.965553 +j 157.343284 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 2.341 IASYM Based on X/R ratio = 1.501

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1 L		2EL1	1.46	-56.04	Branch	1	1	B 2EL1-MAIN

*Bus 2HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 47.179 kA (39.22 MVA) At -75.27DEG, X/R = 3.81
 Z1 = 0.648026 +j 2.465744 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 75.486 IASYM Based on X/R ratio = 56.518

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIA	47.18	-75.27	Branch	1	1	C 2HAIA

*Bus 2HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 46.163 kA (38.38 MVA) At -77.24DEG, X/R = 4.41
 Z1 = 0.575665 +j 2.541212 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 73.860 IASYM Based on X/R ratio = 57.085

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIB	46.16	-77.24	Branch	1	1	C 2HAIB

*Bus 2HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 44.783 kA (37.23 MVA) At -72.82DEG, X/R = 3.23
 Z1 = 0.793532 +j 2.565941 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 71.654 IASYM Based on X/R ratio = 51.840

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIC	44.78	-72.82	Branch	1	1	C 2HAIC

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Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 2HDPA 0.480 kV, Zone 1, Area 1
E/Z = 51.529 kA (42.84 MVA) At -80.00DEG, X/R = 5.67
Z1 = 0.405517 +j 2.298748 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 82.447 IASYM Based on X/R ratio = 67.146

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		2HDPA	51.53	-80.00	Branch	1	1	C 2HDPA
2HAIA		2HDPA	0.00	0.00	Branch	1	1	C 2HAIA
2HAIB		2HDPA	0.00	0.00	Branch	1	1	C 2HAIB
2HAIC		2HDPA	0.00	0.00	Branch	1	1	C 2HAIC
TX T2LDPA H		2HDPA	0.00	0.00	Branch	1	1	C TX T2LDPA

*Bus 2LA1A 0.208 kV, Zone 1, Area 1
E/Z = 11.146 kA (4.02 MVA) At -70.25DEG, X/R = 2.79
Z1 = 8.415895 +j 23.439273 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 17.833 IASYM Based on X/R ratio = 12.521

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1A	11.15	-70.25	Branch	1	1	C 2LA1A

*Bus 2LA1B 0.208 kV, Zone 1, Area 1
E/Z = 11.146 kA (4.02 MVA) At -70.25DEG, X/R = 2.79
Z1 = 8.415895 +j 23.439273 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 17.833 IASYM Based on X/R ratio = 12.521

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1B	11.15	-70.25	Branch	1	1	C 2LA1B

*Bus 2LA1KA 0.208 kV, Zone 1, Area 1
E/Z = 9.665 kA (3.48 MVA) At -64.95DEG, X/R = 2.14
Z1 = 12.161155 +j 26.018326 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 15.464 IASYM Based on X/R ratio = 10.364

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KA	9.66	-64.95	Branch	1	1	C 2LA1KA

*Bus 2LA1KB 0.208 kV, Zone 1, Area 1
E/Z = 9.665 kA (3.48 MVA) At -64.95DEG, X/R = 2.14
Z1 = 12.161155 +j 26.018326 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 15.464 IASYM Based on X/R ratio = 10.364

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KB	9.66	-64.95	Branch	1	1	C 2LA1KB

*Bus 2LA1KC 0.208 kV, Zone 1, Area 1
E/Z = 9.665 kA (3.48 MVA) At -64.95DEG, X/R = 2.14
Z1 = 12.161155 +j 26.018326 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 15.464 IASYM Based on X/R ratio = 10.364

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KC	9.66	-64.95	Branch	1	1	C 2LA1KC

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Driving Point Voltage (P.U.) = 1.00000

*Bus 2LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 11.146 kA (4.02 MVA) At -70.25DEG, X/R = 2.79
 Z1 = 8.415895 +j 23.439273 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 17.833 IASYM Based on X/R ratio = 12.521

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LAC1A	11.15	-70.25	Branch	1	1	C 2LAC1A

*Bus 2LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 11.737 kA (4.23 MVA) At -72.47DEG, X/R = 3.17
 Z1 = 7.124427 +j 22.549945 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 18.780 IASYM Based on X/R ratio = 13.527

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA T2L		2LDPA	11.74	-72.47	Branch	1	1	C 2LDPA
2LAC1A		2LDPA	0.00	0.00	Branch	1	1	C 2LAC1A
2LA1A		2LDPA	0.00	0.00	Branch	1	1	C 2LA1A
2LA1B		2LDPA	0.00	0.00	Branch	1	1	C 2LA1B
2LA1KA		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KA
2LA1KB		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KB
2LA1KC		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KC

*Bus 3EH1 0.480 kV, Zone 1, Area 1
 E/Z = 7.670 kA (6.38 MVA) At -22.32DEG, X/R = 0.41
 Z1 = 14.507703 +j 5.955119 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 12.272 IASYM Based on X/R ratio = 7.670

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		3EH1	7.67	-22.32	Branch	1	1	C 3EH1
TX 3EL1 H		3EH1	0.00	0.00	Branch	1	1	C 3EL1

*Bus 3EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.615 kA (0.94 MVA) At -52.24DEG, X/R = 1.29
 Z1 = 64.998262 +j 83.901421 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 4.185 IASYM Based on X/R ratio = 2.657

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 8I		3EL1	0.00	0.00	Branch	1	1	C UPS 8
TX 3EL1 L		3EL1	2.62	-52.24	Branch	1	1	B 3EL1-MAIN

*Bus 4EDP1 0.208 kV, Zone 1, Area 1
 E/Z = 2.218 kA (0.80 MVA) At -45.56DEG, X/R = 1.02
 Z1 = 87.611179 +j 89.353990 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 3.549 IASYM Based on X/R ratio = 2.231

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4EL2		4EDP1	2.22	-45.56	Branch	1	1	C 4EDP1

*Bus 4EH1 0.480 kV, Zone 1, Area 1
 E/Z = 4.375 kA (3.64 MVA) At -18.26DEG, X/R = 0.33
 Z1 = 26.109917 +j 8.614273 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 7.000 IASYM Based on X/R ratio = 4.375

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		4EH1	4.37	-18.26	Branch	1	1	C 4EH1
TX 4EL1 H		4EH1	0.00	0.00	Branch	1	1	C 4EL1

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Driving Point Voltage (P.U.) = 1.00000

*Bus 4EH2 0.480 kV, Zone 1, Area 1
 E/Z = 4.195 kA (3.49 MVA) At -21.33DEG, X/R = 0.39
 Z1 = 26.708828 +j 10.431665 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 6.712 IASYM Based on X/R ratio = 4.195

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		4EH2	4.19	-21.33	Branch	1	1	C 4EH2
TX 4EL2 H		4EH2	0.00	0.00	Branch	1	1	C 4EL2

*Bus 4EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.401 kA (0.87 MVA) At -48.49DEG, X/R = 1.13
 Z1 = 76.600471 +j 86.560567 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 3.842 IASYM Based on X/R ratio = 2.423

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1 L		4EL1	2.40	-48.49	Branch	1	1	B 4EL1-MAIN

*Bus 4EL2 0.208 kV, Zone 1, Area 1
 E/Z = 2.365 kA (0.85 MVA) At -48.86DEG, X/R = 1.14
 Z1 = 77.199382 +j 88.377959 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 3.785 IASYM Based on X/R ratio = 2.388

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4EDP1		4EL2	0.00	0.00	Branch	1	1	C 4EDP1
TX 4EL2 L		4EL2	2.37	-48.86	Branch	1	1	B 4EL2-MAIN

*Bus 5EH1 0.480 kV, Zone 1, Area 1
 E/Z = 6.499 kA (5.40 MVA) At -20.87DEG, X/R = 0.38
 Z1 = 17.292235 +j 6.593316 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 10.399 IASYM Based on X/R ratio = 6.499

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		5EH1	6.50	-20.87	Branch	1	1	C 5EH1
TX 5EL1 H		5EH1	0.00	0.00	Branch	1	1	C 5EL1

*Bus 5EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.562 kA (0.92 MVA) At -51.28DEG, X/R = 1.25
 Z1 = 67.782794 +j 84.539618 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 4.099 IASYM Based on X/R ratio = 2.597

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 5I		5EL1	0.00	0.00	Branch	1	1	C UPS 5
TX 5EL1 L		5EL1	2.56	-51.28	Branch	1	1	B 5EL1-MAIN

*Bus 5HA1A 0.480 kV, Zone 1, Area 1
 E/Z = 35.518 kA (29.53 MVA) At -68.64DEG, X/R = 2.56
 Z1 = 1.233620 +j 3.153835 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 56.828 IASYM Based on X/R ratio = 39.260

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1A	35.52	-68.64	Branch	1	1	C 5HA1A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 5HA1B 0.480 kV, Zone 1, Area 1
 E/Z = 36.192 kA (30.09 MVA) At -71.43DEG, X/R = 2.98
 Z1 = 1.058122 +j 3.150499 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 57.907 IASYM Based on X/R ratio = 41.196

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1B	36.19	-71.43	Branch	1	1	C 5HA1B

*Bus 5HA1C 0.480 kV, Zone 1, Area 1
 E/Z = 35.748 kA (29.72 MVA) At -71.11DEG, X/R = 2.92
 Z1 = 1.089075 +j 3.183565 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 57.197 IASYM Based on X/R ratio = 40.542

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1C	35.75	-71.11	Branch	1	1	C 5HA1C

*Bus 5HA1D 0.480 kV, Zone 1, Area 1
 E/Z = 34.763 kA (28.90 MVA) At -67.82DEG, X/R = 2.45
 Z1 = 1.306373 +j 3.203934 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 55.621 IASYM Based on X/R ratio = 38.139

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1D	34.76	-67.82	Branch	1	1	C 5HA1D

*Bus 5HA1E 0.480 kV, Zone 1, Area 1
 E/Z = 35.518 kA (29.53 MVA) At -68.64DEG, X/R = 2.56
 Z1 = 1.233620 +j 3.153835 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 56.828 IASYM Based on X/R ratio = 39.260

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1E	35.52	-68.64	Branch	1	1	C 5HA1E

*Bus 5HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 41.227 kA (34.28 MVA) At -75.13DEG, X/R = 3.77
 Z1 = 0.748602 +j 2.819843 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 65.964 IASYM Based on X/R ratio = 49.282

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		5HDPA	40.92	-75.13	Branch	1	1	C 5HDPA
5HA1A		5HDPA	0.00	0.00	Branch	1	1	C 5HA1A
5HA1B		5HDPA	0.00	0.00	Branch	1	1	C 5HA1B
9HA2A		5HDPA	0.00	0.00	Branch	1	1	C 9HA2A
9HA2B		5HDPA	0.00	0.00	Branch	1	1	C 9HA2B
TX T9LDPB H		5HDPA	0.00	0.00	Branch	1	1	C TX T9LDPB
TX T9LDPA H		5HDPA	0.00	0.00	Branch	1	1	C TX T9LDPA
TX T5LDPA H		5HDPA	0.00	0.00	Branch	1	1	C TX T5LDPA
TX T5LDPB H		5HDPA	0.00	0.00	Branch	1	1	C TX T5LDPB
ELEV 560		5HDPA	0.19	-77.47	Branch	1	1	C ELEV 560
CA		5HDPA	0.12	-72.52	Branch	1	1	C CA
5HA1C		5HDPA	0.00	0.00	Branch	1	1	C 5HA1C
5HA1D		5HDPA	0.00	0.00	Branch	1	1	C 5HA1D
5HA1E		5HDPA	0.00	0.00	Branch	1	1	C 5HA1E

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Driving Point Voltage (P.U.) = 1.00000

*Bus 5LA1A 0.208 kV, Zone 1, Area 1
E/Z = 8.599 kA (3.10 MVA) At -61.26DEG, X/R = 1.82
Z1 = 15.522761 +j 28.302229 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 13.758 IASYM Based on X/R ratio = 9.016

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LA1A	8.60	-61.26	Branch	1	1	C 5LA1A

*Bus 5LAC1A 0.208 kV, Zone 1, Area 1
E/Z = 8.599 kA (3.10 MVA) At -61.26DEG, X/R = 1.82
Z1 = 15.522761 +j 28.302229 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 13.758 IASYM Based on X/R ratio = 9.016

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LAC1A	8.60	-61.26	Branch	1	1	C 5LAC1A

*Bus 5LAC1B 0.208 kV, Zone 1, Area 1
E/Z = 8.599 kA (3.10 MVA) At -61.26DEG, X/R = 1.82
Z1 = 15.522761 +j 28.302229 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 13.758 IASYM Based on X/R ratio = 9.016

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LAC1B	8.60	-61.26	Branch	1	1	C 5LAC1B

*Bus 5LB1A 0.208 kV, Zone 1, Area 1
E/Z = 10.216 kA (3.68 MVA) At -68.87DEG, X/R = 2.59
Z1 = 9.795585 +j 25.342444 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 16.346 IASYM Based on X/R ratio = 11.318

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1A	10.22	-68.87	Branch	1	1	C 5LB1A

*Bus 5LB1B 0.208 kV, Zone 1, Area 1
E/Z = 10.120 kA (3.65 MVA) At -68.50DEG, X/R = 2.54
Z1 = 10.053879 +j 25.520309 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 16.191 IASYM Based on X/R ratio = 11.171

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1B	10.12	-68.50	Branch	1	1	C 5LB1B

*Bus 5LB1C 0.208 kV, Zone 1, Area 1
E/Z = 6.525 kA (2.35 MVA) At -55.65DEG, X/R = 1.46
Z1 = 24.001741 +j 35.125055 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 10.439 IASYM Based on X/R ratio = 6.687

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1C	6.52	-55.65	Branch	1	1	C 5LB1C

*Bus 5LBC1A 0.208 kV, Zone 1, Area 1
E/Z = 9.884 kA (3.56 MVA) At -67.60DEG, X/R = 2.43
Z1 = 10.699613 +j 25.964973 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 15.814 IASYM Based on X/R ratio = 10.824

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LBC1A	9.88	-67.60	Branch	1	1	C 5LBC1A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 5LBC1B 0.208 kV, Zone 1, Area 1
 E/Z = 10.168 kA (3.66 MVA) At -68.68DEG, X/R = 2.56
 Z1 = 9.924732 +j 25.431376 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 16.268 IASYM Based on X/R ratio = 11.244

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LBC1B	10.17	-68.68	Branch	1	1	C 5LBC1B

*Bus 5LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 8.987 kA (3.24 MVA) At -62.56DEG, X/R = 1.93
 Z1 = 14.231292 +j 27.412901 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 14.379 IASYM Based on X/R ratio = 9.491

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPA L		5LDPA	8.99	-62.56	Branch	1	1	C 5LDPA
5LAC1A		5LDPA	0.00	0.00	Branch	1	1	C 5LAC1A
5LAC1B		5LDPA	0.00	0.00	Branch	1	1	C 5LAC1B
5LA1A		5LDPA	0.00	0.00	Branch	1	1	C 5LA1A

*Bus 5LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 10.774 kA (3.88 MVA) At -71.03DEG, X/R = 2.91
 Z1 = 8.374970 +j 24.364182 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 17.238 IASYM Based on X/R ratio = 12.207

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB L		5LDPB	10.77	-71.03	Branch	1	1	C 5LDPB
5LBC1A		5LDPB	0.00	0.00	Branch	1	1	C 5LBC1A
5LBC1B		5LDPB	0.00	0.00	Branch	1	1	C 5LBC1B
5LB1A		5LDPB	0.00	0.00	Branch	1	1	C 5LB1A
5LB1C		5LDPB	0.00	0.00	Branch	1	1	C 5LB1C
5LB1B		5LDPB	0.00	0.00	Branch	1	1	C 5LB1B

*Bus 6EH1 0.480 kV, Zone 1, Area 1
 E/Z = 2.621 kA (2.18 MVA) At -19.48DEG, X/R = 0.35
 Z1 = 43.264381 +j 15.303608 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 4.194 IASYM Based on X/R ratio = 2.621

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		6EH1	2.62	-19.48	Branch	1	1	C 6EH1
TX 6EL1 H		6EH1	0.00	0.00	Branch	1	1	C 6EL1

*Bus 6EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.235 kA (0.44 MVA) At -48.99DEG, X/R = 1.15
 Z1 = 147.484664 +j 169.616840 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 1.976 IASYM Based on X/R ratio = 1.247

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1 L		6EL1	1.23	-48.99	Branch	1	1	B 6EL1-MAIN

*Bus 9HA2A 0.480 kV, Zone 1, Area 1
 E/Z = 30.439 kA (25.31 MVA) At -67.34DEG, X/R = 2.40
 Z1 = 1.522404 +j 3.646484 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 48.703 IASYM Based on X/R ratio = 33.257

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		9HA2A	30.44	-67.34	Branch	1	1	C 9HA2A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 9HA2B 0.480 kV, Zone 1, Area 1
E/Z = 36.035 kA (29.96 MVA) At -69.20DEG, X/R = 2.63
Z1 = 1.185118 +j 3.120436 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 57.656 IASYM Based on X/R ratio = 40.050

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		9HA2B	36.03	-69.20	Branch	1	1	C 9HA2B

*Bus 9LA2A 0.208 kV, Zone 1, Area 1
E/Z = 8.293 kA (2.99 MVA) At -60.15DEG, X/R = 1.74
Z1 = 16.658119 +j 29.028601 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 13.270 IASYM Based on X/R ratio = 8.648

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LA2A	8.29	-60.15	Branch	1	1	C 9LA2A

*Bus 9LAC2A 0.208 kV, Zone 1, Area 1
E/Z = 8.545 kA (3.08 MVA) At -60.99DEG, X/R = 1.80
Z1 = 15.754091 +j 28.406071 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 13.673 IASYM Based on X/R ratio = 8.948

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LAC2A	8.55	-60.99	Branch	1	1	C 9LAC2A

*Bus 9LAC2B 0.208 kV, Zone 1, Area 1
E/Z = 8.545 kA (3.08 MVA) At -60.99DEG, X/R = 1.80
Z1 = 15.754091 +j 28.406071 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 13.673 IASYM Based on X/R ratio = 8.948

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LAC2B	8.55	-60.99	Branch	1	1	C 9LAC2B

*Bus 9LB2A 0.208 kV, Zone 1, Area 1
E/Z = 7.456 kA (2.69 MVA) At -62.68DEG, X/R = 1.94
Z1 = 17.086460 +j 33.074505 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 11.930 IASYM Based on X/R ratio = 7.880

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LB2A	7.46	-62.68	Branch	1	1	C 9LB2A

*Bus 9LBC2A 0.208 kV, Zone 1, Area 1
E/Z = 7.654 kA (2.76 MVA) At -63.50DEG, X/R = 2.01
Z1 = 16.182431 +j 32.451975 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 12.247 IASYM Based on X/R ratio = 8.129

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LBC2A	7.65	-63.50	Branch	1	1	C 9LBC2A

*Bus 9LBC2B 0.208 kV, Zone 1, Area 1
E/Z = 7.654 kA (2.76 MVA) At -63.50DEG, X/R = 2.01
Z1 = 16.182431 +j 32.451975 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 12.247 IASYM Based on X/R ratio = 8.129

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LBC2B	7.65	-63.50	Branch	1	1	C 9LBC2B

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*Bus 9LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 8.929 kA (3.22 MVA) At -62.27DEG, X/R = 1.90
 Z1 = 14.462622 +j 27.516743 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 14.287 IASYM Based on X/R ratio = 9.414

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA L		9LDPA	8.93	-62.27	Branch	1	1	C 9LDPA
9LAC2A		9LDPA	0.00	0.00	Branch	1	1	C 9LAC2A
9LAC2B		9LDPA	0.00	0.00	Branch	1	1	C 9LAC2B
9LA2A		9LDPA	0.00	0.00	Branch	1	1	C 9LA2A

*Bus 9LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 7.954 kA (2.87 MVA) At -64.74DEG, X/R = 2.12
 Z1 = 14.890963 +j 31.562647 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 12.726 IASYM Based on X/R ratio = 8.517

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB L		9LDPB	7.95	-64.74	Branch	1	1	C 9LDPB
9LBC2A		9LDPB	0.00	0.00	Branch	1	1	C 9LBC2A
9LBC2B		9LDPB	0.00	0.00	Branch	1	1	C 9LBC2B
9LB2A		9LDPB	0.00	0.00	Branch	1	1	C 9LB2A

*Bus ATS EH2A1 0.480 kV, Zone 1, Area 1
 E/Z = 43.418 kA (36.10 MVA) At -74.51DEG, X/R = 3.61
 Z1 = 0.739676 +j 2.669717 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 69.469 IASYM Based on X/R ratio = 51.432

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		ATS EH2A1	0.00	0.00	Branch	1	1	C 2EHDP
MSB		ATS EH2A1	43.42	-74.51	Branch	1	1	C MSB-ATS EH2A

*Bus CA 0.480 kV, Zone 1, Area 1
 E/Z = 9.588 kA (7.97 MVA) At -21.39DEG, X/R = 0.39
 Z1 = 11.680270 +j 4.575691 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 15.341 IASYM Based on X/R ratio = 9.588

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M CA		CA	0.12	-73.09	Motor	1	1	
5HDPA		CA	9.52	-20.84	Branch	1	1	C CA

*Bus EGH1 0.480 kV, Zone 1, Area 1
 E/Z = 1.700 kA (1.41 MVA) At -84.17DEG, X/R = 9.80
 Z1 = 7.184070 +j 70.400002 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 2.720 IASYM Based on X/R ratio = 2.447

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
GEN EGH1		EGH1	1.70	-84.17	Gen	1	1	
ATS EH2A1		EGH1	0.00	0.00	Branch	1	1	C EGH1-ATS EH2A

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*Bus ELEV 160 0.480 kV, Zone 1, Area 1
 E/Z = 7.673 kA (6.38 MVA) At -30.94DEG, X/R = 0.60
 Z1 = 13.444884 +j 8.060749 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 12.277 IASYM Based on X/R ratio = 7.674

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M ELEV 160		ELEV 160	0.19	-77.63	Motor	1	1	
1HDPA		ELEV 160	7.55	-29.91	Branch	1	1	C ELEV 160

*Bus ELEV 560 0.480 kV, Zone 1, Area 1
 E/Z = 28.560 kA (23.74 MVA) At -50.82DEG, X/R = 1.23
 Z1 = 2.660770 +j 3.264513 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 45.696 IASYM Based on X/R ratio = 28.931

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M ELEV 560		ELEV 560	0.19	-77.63	Motor	1	1	
5HDPA		ELEV 560	28.39	-50.65	Branch	1	1	C ELEV 560

*Bus MCCA 0.480 kV, Zone 1, Area 1
 E/Z = 43.676 kA (36.31 MVA) At -76.40DEG, X/R = 4.13
 Z1 = 0.647699 +j 2.676668 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 69.882 IASYM Based on X/R ratio = 53.254

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		MCCA	43.68	-76.40	Branch	1	1	C MCCA

*Bus MDB 0.480 kV, Zone 1, Area 1
 E/Z = 53.034 kA (44.09 MVA) At -81.31DEG, X/R = 6.54
 Z1 = 0.342628 +j 2.241990 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 84.854 IASYM Based on X/R ratio = 71.104

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		MDB	0.49	-75.93	Branch	1	1	C MSB
TX NPC L		MDB	52.55	-81.36	Branch	1	1	C MDB

*Bus MSB 0.480 kV, Zone 1, Area 1
 E/Z = 52.667 kA (43.79 MVA) At -81.11DEG, X/R = 6.40
 Z1 = 0.352775 +j 2.256396 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 84.267 IASYM Based on X/R ratio = 70.301

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDB		MSB	52.18	-81.16	Branch	1	1	C MSB
ATS EH2A1		MSB	0.00	0.00	Branch	1	1	C MSB-ATS EH2A
1HDPA		MSB	0.19	-76.57	Branch	1	1	C 1HDPA
2HDPA		MSB	0.00	0.00	Branch	1	1	C 2HDPA
MCCA		MSB	0.00	0.00	Branch	1	1	C MCCA
5HDPA		MSB	0.30	-75.53	Branch	1	1	C 5HDPA

*Bus TX 1EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 3.341 kA (2.78 MVA) At -15.52DEG, X/R = 0.28
 Z1 = 34.689635 +j 9.632852 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 5.346 IASYM Based on X/R ratio = 3.341

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1 L		TX 1EL1 H	0.00	0.00	Branch	1	1	TX 1EL1
1EH1		TX 1EL1 H	3.34	-15.52	Branch	1	1	C 1EL1

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*Bus TX 1EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.312 kA (0.47 MVA) At -50.71DEG, X/R = 1.22
 Z1 = 133.965561 +j 163.760707 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 2.099 IASYM Based on X/R ratio = 1.329

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1	H	TX 1EL1 L	1.31	-50.71	Branch	1	1	TX 1EL1
1EL1		TX 1EL1 L	0.00	0.00	Branch	1	1	B 1EL1-MAIN

*Bus TX 2EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 16.205 kA (13.47 MVA) At -25.67DEG, X/R = 0.48
 Z1 = 6.689624 +j 3.215427 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 25.929 IASYM Based on X/R ratio = 16.206

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1	L	TX 2EL1 H	0.00	0.00	Branch	1	1	TX 2EL1
2EH1		TX 2EL1 H	16.21	-25.67	Branch	1	1	C 2EL1

*Bus TX 2EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.463 kA (0.53 MVA) At -56.04DEG, X/R = 1.48
 Z1 = 105.965552 +j 157.343284 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 2.341 IASYM Based on X/R ratio = 1.501

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1	H	TX 2EL1 L	1.46	-56.04	Branch	1	1	TX 2EL1
2EL1		TX 2EL1 L	0.00	0.00	Branch	1	1	B 2EL1-MAIN

*Bus TX 3EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 6.846 kA (5.69 MVA) At -20.45DEG, X/R = 0.37
 Z1 = 16.462807 +j 6.138396 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 10.953 IASYM Based on X/R ratio = 6.846

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 3EL1	L	TX 3EL1 H	0.00	0.00	Branch	1	1	TX 3EL1
3EH1		TX 3EL1 H	6.85	-20.45	Branch	1	1	C 3EL1

*Bus TX 3EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.615 kA (0.94 MVA) At -52.24DEG, X/R = 1.29
 Z1 = 64.998262 +j 83.901421 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 4.185 IASYM Based on X/R ratio = 2.657

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 3EL1	H	TX 3EL1 L	2.62	-52.24	Branch	1	1	TX 3EL1
3EL1		TX 3EL1 L	0.00	0.00	Branch	1	1	B 3EL1-MAIN

*Bus TX 4EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 4.090 kA (3.40 MVA) At -17.40DEG, X/R = 0.31
 Z1 = 28.065021 +j 8.797550 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 6.543 IASYM Based on X/R ratio = 4.090

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1	L	TX 4EL1 H	0.00	0.00	Branch	1	1	TX 4EL1
4EH1		TX 4EL1 H	4.09	-17.40	Branch	1	1	C 4EL1

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*Bus TX 4EL1 L 0.208 kV, Zone 1, Area 1
E/Z = 2.401 kA (0.87 MVA) At -48.49DEG, X/R = 1.13
Z1 = 76.600471 +j 86.560567 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 3.842 IASYM Based on X/R ratio = 2.423

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1 H		TX 4EL1 L	2.40	-48.49	Branch	1	1	TX 4EL1
4EL1		TX 4EL1 L	0.00	0.00	Branch	1	1	B 4EL1-MAIN

*Bus TX 4EL2 H 0.480 kV, Zone 1, Area 1
E/Z = 3.935 kA (3.27 MVA) At -20.32DEG, X/R = 0.37
Z1 = 28.663932 +j 10.614942 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 6.296 IASYM Based on X/R ratio = 3.935

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL2 L		TX 4EL2 H	0.00	0.00	Branch	1	1	TX 4EL2
4EH2		TX 4EL2 H	3.94	-20.32	Branch	1	1	C 4EL2

*Bus TX 4EL2 L 0.208 kV, Zone 1, Area 1
E/Z = 2.365 kA (0.85 MVA) At -48.86DEG, X/R = 1.14
Z1 = 77.199382 +j 88.377959 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 3.785 IASYM Based on X/R ratio = 2.388

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL2 H		TX 4EL2 L	2.37	-48.86	Branch	1	1	TX 4EL2
4EL2		TX 4EL2 L	0.00	0.00	Branch	1	1	B 4EL2-MAIN

*Bus TX 5EL1 H 0.480 kV, Zone 1, Area 1
E/Z = 5.895 kA (4.90 MVA) At -19.40DEG, X/R = 0.35
Z1 = 19.247339 +j 6.776593 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 9.431 IASYM Based on X/R ratio = 5.895

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 5EL1 L		TX 5EL1 H	0.00	0.00	Branch	1	1	TX 5EL1
5EH1		TX 5EL1 H	5.89	-19.40	Branch	1	1	C 5EL1

*Bus TX 5EL1 L 0.208 kV, Zone 1, Area 1
E/Z = 2.562 kA (0.92 MVA) At -51.28DEG, X/R = 1.25
Z1 = 67.782794 +j 84.539618 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 4.099 IASYM Based on X/R ratio = 2.597

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 5EL1 H		TX 5EL1 L	2.56	-51.28	Branch	1	1	TX 5EL1
5EL1		TX 5EL1 L	0.00	0.00	Branch	1	1	B 5EL1-MAIN

*Bus TX 6EL1 H 0.480 kV, Zone 1, Area 1
E/Z = 2.375 kA (1.97 MVA) At -17.81DEG, X/R = 0.32
Z1 = 48.208739 +j 15.488985 pu, Z0 = 0.000000 +j 0.000000 pu
1.6*ISYM= 3.801 IASYM Based on X/R ratio = 2.375

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1 L		TX 6EL1 H	0.00	0.00	Branch	1	1	TX 6EL1
6EH1		TX 6EL1 H	2.38	-17.81	Branch	1	1	C 6EL1

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*Bus TX 6EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.235 kA (0.44 MVA) At -48.99DEG, X/R = 1.15
 Z1 = 147.484664 +j 169.616840 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 1.976 IASYM Based on X/R ratio = 1.247

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1 H		TX 6EL1 L	1.23	-48.99	Branch	1	1	TX 6EL1
6EL1		TX 6EL1 L	0.00	0.00	Branch	1	1	B 6EL1-MAIN

*Bus TX NPC L 0.480 kV, Zone 1, Area 1
 E/Z = 53.970 kA (44.87 MVA) At -81.82DEG, X/R = 6.95
 Z1 = 0.317251 +j 2.205967 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 86.352 IASYM Based on X/R ratio = 73.205

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
NPC		TX NPC L	53.48	-81.87	Util	1	1	
MDB		TX NPC L	0.49	-75.92	Branch	1	1	C MDB

*Bus TX T1LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 19.404 kA (16.13 MVA) At -62.33DEG, X/R = 1.91
 Z1 = 2.878688 +j 5.489949 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 31.046 IASYM Based on X/R ratio = 20.464

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA T1L		TX T1LDPA H	0.00	0.00	Branch	1	1	TX T1LDPA
1HDPA		TX T1LDPA H	19.40	-62.33	Branch	1	1	C TX T1LDPA

*Bus TX T1LDPA T1L 0.208 kV, Zone 1, Area 1
 E/Z = 7.283 kA (2.62 MVA) At -62.11DEG, X/R = 1.89
 Z1 = 17.828719 +j 33.682419 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 11.654 IASYM Based on X/R ratio = 7.672

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA H		TX T1LDPA T1L	7.28	-62.11	Branch	1	1	TX T1LDPA
1LDPA		TX T1LDPA T1L	0.00	0.00	Branch	1	1	C 1LDPA

*Bus TX T2LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 43.700 kA (36.33 MVA) At -75.99DEG, X/R = 4.01
 Z1 = 0.666411 +j 2.670526 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 69.920 IASYM Based on X/R ratio = 52.934

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA T2L		TX T2LDPA H	0.00	0.00	Branch	1	1	TX T2LDPA
2HDPA		TX T2LDPA H	43.70	-75.99	Branch	1	1	C TX T2LDPA

*Bus TX T2LDPA T2L 0.208 kV, Zone 1, Area 1
 E/Z = 11.991 kA (4.32 MVA) At -72.86DEG, X/R = 3.24
 Z1 = 6.822388 +j 22.119535 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 19.186 IASYM Based on X/R ratio = 13.889

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA H		TX T2LDPA T2L	11.99	-72.86	Branch	1	1	TX T2LDPA
2LDPA		TX T2LDPA T2L	0.00	0.00	Branch	1	1	C 2LDPA

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Driving Point Voltage (P.U.) = 1.00000

*Bus TX T5LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 37.581 kA (31.24 MVA) At -69.25DEG, X/R = 2.64
 Z1 = 1.134152 +j 2.992913 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 60.129 IASYM Based on X/R ratio = 41.786

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPA L		TX T5LDPA H	0.00	0.00	Branch	1	1	TX T5LDPA
5HDPA		TX T5LDPA H	37.58	-69.25	Branch	1	1	C TX T5LDPA

*Bus TX T5LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.301 kA (3.35 MVA) At -62.83DEG, X/R = 1.95
 Z1 = 13.627215 +j 26.552081 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 14.881 IASYM Based on X/R ratio = 9.838

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPA H		TX T5LDPA L	9.30	-62.83	Branch	1	1	TX T5LDPA
5LDPA		TX T5LDPA L	0.00	0.00	Branch	1	1	C 5LDPA

*Bus TX T5LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 24.662 kA (20.50 MVA) At -66.86DEG, X/R = 2.34
 Z1 = 1.916954 +j 4.484764 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 39.459 IASYM Based on X/R ratio = 26.835

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB L		TX T5LDPB H	0.00	0.00	Branch	1	1	TX T5LDPB
5HDPA		TX T5LDPB H	24.66	-66.86	Branch	1	1	C TX T5LDPB

*Bus TX T5LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 10.989 kA (3.96 MVA) At -71.36DEG, X/R = 2.96
 Z1 = 8.072931 +j 23.933773 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 17.583 IASYM Based on X/R ratio = 12.498

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB H		TX T5LDPB L	10.99	-71.36	Branch	1	1	TX T5LDPB
5LDPB		TX T5LDPB L	0.00	0.00	Branch	1	1	C 5LDPB

*Bus TX T9LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 35.539 kA (29.55 MVA) At -66.21DEG, X/R = 2.27
 Z1 = 1.365482 +j 3.096755 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 56.863 IASYM Based on X/R ratio = 38.470

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA L		TX T9LDPA H	0.00	0.00	Branch	1	1	TX T9LDPA
5HDPA		TX T9LDPA H	35.54	-66.21	Branch	1	1	C TX T9LDPA

*Bus TX T9LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.239 kA (3.33 MVA) At -62.53DEG, X/R = 1.92
 Z1 = 13.858545 +j 26.655923 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 14.783 IASYM Based on X/R ratio = 9.755

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA H		TX T9LDPA L	9.24	-62.53	Branch	1	1	TX T9LDPA
9LDPA		TX T9LDPA L	0.00	0.00	Branch	1	1	C 9LDPA

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus TX T9LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 21.029 kA (17.48 MVA) At -53.93DEG, X/R = 1.37
 Z1 = 3.367700 +j 4.623401 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 33.646 IASYM Based on X/R ratio = 21.448

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB L		TX T9LDPB H	0.00	0.00	Branch	1	1	TX T9LDPB
5HDPA		TX T9LDPB H	21.03	-53.93	Branch	1	1	C TX T9LDPB

*Bus TX T9LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 8.104 kA (2.92 MVA) At -65.27DEG, X/R = 2.17
 Z1 = 14.329213 +j 31.111568 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 12.966 IASYM Based on X/R ratio = 8.710

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB H		TX T9LDPB L	8.10	-65.27	Branch	1	1	TX T9LDPB
9LDPB		TX T9LDPB L	0.00	0.00	Branch	1	1	C 9LDPB

*Bus UPS 5I 0.208 kV, Zone 1, Area 1
 E/Z = 2.485 kA (0.90 MVA) At -49.93DEG, X/R = 1.19
 Z1 = 71.901923 +j 85.483696 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 3.976 IASYM Based on X/R ratio = 2.513

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5EL1		UPS 5I	2.48	-49.93	Branch	1	1	C UPS 5

*Bus UPS 50 0.208 kV, Zone 1, Area 1
 E/Z = 0.333 kA (0.12 MVA) At -77.63DEG, X/R = 4.56
 Z1 = 178.565613 +j 813.977051 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 0.533 IASYM Based on X/R ratio = 0.415

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 5		UPS 50	0.33	-77.63	Gen	1	1	
UPS5A		UPS 50	0.00	0.00	Branch	1	1	C UPS5A

*Bus UPS 8I 0.208 kV, Zone 1, Area 1
 E/Z = 2.536 kA (0.91 MVA) At -50.83DEG, X/R = 1.23
 Z1 = 69.117391 +j 84.845499 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 4.058 IASYM Based on X/R ratio = 2.569

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3EL1		UPS 8I	2.54	-50.83	Branch	1	1	C UPS 8

*Bus UPS 80 0.208 kV, Zone 1, Area 1
 E/Z = 0.333 kA (0.12 MVA) At -77.63DEG, X/R = 4.56
 Z1 = 178.565613 +j 813.977051 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 0.533 IASYM Based on X/R ratio = 0.415

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 8		UPS 80	0.33	-77.63	Gen	1	1	
UPS8A		UPS 80	0.00	0.00	Branch	1	1	C UPS8A

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Momentary Report

First Cycle Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus UPS3A 0.208 kV, Zone 1, Area 1
 E/Z = 0.326 kA (0.12 MVA) At -75.26DEG, X/R = 3.80
 Z1 = 216.461601 +j 822.662570 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 0.522 IASYM Based on X/R ratio = 0.391

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS5A		UPS3A	0.33	-75.26	Branch	1	1	C UPS3A

*Bus UPS5A 0.208 kV, Zone 1, Area 1
 E/Z = 0.327 kA (0.12 MVA) At -75.56DEG, X/R = 3.88
 Z1 = 211.518646 +j 821.529676 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 0.524 IASYM Based on X/R ratio = 0.394

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS3A		UPS5A	0.00	0.00	Branch	1	1	C UPS3A
UPS 50		UPS5A	0.33	-75.56	Branch	1	1	C UPS5A

*Bus UPS8A 0.208 kV, Zone 1, Area 1
 E/Z = 0.320 kA (0.12 MVA) At -73.18DEG, X/R = 3.31
 Z1 = 251.062286 +j 830.592827 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 0.512 IASYM Based on X/R ratio = 0.372

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 80		UPS8A	0.32	-73.18	Branch	1	1	C UPS8A
UPS9A		UPS8A	0.00	0.00	Branch	1	1	C UPS9A

*Bus UPS9A 0.208 kV, Zone 1, Area 1
 E/Z = 0.319 kA (0.11 MVA) At -72.89DEG, X/R = 3.25
 Z1 = 256.005241 +j 831.725721 pu, Z0 = 0.000000 +j 0.000000 pu
 1.6*ISYM= 0.510 IASYM Based on X/R ratio = 0.370

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS8A		UPS9A	0.32	-72.89	Branch	1	1	C UPS9A

Three Phase Bolted Fault
Low Voltage Interrupting Report

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 1EH1 0.480 kV, Zone 1, Area 1
 E/Z = 3.853 kA (3.203 MVA) At -17.66DEG, X/R = 1.05
 Z1 = 29.746640 +j 9.468826 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		1EH1	3.85	-17.66	Branch	1	1	C 1EH1
TX 1EL1 H		1EH1	0.00	0.00	Branch	1	1	C 1EL1

*Bus 1EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.312 kA (0.473 MVA) At -50.72DEG, X/R = 1.58
 Z1 = 133.966924 +j 163.782059 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1 L		1EL1	1.31	-50.72	Branch	1	1	B 1EL1-MAIN

*Bus 1HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 19.101 kA (15.881 MVA) At -62.93DEG, X/R = 2.20
 Z1 = 2.865876 +j 5.606999 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIA	19.10	-62.93	Branch	1	1	C 1HAIA

*Bus 1HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 19.023 kA (15.816 MVA) At -62.80DEG, X/R = 2.19
 Z1 = 2.890126 +j 5.623699 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIB	19.02	-62.80	Branch	1	1	C 1HAIB

*Bus 1HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 18.945 kA (15.751 MVA) At -62.67DEG, X/R = 2.18
 Z1 = 2.914377 +j 5.640398 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIC	18.95	-62.67	Branch	1	1	C 1HAIC

*Bus 1HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 20.258 kA (16.842 MVA) At -64.82DEG, X/R = 2.35
 Z1 = 2.526363 +j 5.373204 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		1HDPA	20.26	-64.82	Branch	1	1	C 1HDPA
1HAIA		1HDPA	0.00	0.00	Branch	1	1	C 1HAIA
1HAIB		1HDPA	0.00	0.00	Branch	1	1	C 1HAIB
1HAIC		1HDPA	0.00	0.00	Branch	1	1	C 1HAIC
ELEV 160		1HDPA	0.00	0.00	Branch	1	1	C ELEV 160
TX T1LDPA H		1HDPA	0.00	0.00	Branch	1	1	C TX T1LDPA

*Bus 1LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 6.834 kA (2.462 MVA) At -60.89DEG, X/R = 2.06
 Z1 = 19.757490 +j 35.488893 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LA1A	6.83	-60.89	Branch	1	1	C 1LA1A

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 1LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 6.834 kA (2.462 MVA) At -60.89DEG, X/R = 2.06
 Z1 = 19.757490 +j 35.488893 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LA2A	6.83	-60.89	Branch	1	1	C 1LA2A

*Bus 1LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 6.834 kA (2.462 MVA) At -60.89DEG, X/R = 2.06
 Z1 = 19.757490 +j 35.488893 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LAC1A	6.83	-60.89	Branch	1	1	C 1LAC1A

*Bus 1LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 6.834 kA (2.462 MVA) At -60.89DEG, X/R = 2.06
 Z1 = 19.757490 +j 35.488893 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LAC2A	6.83	-60.89	Branch	1	1	C 1LAC2A

*Bus 1LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 7.078 kA (2.550 MVA) At -61.91DEG, X/R = 2.12
 Z1 = 18.466022 +j 34.599565 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA	T1L	1LDPA	7.08	-61.91	Branch	1	1	C 1LDPA
1LAC1A		1LDPA	0.00	0.00	Branch	1	1	C 1LAC1A
1LAC2A		1LDPA	0.00	0.00	Branch	1	1	C 1LAC2A
1LA1A		1LDPA	0.00	0.00	Branch	1	1	C 1LA1A
1LA2A		1LDPA	0.00	0.00	Branch	1	1	C 1LA2A

*Bus 2EH1 0.480 kV, Zone 1, Area 1
 E/Z = 34.210 kA (28.442 MVA) At -60.21DEG, X/R = 2.01
 Z1 = 1.746628 +j 3.051401 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		2EH1	34.21	-60.21	Branch	1	1	C 2EH1
TX 2EL1	H	2EH1	0.00	0.00	Branch	1	1	C 2EL1

*Bus 2EHDP 0.480 kV, Zone 1, Area 1
 E/Z = 40.180 kA (33.405 MVA) At -72.59DEG, X/R = 3.34
 Z1 = 0.895799 +j 2.856397 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
ATS EH2A1		2EHDP	40.18	-72.59	Branch	1	1	C 2EHDP
1EH1		2EHDP	0.00	0.00	Branch	1	1	C 1EH1
3EH1		2EHDP	0.00	0.00	Branch	1	1	C 3EH1
2EH1		2EHDP	0.00	0.00	Branch	1	1	C 2EH1
4EH1		2EHDP	0.00	0.00	Branch	1	1	C 4EH1
5EH1		2EHDP	0.00	0.00	Branch	1	1	C 5EH1
6EH1		2EHDP	0.00	0.00	Branch	1	1	C 6EH1
4EH2		2EHDP	0.00	0.00	Branch	1	1	C 4EH2

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 2EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.463 kA (0.527 MVA) At -56.04DEG, X/R = 1.79
 Z1 = 105.966915 +j 157.364636 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1 L		2EL1	1.46	-56.04	Branch	1	1	B 2EL1-MAIN

*Bus 2HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 46.793 kA (38.903 MVA) At -75.37DEG, X/R = 3.96
 Z1 = 0.649389 +j 2.487096 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIA	46.79	-75.37	Branch	1	1	C 2HAIA

*Bus 2HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 45.791 kA (38.070 MVA) At -77.31DEG, X/R = 4.55
 Z1 = 0.577028 +j 2.562564 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIB	45.79	-77.31	Branch	1	1	C 2HAIB

*Bus 2HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 44.439 kA (36.946 MVA) At -72.92DEG, X/R = 3.41
 Z1 = 0.794894 +j 2.587293 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIC	44.44	-72.92	Branch	1	1	C 2HAIC

*Bus 2HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 51.064 kA (42.454 MVA) At -80.05DEG, X/R = 5.79
 Z1 = 0.406880 +j 2.320100 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		2HDPA	51.06	-80.05	Branch	1	1	C 2HDPA
2HAIA		2HDPA	0.00	0.00	Branch	1	1	C 2HAIA
2HAIB		2HDPA	0.00	0.00	Branch	1	1	C 2HAIB
2HAIC		2HDPA	0.00	0.00	Branch	1	1	C 2HAIC
TX T2LDPA H		2HDPA	0.00	0.00	Branch	1	1	C TX T2LDPA

*Bus 2LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 11.136 kA (4.012 MVA) At -70.26DEG, X/R = 2.96
 Z1 = 8.417258 +j 23.460625 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1A	11.14	-70.26	Branch	1	1	C 2LA1A

*Bus 2LA1B 0.208 kV, Zone 1, Area 1
 E/Z = 11.136 kA (4.012 MVA) At -70.26DEG, X/R = 2.96
 Z1 = 8.417258 +j 23.460625 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1B	11.14	-70.26	Branch	1	1	C 2LA1B

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 2LA1KA 0.208 kV, Zone 1, Area 1
 E/Z = 9.658 kA (3.479 MVA) At -64.96DEG, X/R = 2.36
 Z1 = 12.162517 +j 26.039677 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KA	9.66	-64.96	Branch	1	1	C 2LA1KA

*Bus 2LA1KB 0.208 kV, Zone 1, Area 1
 E/Z = 9.658 kA (3.479 MVA) At -64.96DEG, X/R = 2.36
 Z1 = 12.162517 +j 26.039677 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KB	9.66	-64.96	Branch	1	1	C 2LA1KB

*Bus 2LA1KC 0.208 kV, Zone 1, Area 1
 E/Z = 9.658 kA (3.479 MVA) At -64.96DEG, X/R = 2.36
 Z1 = 12.162517 +j 26.039677 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KC	9.66	-64.96	Branch	1	1	C 2LA1KC

*Bus 2LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 11.136 kA (4.012 MVA) At -70.26DEG, X/R = 2.96
 Z1 = 8.417258 +j 23.460625 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LAC1A	11.14	-70.26	Branch	1	1	C 2LAC1A

*Bus 2LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 11.727 kA (4.225 MVA) At -72.48DEG, X/R = 3.32
 Z1 = 7.125789 +j 22.571297 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA T2L		2LDPA	11.73	-72.48	Branch	1	1	C 2LDPA
2LAC1A		2LDPA	0.00	0.00	Branch	1	1	C 2LAC1A
2LA1A		2LDPA	0.00	0.00	Branch	1	1	C 2LA1A
2LA1B		2LDPA	0.00	0.00	Branch	1	1	C 2LA1B
2LA1KA		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KA
2LA1KB		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KB
2LA1KC		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KC

*Bus 3EH1 0.480 kV, Zone 1, Area 1
 E/Z = 7.665 kA (6.373 MVA) At -22.39DEG, X/R = 1.08
 Z1 = 14.509065 +j 5.976471 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		3EH1	7.67	-22.39	Branch	1	1	C 3EH1
TX 3EL1 H		3EH1	0.00	0.00	Branch	1	1	C 3EL1

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus 3EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.615 kA (0.942 MVA) At -52.24DEG, X/R = 1.63
 Z1 = 64.999621 +j 83.922766 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 8I		3EL1	0.00	0.00	Branch	1	1	C UPS 8
TX 3EL1 L		3EL1	2.61	-52.24	Branch	1	1	B 3EL1-MAIN

*Bus 4EDP1 0.208 kV, Zone 1, Area 1
 E/Z = 2.218 kA (0.799 MVA) At -45.57DEG, X/R = 1.43
 Z1 = 87.612541 +j 89.375342 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4EL2		4EDP1	2.22	-45.57	Branch	1	1	C 4EDP1

*Bus 4EH1 0.480 kV, Zone 1, Area 1
 E/Z = 4.374 kA (3.636 MVA) At -18.30DEG, X/R = 1.05
 Z1 = 26.111279 +j 8.635625 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		4EH1	4.37	-18.30	Branch	1	1	C 4EH1
TX 4EL1 H		4EH1	0.00	0.00	Branch	1	1	C 4EL1

*Bus 4EH2 0.480 kV, Zone 1, Area 1
 E/Z = 4.194 kA (3.486 MVA) At -21.37DEG, X/R = 1.07
 Z1 = 26.710191 +j 10.453017 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		4EH2	4.19	-21.37	Branch	1	1	C 4EH2
TX 4EL2 H		4EH2	0.00	0.00	Branch	1	1	C 4EL2

*Bus 4EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.401 kA (0.865 MVA) At -48.50DEG, X/R = 1.51
 Z1 = 76.601833 +j 86.581919 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1 L		4EL1	2.40	-48.50	Branch	1	1	B 4EL1-MAIN

*Bus 4EL2 0.208 kV, Zone 1, Area 1
 E/Z = 2.365 kA (0.852 MVA) At -48.87DEG, X/R = 1.52
 Z1 = 77.200745 +j 88.399311 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4EDP1		4EL2	0.00	0.00	Branch	1	1	C 4EDP1
TX 4EL2 L		4EL2	2.37	-48.87	Branch	1	1	B 4EL2-MAIN

*Bus 5EH1 0.480 kV, Zone 1, Area 1
 E/Z = 6.496 kA (5.401 MVA) At -20.93DEG, X/R = 1.07
 Z1 = 17.293597 +j 6.614668 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		5EH1	6.50	-20.93	Branch	1	1	C 5EH1
TX 5EL1 H		5EH1	0.00	0.00	Branch	1	1	C 5EL1

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*Bus 5EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.561 kA (0.923 MVA) At -51.28DEG, X/R = 1.60
 Z1 = 67.784154 +j 84.560963 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 5I		5EL1	0.00	0.00	Branch	1	1	C UPS 5
TX 5EL1 L		5EL1	2.56	-51.28	Branch	1	1	B 5EL1-MAIN

*Bus 5HA1A 0.480 kV, Zone 1, Area 1
 E/Z = 35.212 kA (29.275 MVA) At -68.72DEG, X/R = 2.75
 Z1 = 1.239949 +j 3.182878 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1A	35.21	-68.72	Branch	1	1	C 5HA1A

*Bus 5HA1B 0.480 kV, Zone 1, Area 1
 E/Z = 35.873 kA (29.824 MVA) At -71.49DEG, X/R = 3.15
 Z1 = 1.064452 +j 3.179542 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1B	35.87	-71.49	Branch	1	1	C 5HA1B

*Bus 5HA1C 0.480 kV, Zone 1, Area 1
 E/Z = 35.437 kA (29.462 MVA) At -71.17DEG, X/R = 3.10
 Z1 = 1.095404 +j 3.212607 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1C	35.44	-71.17	Branch	1	1	C 5HA1C

*Bus 5HA1D 0.480 kV, Zone 1, Area 1
 E/Z = 34.471 kA (28.659 MVA) At -67.90DEG, X/R = 2.66
 Z1 = 1.312702 +j 3.232976 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1D	34.47	-67.90	Branch	1	1	C 5HA1D

*Bus 5HA1E 0.480 kV, Zone 1, Area 1
 E/Z = 35.212 kA (29.275 MVA) At -68.72DEG, X/R = 2.75
 Z1 = 1.239949 +j 3.182878 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1E	35.21	-68.72	Branch	1	1	C 5HA1E

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Driving Point Voltage (P.U.) = 1.00000

*Bus 5HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 40.812 kA (33.930 MVA) At -75.16DEG, X/R = 3.90
 Z1 = 0.754931 +j 2.848885 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		5HDPA	40.81	-75.16	Branch	1	1	C 5HDPA
5HA1A		5HDPA	0.00	0.00	Branch	1	1	C 5HA1A
5HA1B		5HDPA	0.00	0.00	Branch	1	1	C 5HA1B
9HA2A		5HDPA	0.00	0.00	Branch	1	1	C 9HA2A
9HA2B		5HDPA	0.00	0.00	Branch	1	1	C 9HA2B
TX T9LDPB H		5HDPA	0.00	0.00	Branch	1	1	C TX T9LDPB
TX T9LDPA H		5HDPA	0.00	0.00	Branch	1	1	C TX T9LDPA
TX T5LDPA H		5HDPA	0.00	0.00	Branch	1	1	C TX T5LDPA
TX T5LDPB H		5HDPA	0.00	0.00	Branch	1	1	C TX T5LDPB
ELEV 560		5HDPA	0.00	0.00	Branch	1	1	C ELEV 560
CA		5HDPA	0.00	0.00	Branch	1	1	C CA
5HA1C		5HDPA	0.00	0.00	Branch	1	1	C 5HA1C
5HA1D		5HDPA	0.00	0.00	Branch	1	1	C 5HA1D
5HA1E		5HDPA	0.00	0.00	Branch	1	1	C 5HA1E

*Bus 5LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.591 kA (3.095 MVA) At -61.27DEG, X/R = 2.08
 Z1 = 15.529090 +j 28.331271 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LA1A	8.59	-61.27	Branch	1	1	C 5LA1A

*Bus 5LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.591 kA (3.095 MVA) At -61.27DEG, X/R = 2.08
 Z1 = 15.529090 +j 28.331271 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LAC1A	8.59	-61.27	Branch	1	1	C 5LAC1A

*Bus 5LAC1B 0.208 kV, Zone 1, Area 1
 E/Z = 8.591 kA (3.095 MVA) At -61.27DEG, X/R = 2.08
 Z1 = 15.529090 +j 28.331271 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LAC1B	8.59	-61.27	Branch	1	1	C 5LAC1B

*Bus 5LB1A 0.208 kV, Zone 1, Area 1
 E/Z = 10.205 kA (3.677 MVA) At -68.88DEG, X/R = 2.77
 Z1 = 9.801915 +j 25.371486 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1A	10.21	-68.88	Branch	1	1	C 5LB1A

*Bus 5LB1B 0.208 kV, Zone 1, Area 1
 E/Z = 10.109 kA (3.642 MVA) At -68.51DEG, X/R = 2.73
 Z1 = 10.060209 +j 25.549352 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1B	10.11	-68.51	Branch	1	1	C 5LB1B

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*Bus 5LB1C 0.208 kV, Zone 1, Area 1
 E/Z = 6.520 kA (2.349 MVA) At -55.67DEG, X/R = 1.77
 Z1 = 24.008070 +j 35.154098 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1C	6.52	-55.67	Branch	1	1	C 5LB1C

*Bus 5LBC1A 0.208 kV, Zone 1, Area 1
 E/Z = 9.874 kA (3.557 MVA) At -67.62DEG, X/R = 2.63
 Z1 = 10.705943 +j 25.994016 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LBC1A	9.87	-67.62	Branch	1	1	C 5LBC1A

*Bus 5LBC1B 0.208 kV, Zone 1, Area 1
 E/Z = 10.157 kA (3.659 MVA) At -68.69DEG, X/R = 2.75
 Z1 = 9.931062 +j 25.460419 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LBC1B	10.16	-68.69	Branch	1	1	C 5LBC1B

*Bus 5LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 8.978 kA (3.235 MVA) At -62.58DEG, X/R = 2.17
 Z1 = 14.237622 +j 27.441943 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB L		5LDPA	8.98	-62.58	Branch	1	1	C 5LDPA
5LAC1A		5LDPA	0.00	0.00	Branch	1	1	C 5LAC1A
5LAC1B		5LDPA	0.00	0.00	Branch	1	1	C 5LAC1B
5LA1A		5LDPA	0.00	0.00	Branch	1	1	C 5LA1A

*Bus 5LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 10.762 kA (3.877 MVA) At -71.04DEG, X/R = 3.08
 Z1 = 8.381299 +j 24.393225 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB L		5LDPB	10.76	-71.04	Branch	1	1	C 5LDPB
5LBC1A		5LDPB	0.00	0.00	Branch	1	1	C 5LBC1A
5LBC1B		5LDPB	0.00	0.00	Branch	1	1	C 5LBC1B
5LB1A		5LDPB	0.00	0.00	Branch	1	1	C 5LB1A
5LB1C		5LDPB	0.00	0.00	Branch	1	1	C 5LB1C
5LB1B		5LDPB	0.00	0.00	Branch	1	1	C 5LB1B

*Bus 6EH1 0.480 kV, Zone 1, Area 1
 E/Z = 2.621 kA (2.179 MVA) At -19.50DEG, X/R = 1.06
 Z1 = 43.265744 +j 15.324960 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		6EH1	2.62	-19.50	Branch	1	1	C 6EH1
TX 6EL1 H		6EH1	0.00	0.00	Branch	1	1	C 6EL1

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Driving Point Voltage (P.U.) = 1.00000

*Bus 6EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.235 kA (0.445 MVA) At -49.00DEG, X/R = 1.52
 Z1 = 147.486026 +j 169.638192 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1	L	6EL1	1.23	-49.00	Branch	1	1	B 6EL1-MAIN

*Bus 9HA2A 0.480 kV, Zone 1, Area 1
 E/Z = 30.216 kA (25.121 MVA) At -67.42DEG, X/R = 2.60
 Z1 = 1.528733 +j 3.675526 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		9HA2A	30.22	-67.42	Branch	1	1	C 9HA2A

*Bus 9HA2B 0.480 kV, Zone 1, Area 1
 E/Z = 35.720 kA (29.697 MVA) At -69.28DEG, X/R = 2.83
 Z1 = 1.191448 +j 3.149478 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		9HA2B	35.72	-69.28	Branch	1	1	C 9HA2B

*Bus 9LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.286 kA (2.985 MVA) At -60.17DEG, X/R = 2.01
 Z1 = 16.664449 +j 29.057644 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LA2A	8.29	-60.17	Branch	1	1	C 9LA2A

*Bus 9LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.538 kA (3.076 MVA) At -61.00DEG, X/R = 2.06
 Z1 = 15.760421 +j 28.435114 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LAC2A	8.54	-61.00	Branch	1	1	C 9LAC2A

*Bus 9LAC2B 0.208 kV, Zone 1, Area 1
 E/Z = 8.538 kA (3.076 MVA) At -61.00DEG, X/R = 2.06
 Z1 = 15.760421 +j 28.435114 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LAC2B	8.54	-61.00	Branch	1	1	C 9LAC2B

*Bus 9LB2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.450 kA (2.684 MVA) At -62.69DEG, X/R = 2.18
 Z1 = 17.092789 +j 33.103548 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LB2A	7.45	-62.69	Branch	1	1	C 9LB2A

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*Bus 9LBC2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.648 kA (2.755 MVA) At -63.51DEG, X/R = 2.24
 Z1 = 16.188761 +j 32.481018 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LBC2A	7.65	-63.51	Branch	1	1	C 9LBC2A

*Bus 9LBC2B 0.208 kV, Zone 1, Area 1
 E/Z = 7.648 kA (2.755 MVA) At -63.51DEG, X/R = 2.24
 Z1 = 16.188761 +j 32.481018 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LBC2B	7.65	-63.51	Branch	1	1	C 9LBC2B

*Bus 9LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 8.921 kA (3.214 MVA) At -62.29DEG, X/R = 2.15
 Z1 = 14.468952 +j 27.545785 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA L		9LDPA	8.92	-62.29	Branch	1	1	C 9LDPA
9LAC2A		9LDPA	0.00	0.00	Branch	1	1	C 9LAC2A
9LAC2B		9LDPA	0.00	0.00	Branch	1	1	C 9LAC2B
9LA2A		9LDPA	0.00	0.00	Branch	1	1	C 9LA2A

*Bus 9LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 7.947 kA (2.863 MVA) At -64.75DEG, X/R = 2.34
 Z1 = 14.897292 +j 31.591690 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB L		9LDPB	7.95	-64.75	Branch	1	1	C 9LDPB
9LBC2A		9LDPB	0.00	0.00	Branch	1	1	C 9LBC2A
9LBC2B		9LDPB	0.00	0.00	Branch	1	1	C 9LBC2B
9LB2A		9LDPB	0.00	0.00	Branch	1	1	C 9LB2A

*Bus ATS EH2A1 0.480 kV, Zone 1, Area 1
 E/Z = 43.093 kA (35.826 MVA) At -74.60DEG, X/R = 3.77
 Z1 = 0.741039 +j 2.691069 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		ATS EH2A1	0.00	0.00	Branch	1	1	C 2EHDP
MSB		ATS EH2A1	43.09	-74.60	Branch	1	1	C MSB-ATS EH2A

*Bus CA 0.480 kV, Zone 1, Area 1
 E/Z = 9.507 kA (7.904 MVA) At -20.92DEG, X/R = 1.07
 Z1 = 11.817653 +j 4.517289 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M CA		CA	0.00	0.00	Motor	1	1	
5HDPA		CA	9.51	-20.92	Branch	1	1	C CA

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Driving Point Voltage (P.U.) = 1.00000

*Bus EGH1 0.480 kV, Zone 1, Area 1
 E/Z = 1.700 kA (1.413 MVA) At -84.17DEG, X/R = 9.85
 Z1 = 7.184066 +j 70.400008 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
GEN	EGH1	EGH1	1.70	-84.17	Gen	1	1	
ATS	EH2A1	EGH1	0.00	0.00	Branch	1	1	C EGH1-ATS EH2A

*Bus ELEV 160 0.480 kV, Zone 1, Area 1
 E/Z = 7.542 kA (6.270 MVA) At -29.95DEG, X/R = 1.15
 Z1 = 13.819151 +j 7.961464 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M	ELEV 160	ELEV 160	0.00	0.00	Motor	1	1	
1HDPA		ELEV 160	7.54	-29.95	Branch	1	1	C ELEV 160

*Bus ELEV 560 0.480 kV, Zone 1, Area 1
 E/Z = 28.298 kA (23.527 MVA) At -50.76DEG, X/R = 1.58
 Z1 = 2.688631 +j 3.292078 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M	ELEV 560	ELEV 560	0.00	0.00	Motor	1	1	
5HDPA		ELEV 560	28.30	-50.76	Branch	1	1	C ELEV 560

*Bus MCCA 0.480 kV, Zone 1, Area 1
 E/Z = 43.345 kA (36.036 MVA) At -76.47DEG, X/R = 4.28
 Z1 = 0.649061 +j 2.698019 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		MCCA	43.34	-76.47	Branch	1	1	C MCCA

*Bus MDB 0.480 kV, Zone 1, Area 1
 E/Z = 52.547 kA (43.687 MVA) At -81.36DEG, X/R = 6.66
 Z1 = 0.343825 +j 2.263053 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		MDB	0.00	0.00	Branch	1	1	C MSB
TX NPC L		MDB	52.55	-81.36	Branch	1	1	C MDB

*Bus MSB 0.480 kV, Zone 1, Area 1
 E/Z = 52.180 kA (43.382 MVA) At -81.16DEG, X/R = 6.51
 Z1 = 0.354137 +j 2.277748 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDB		MSB	52.18	-81.16	Branch	1	1	C MSB
ATS	EH2A1	MSB	0.00	0.00	Branch	1	1	C MSB-ATS EH2A
1HDPA		MSB	0.00	0.00	Branch	1	1	C 1HDPA
2HDPA		MSB	0.00	0.00	Branch	1	1	C 2HDPA
MCCA		MSB	0.00	0.00	Branch	1	1	C MCCA
5HDPA		MSB	0.00	0.00	Branch	1	1	C 5HDPA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus TX 1EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 3.340 kA (2.777 MVA) At -15.55DEG, X/R = 1.04
 Z1 = 34.690998 +j 9.654204 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1 L		TX 1EL1 H	0.00	0.00	Branch	1	1	TX 1EL1
1EH1		TX 1EL1 H	3.34	-15.55	Branch	1	1	C 1EL1

*Bus TX 1EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.312 kA (0.473 MVA) At -50.72DEG, X/R = 1.58
 Z1 = 133.966924 +j 163.782059 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1 H		TX 1EL1 L	1.31	-50.72	Branch	1	1	TX 1EL1
1EL1		TX 1EL1 L	0.00	0.00	Branch	1	1	B 1EL1-MAIN

*Bus TX 2EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 16.183 kA (13.454 MVA) At -25.82DEG, X/R = 1.11
 Z1 = 6.690986 +j 3.236779 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1 L		TX 2EL1 H	0.00	0.00	Branch	1	1	TX 2EL1
2EH1		TX 2EL1 H	16.18	-25.82	Branch	1	1	C 2EL1

*Bus TX 2EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.463 kA (0.527 MVA) At -56.04DEG, X/R = 1.79
 Z1 = 105.966915 +j 157.364636 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1 H		TX 2EL1 L	1.46	-56.04	Branch	1	1	TX 2EL1
2EL1		TX 2EL1 L	0.00	0.00	Branch	1	1	B 2EL1-MAIN

*Bus TX 3EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 6.842 kA (5.689 MVA) At -20.51DEG, X/R = 1.07
 Z1 = 16.464169 +j 6.159748 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 3EL1 L		TX 3EL1 H	0.00	0.00	Branch	1	1	TX 3EL1
3EH1		TX 3EL1 H	6.84	-20.51	Branch	1	1	C 3EL1

*Bus TX 3EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.615 kA (0.942 MVA) At -52.24DEG, X/R = 1.63
 Z1 = 64.999621 +j 83.922766 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 3EL1 H		TX 3EL1 L	2.61	-52.24	Branch	1	1	TX 3EL1
3EL1		TX 3EL1 L	0.00	0.00	Branch	1	1	B 3EL1-MAIN

*Bus TX 4EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 4.089 kA (3.399 MVA) At -17.44DEG, X/R = 1.05
 Z1 = 28.066384 +j 8.818902 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1 L		TX 4EL1 H	0.00	0.00	Branch	1	1	TX 4EL1
4EH1		TX 4EL1 H	4.09	-17.44	Branch	1	1	C 4EL1

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus TX 4EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.401 kA (0.865 MVA) At -48.50DEG, X/R = 1.51
 Z1 = 76.601833 +j 86.581919 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1 H		TX 4EL1 L	2.40	-48.50	Branch	1	1	TX 4EL1
4EL1		TX 4EL1 L	0.00	0.00	Branch	1	1	B 4EL1-MAIN

*Bus TX 4EL2 H 0.480 kV, Zone 1, Area 1
 E/Z = 3.934 kA (3.271 MVA) At -20.36DEG, X/R = 1.07
 Z1 = 28.665295 +j 10.636294 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL2 L		TX 4EL2 H	0.00	0.00	Branch	1	1	TX 4EL2
4EH2		TX 4EL2 H	3.93	-20.36	Branch	1	1	C 4EL2

*Bus TX 4EL2 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.365 kA (0.852 MVA) At -48.87DEG, X/R = 1.52
 Z1 = 77.200745 +j 88.399311 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL2 H		TX 4EL2 L	2.37	-48.87	Branch	1	1	TX 4EL2
4EL2		TX 4EL2 L	0.00	0.00	Branch	1	1	B 4EL2-MAIN

*Bus TX 5EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 5.892 kA (4.899 MVA) At -19.45DEG, X/R = 1.06
 Z1 = 19.248702 +j 6.797945 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 5EL1 L		TX 5EL1 H	0.00	0.00	Branch	1	1	TX 5EL1
5EH1		TX 5EL1 H	5.89	-19.45	Branch	1	1	C 5EL1

*Bus TX 5EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.561 kA (0.923 MVA) At -51.28DEG, X/R = 1.60
 Z1 = 67.784153 +j 84.560963 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 5EL1 H		TX 5EL1 L	2.56	-51.28	Branch	1	1	TX 5EL1
5EL1		TX 5EL1 L	0.00	0.00	Branch	1	1	B 5EL1-MAIN

*Bus TX 6EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 2.375 kA (1.975 MVA) At -17.83DEG, X/R = 1.05
 Z1 = 48.210102 +j 15.510337 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1 L		TX 6EL1 H	0.00	0.00	Branch	1	1	TX 6EL1
6EH1		TX 6EL1 H	2.38	-17.83	Branch	1	1	C 6EL1

*Bus TX 6EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.235 kA (0.445 MVA) At -49.00DEG, X/R = 1.52
 Z1 = 147.486026 +j 169.638191 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1 H		TX 6EL1 L	1.23	-49.00	Branch	1	1	TX 6EL1
6EL1		TX 6EL1 L	0.00	0.00	Branch	1	1	B 6EL1-MAIN

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus TX NPC L 0.480 kV, Zone 1, Area 1
 E/Z = 53.484 kA (44.466 MVA) At -81.87DEG, X/R = 7.07
 Z1 = 0.318045 +j 2.226317 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
NPC		TX NPC L	53.48	-81.87	Util	1	1	
MDB		TX NPC L	0.00	0.00	Branch	1	1	C MDB

*Bus TX T1LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 19.201 kA (15.964 MVA) At -62.30DEG, X/R = 2.15
 Z1 = 2.911913 +j 5.546275 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA T1L		TX T1LDPA H	0.00	0.00	Branch	1	1	TX T1LDPA
1HDPA		TX T1LDPA H	19.20	-62.30	Branch	1	1	C TX T1LDPA

*Bus TX T1LDPA T1L 0.208 kV, Zone 1, Area 1
 E/Z = 7.271 kA (2.619 MVA) At -62.10DEG, X/R = 2.14
 Z1 = 17.861944 +j 33.738745 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA H		TX T1LDPA T1L	7.27	-62.10	Branch	1	1	TX T1LDPA
1LDPA		TX T1LDPA T1L	0.00	0.00	Branch	1	1	C 1LDPA

*Bus TX T2LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 43.369 kA (36.056 MVA) At -76.07DEG, X/R = 4.15
 Z1 = 0.667774 +j 2.691878 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA T2L		TX T2LDPA H	0.00	0.00	Branch	1	1	TX T2LDPA
2HDPA		TX T2LDPA H	43.37	-76.07	Branch	1	1	C TX T2LDPA

*Bus TX T2LDPA T2L 0.208 kV, Zone 1, Area 1
 E/Z = 11.981 kA (4.316 MVA) At -72.87DEG, X/R = 3.40
 Z1 = 6.823751 +j 22.140887 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA H		TX T2LDPA T2L	11.98	-72.87	Branch	1	1	TX T2LDPA
2LDPA		TX T2LDPA T2L	0.00	0.00	Branch	1	1	C 2LDPA

*Bus TX T5LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 37.239 kA (30.960 MVA) At -69.32DEG, X/R = 2.83
 Z1 = 1.140481 +j 3.021956 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPA L		TX T5LDPA H	0.00	0.00	Branch	1	1	TX T5LDPA
5HDPA		TX T5LDPA H	37.24	-69.32	Branch	1	1	C TX T5LDPA

*Bus TX T5LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.292 kA (3.347 MVA) At -62.85DEG, X/R = 2.19
 Z1 = 13.633544 +j 26.581124 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPA H		TX T5LDPA L	9.29	-62.85	Branch	1	1	TX T5LDPA
5LDPA		TX T5LDPA L	0.00	0.00	Branch	1	1	C 5LDPA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus TX T5LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 24.515 kA (20.381 MVA) At -66.92DEG, X/R = 2.55
 Z1 = 1.923284 +j 4.513806 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB L		TX T5LDPB H	0.00	0.00	Branch	1	1	TX T5LDPB
5HDPA		TX T5LDPB H	24.51	-66.92	Branch	1	1	C TX T5LDPB

*Bus TX T5LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 10.976 kA (3.954 MVA) At -71.37DEG, X/R = 3.13
 Z1 = 8.079261 +j 23.962815 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB H		TX T5LDPB L	10.98	-71.37	Branch	1	1	TX T5LDPB
5LDPB		TX T5LDPB L	0.00	0.00	Branch	1	1	C 5LDPB

*Bus TX T9LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 35.236 kA (29.295 MVA) At -66.30DEG, X/R = 2.49
 Z1 = 1.371812 +j 3.125798 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA L		TX T9LDPA H	0.00	0.00	Branch	1	1	TX T9LDPA
5HDPA		TX T9LDPA H	35.24	-66.30	Branch	1	1	C TX T9LDPA

*Bus TX T9LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 9.230 kA (3.325 MVA) At -62.54DEG, X/R = 2.17
 Z1 = 13.864875 +j 26.684966 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA H		TX T9LDPA L	9.23	-62.54	Branch	1	1	TX T9LDPA
9LDPA		TX T9LDPA L	0.00	0.00	Branch	1	1	C 9LDPA

*Bus TX T9LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 20.929 kA (17.400 MVA) At -54.05DEG, X/R = 1.70
 Z1 = 3.374030 +j 4.652443 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB L		TX T9LDPB H	0.00	0.00	Branch	1	1	TX T9LDPB
5HDPA		TX T9LDPB H	20.93	-54.05	Branch	1	1	C TX T9LDPB

*Bus TX T9LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 8.097 kA (2.917 MVA) At -65.28DEG, X/R = 2.39
 Z1 = 14.335542 +j 31.140610 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB H		TX T9LDPB L	8.10	-65.28	Branch	1	1	TX T9LDPB
9LDPB		TX T9LDPB L	0.00	0.00	Branch	1	1	C 9LDPB

*Bus UPS 5I 0.208 kV, Zone 1, Area 1
 E/Z = 2.485 kA (0.895 MVA) At -49.94DEG, X/R = 1.55
 Z1 = 71.903283 +j 85.505041 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5EL1		UPS 5I	2.48	-49.94	Branch	1	1	C UPS 5

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Three Phase Fault - Low Voltage Interrupting Report

Interrupting Results 3 PHASE

Driving Point Voltage (P.U.) = 1.00000

*Bus UPS 50 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 4.67
 Z1 = ***** +j ***** pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 5		UPS 50	0.00	0.00	Gen	1	1	
UPS5A		UPS 50	0.00	0.00	Branch	1	1	C UPS5A

*Bus UPS 8I 0.208 kV, Zone 1, Area 1
 E/Z = 2.536 kA (0.914 MVA) At -50.84DEG, X/R = 1.58
 Z1 = 69.118750 +j 84.866844 pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3EL1		UPS 8I	2.54	-50.84	Branch	1	1	C UPS 8

*Bus UPS 80 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 4.67
 Z1 = ***** +j ***** pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 8		UPS 80	0.00	0.00	Gen	1	1	
UPS8A		UPS 80	0.00	0.00	Branch	1	1	C UPS8A

*Bus UPS3A 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 4.67
 Z1 = ***** +j ***** pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS5A		UPS3A	0.00	0.00	Branch	1	1	C UPS3A

*Bus UPS5A 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 4.67
 Z1 = ***** +j ***** pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS3A		UPS5A	0.00	0.00	Branch	1	1	C UPS3A
UPS 50		UPS5A	0.00	0.00	Branch	1	1	C UPS5A

*Bus UPS8A 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 4.67
 Z1 = ***** +j ***** pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 80		UPS8A	0.00	0.00	Branch	1	1	C UPS8A
UPS9A		UPS8A	0.00	0.00	Branch	1	1	C UPS9A

*Bus UPS9A 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 4.67
 Z1 = ***** +j ***** pu, Z0 = 0.000000 +j 0.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS8A		UPS9A	0.00	0.00	Branch	1	1	C UPS9A

Ground Fault

Equipment Duty Ratings

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

1EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 1EH1-BR	GE /THED (277V)	ANSI-SYM	65.00			1.96	(-97.0%)	
B 1EL1	GE /TEY	ANSI-SYM	14.00			1.96	(-86.0%)	
B 1EH1-MAIN	GE /TEY	ANSI-SYM	14.00			1.96	(-86.0%)	
1EH1	/	ANSI-SYM	14.00			1.96	(-86.0%)	

Equipment Duty Comparison Report For Bus:

1EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 1EL1-BR	GE /THQL	ANSI-SYM	10.00			1.44	(-85.6%)	
B 1EL1-MAIN	GE /THQL	ANSI-SYM	10.00			1.44	(-85.6%)	
1EL1	/	ANSI-SYM	22.00			1.44	(-93.5%)	

Equipment Duty Comparison Report For Bus:

1HAIA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 1HAIA-BR	GE /THED (277V)	ANSI-SYM	65.00			11.63	(-82.1%)	
1HAIA	/	ANSI-SYM	22.00			11.63	(-47.1%)	

Equipment Duty Comparison Report For Bus:

1HAIB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 1HAIB-BR	GE /THED (277V)	ANSI-SYM	65.00			11.57	(-82.2%)	
1HAIB	/	ANSI-SYM	22.00			11.57	(-47.4%)	

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

1HAIC Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 1HAIC-BR	GE /THED (277V)	ANSI-SYM	65.00		11.51 (-82.3%)		
1HAIC	/	ANSI-SYM	22.00		11.51 (-47.7%)		

Equipment Duty Comparison Report For Bus:

1HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 1HDPA-MAIN	GE /SKH8	ANSI-SYM	50.00		12.46 (-75.1%)		
B 1HAIA	GE /SFL	ANSI-SYM	65.00		12.54 (-80.7%)		
B 1HAIB	GE /SFL	ANSI-SYM	65.00		12.54 (-80.7%)		
B 1HAIC	GE /SFL	ANSI-SYM	65.00		12.54 (-80.7%)		
B ELEV 160	GE /FCN	ANSI-SYM	65.00		12.46 (-80.8%)		
B TX T1LDPA	GE /SFL	ANSI-SYM	65.00		12.54 (-80.7%)		
1HDPA	/	ANSI-SYM	65.00		12.54 (-80.7%)		

Equipment Duty Comparison Report For Bus:

1LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 1LA1A-BR	GE /THQB	ANSI-SYM	10.00		7.05 (-29.5%)		
1LA1A	/	ANSI-SYM	10.00		7.05 (-29.5%)		

Equipment Duty Comparison Report For Bus:

1LA2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 1LA2A-BR	GE /THQB	ANSI-SYM	10.00		7.05 (-29.5%)		
1LA2A	/	ANSI-SYM	10.00		7.05 (-29.5%)		

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

1LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 1LAC1A-BR	GE	/THQB	ANSI-SYM	10.00			7.05 (-29.5%)		
1LAC1A		/	ANSI-SYM	10.00			7.05 (-29.5%)		

Equipment Duty Comparison Report For Bus:

1LAC2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 1LAC2A-BR	GE	/THQB	ANSI-SYM	10.00			7.05 (-29.5%)		
1LAC2A		/	ANSI-SYM	10.00			7.05 (-29.5%)		

Equipment Duty Comparison Report For Bus:

1LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 1LDPA-MAIN	GE	/SGD	ANSI-SYM	65.00			7.60 (-88.3%)		
B 1LDPA-BR	GE	/TEB	ANSI-SYM	10.00			7.60 (-24.0%)		
B 1LAC1A	GE	/TQD	ANSI-SYM	10.00			7.60 (-24.0%)		
B 1LAC2A	GE	/TQD	ANSI-SYM	10.00			7.60 (-24.0%)		
B 1LA1A	GE	/TQD	ANSI-SYM	10.00			7.60 (-24.0%)		
B 1LA2A	GE	/TQD	ANSI-SYM	10.00			7.60 (-24.0%)		
1LDPA		/	ANSI-SYM	10.00			7.60 (-24.0%)		

Equipment Duty Comparison Report For Bus:

2EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 2EH1-BR	GE	/THED (277V)	ANSI-SYM	65.00			24.55 (-62.2%)		
B 2EL1	GE	/SEL	ANSI-SYM	65.00			24.55 (-62.2%)		
B 2EH1-MAIN	GE	/SEL	ANSI-SYM	65.00			24.55 (-62.2%)		
2EH1		/	ANSI-SYM	42.00			24.55 (-41.5%)		

^ (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

2EHDP Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2EHDP-MAIN	GE /SGL4	ANSI-SYM	65.00			32.88	(-49.4%)	
B 1EH1	GE /FCN	ANSI-SYM	65.00			32.88	(-49.4%)	
B 3EH1	GE /FCN	ANSI-SYM	65.00			32.88	(-49.4%)	
B 2EH1	GE /FCN	ANSI-SYM	65.00			32.88	(-49.4%)	
B 4EH1	/	ANSI-SYM	65.00			32.88	(-49.4%)	
B 5EH1	GE /FCN	ANSI-SYM	65.00			32.88	(-49.4%)	
B 6EH1	GE /FCN	ANSI-SYM	65.00			32.88	(-49.4%)	
B 4EH2	/	ANSI-SYM	65.00			32.88	(-49.4%)	
2EHDP	/	ANSI-SYM	65.00			32.88	(-49.4%)	

Equipment Duty Comparison Report For Bus:

2EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2EL1-BR	GE /THQL	ANSI-SYM	10.00			1.56	(-84.4%)	
B 2EL1-MAIN	GE /THQL	ANSI-SYM	10.00			1.56	(-84.4%)	
2EL1	/	ANSI-SYM	22.00			1.56	(-92.9%)	

Equipment Duty Comparison Report For Bus:

2HAIA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2HAIA-BR	GE /THED (277V)	ANSI-SYM	65.00			43.13	(-33.6%)	
2HAIA	/	ANSI-SYM	65.00			43.13	(-33.6%)	

Equipment Duty Comparison Report For Bus:

2HAIB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 2HAIB-BR2	GE /THED (277V)	ANSI-SYM	65.00			41.67	(-35.9%)	
B 2HAIB-BR1	GE /SEL	ANSI-SYM	65.00			41.67	(-35.9%)	

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
 Driving Point Voltage (P.U.) = 1.00000

2HAIB / ANSI-SYM 65.00 41.67 (-35.9%)

Equipment Duty Comparison Report For Bus:

2HAIC Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2HAIC-BR2	GE /THED (277V)	ANSI-SYM	65.00		39.00 (-40.0%)		
B 2HAIC-BR1	GE /SEL	ANSI-SYM	65.00		39.00 (-40.0%)		
2HAIC	/	ANSI-SYM	65.00		39.00 (-40.0%)		

Equipment Duty Comparison Report For Bus:

2HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2HDPA-MAIN	GE /SKL12	ANSI-SYM	65.00		51.56 (-20.7%)		
B 2HAIA	GE /SFL	ANSI-SYM	65.00		51.56 (-20.7%)		
B 2HAIB	GE /SGL4	ANSI-SYM	65.00		51.56 (-20.7%)		
B 2HAIC	GE /SFL	ANSI-SYM	65.00		51.56 (-20.7%)		
B TX T2LDPA	GE /SGL4	ANSI-SYM	65.00		51.56 (-20.7%)		
2HDPA	/	ANSI-SYM	65.00		51.56 (-20.7%)		

Equipment Duty Comparison Report For Bus:

2LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2LA1A-BR	GE /THHQB	ANSI-SYM	22.00		11.20 (-49.1%)		
2LA1A	/	ANSI-SYM	22.00		11.20 (-49.1%)		

Equipment Duty Comparison Report For Bus:

2LA1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2LA1B-BR	GE /THHQB	ANSI-SYM	22.00		11.20 (-49.1%)		
2LA1B	/	ANSI-SYM	22.00		11.20 (-49.1%)		

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:
2LA1KA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2LA1KA-BR	GE /THHQB	ANSI-SYM	22.00		8.47(-61.5%)		
2LA1KA	/	ANSI-SYM	22.00		8.47(-61.5%)		

Equipment Duty Comparison Report For Bus:
2LA1KB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2LA1KB-BR	GE /THHQB	ANSI-SYM	22.00		8.47(-61.5%)		
2LA1KB	/	ANSI-SYM	22.00		8.47(-61.5%)		

Equipment Duty Comparison Report For Bus:
2LA1KC Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
KC 2LA1KC-BR	GE /THHQB	ANSI-SYM	22.00		8.47(-61.5%)		
2LA1KC	/	ANSI-SYM	22.00		8.47(-61.5%)		

Equipment Duty Comparison Report For Bus:
2LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2LAC1A-BR	GE /THHQB	ANSI-SYM	22.00		11.20(-49.1%)		
2LAC1A	/	ANSI-SYM	22.00		11.20(-49.1%)		

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
 Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:
 2LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA)	(kA)	Cyc	1/2 Cycle Interrupting kA (%)	Interrupting kA (%)		
B 2LDPA-MAIN	GE /SKH8	ANSI-SYM	65.00			12.49 (-80.8%)			
B 2LDPA-BR	GE /THQD	ANSI-SYM	22.00			12.49 (-43.2%)			
B 2LAC1A	GE /THQD	ANSI-SYM	22.00			12.49 (-43.2%)			
B 2LA1A	GE /THQD	ANSI-SYM	22.00			12.49 (-43.2%)			
B 2LA1B	GE /THQD	ANSI-SYM	22.00			12.49 (-43.2%)			
B 2LA1KA	GE /THQD	ANSI-SYM	22.00			12.49 (-43.2%)			
B 2LA1KB	GE /THQD	ANSI-SYM	22.00			12.49 (-43.2%)			
B 2LA1KC	GE /THQD	ANSI-SYM	22.00			12.49 (-43.2%)			
2LDPA	/	ANSI-SYM	22.00			12.49 (-43.2%)			

Equipment Duty Comparison Report For Bus:
 3EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA)	(kA)	Cyc	1/2 Cycle Interrupting kA (%)	Interrupting kA (%)		
B 3EH1-MAIN	GE /TEY	ANSI-SYM	14.00			3.98 (-71.6%)			
B 3EH1-BR	GE /THED (277V)	ANSI-SYM	65.00			3.98 (-93.9%)			
B 3EL1	GE /FBN	ANSI-SYM	65.00			3.98 (-93.9%)			
3EH1	/	ANSI-SYM	42.00			3.98 (-90.5%)			

Equipment Duty Comparison Report For Bus:
 3EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA)	(kA)	Cyc	1/2 Cycle Interrupting kA (%)	Interrupting kA (%)		
B 3EL1-BR	GE /THQL	ANSI-SYM	10.00			2.87 (-71.3%)			
B 3EL1-MAIN	GE /THQL	ANSI-SYM	10.00			2.87 (-71.3%)			
B UPS 8	GE /THQL	ANSI-SYM	10.00			2.87 (-71.3%)			
3EL1	/	ANSI-SYM	22.00			2.87 (-86.9%)			

^(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

4EDP1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
4EDP1	/	ANSI-SYM	10.00			2.32	(-76.8%)	

Equipment Duty Comparison Report For Bus:

4EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
B 4EH1-MAIN	GE /TEY	ANSI-SYM	14.00			2.23	(-84.1%)	
B 4EH1-BR	GE /TEY	ANSI-SYM	14.00			2.23	(-84.1%)	
B 4EL1	GE /TEY	ANSI-SYM	14.00			2.23	(-84.1%)	
4EH1	/	ANSI-SYM	14.00			2.23	(-84.1%)	

Equipment Duty Comparison Report For Bus:

4EH2 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
B 4EH2-MAIN	GE /TEY	ANSI-SYM	14.00			2.14	(-84.7%)	
B 4EH2-BR	GE /TEY	ANSI-SYM	14.00			2.14	(-84.7%)	
B 4EL2	GE /TEY	ANSI-SYM	14.00			2.14	(-84.7%)	
4EH2	/	ANSI-SYM	14.00			2.14	(-84.7%)	

Equipment Duty Comparison Report For Bus:

4EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
B 4EL1-BR	GE /THQL	ANSI-SYM	10.00			2.70	(-73.0%)	
B 4EL1-MAIN	GE /THQL	ANSI-SYM	10.00			2.70	(-73.0%)	
4EL1	/	ANSI-SYM	22.00			2.70	(-87.7%)	

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
 Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:
 4EL2 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 4EDP1	GE /THQL	ANSI-SYM	10.00			2.67	(-73.3%)	
B 4EL2-BR	GE /THQL	ANSI-SYM	10.00			2.67	(-73.3%)	
B 4EL2-MAIN	GE /THQL	ANSI-SYM	10.00			2.67	(-73.3%)	
4EL2	/	ANSI-SYM	22.00			2.67	(-87.9%)	

Equipment Duty Comparison Report For Bus:
 5EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5EH1-MAIN	GE /TEY	ANSI-SYM	14.00			3.35	(-76.1%)	
B 5EH1-BR	GE /TEY	ANSI-SYM	14.00			3.35	(-76.1%)	
B 5EL1	GE /TEY	ANSI-SYM	14.00			3.35	(-76.1%)	
5EH1	/	ANSI-SYM	14.00			3.35	(-76.1%)	

Equipment Duty Comparison Report For Bus:
 5EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5EL1-BR	GE /THQL	ANSI-SYM	10.00			2.83	(-71.7%)	
B 5EL1-MAIN	GE /THQL	ANSI-SYM	10.00			2.83	(-71.7%)	
B UPS 5	GE /THQL	ANSI-SYM	10.00			2.83	(-71.7%)	
5EL1	/	ANSI-SYM	22.00			2.83	(-87.1%)	

Equipment Duty Comparison Report For Bus:
 5HA1A Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5HA1A-BR	GE /THED (277V)	ANSI-SYM	65.00			26.49	(-59.2%)	
5HA1A	/	ANSI-SYM	42.00			26.49	(-36.9%)	

^(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

5HA1B Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 5HA1B-BR	GE	/FBN	ANSI-SYM	65.00			27.46 (-57.7%)		
5HA1B		/	ANSI-SYM	42.00			27.46 (-34.6%)		

Equipment Duty Comparison Report For Bus:

5HA1C Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 5HA1C-BR	GE	/FBN	ANSI-SYM	65.00			26.94 (-58.6%)		
5HA1C		/	ANSI-SYM	42.00			26.94 (-35.9%)		

Equipment Duty Comparison Report For Bus:

5HA1D Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 5HA1D-BR2	GE	/FBN	ANSI-SYM	65.00			25.60 (-60.6%)		
B 5HA1D-BR	GE	/THED (277V)	ANSI-SYM	65.00			25.60 (-60.6%)		
5HA1D		/	ANSI-SYM	42.00			25.60 (-39.0%)		

Equipment Duty Comparison Report For Bus:

5HA1E Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))	
B 5HA1E-BR2	GE	/FBN	ANSI-SYM	65.00			26.49 (-59.2%)		
B 5HA1E-BR	GE	/THED (277V)	ANSI-SYM	65.00			26.49 (-59.2%)		
5HA1E		/	ANSI-SYM	42.00			26.49 (-36.9%)		

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

5HDPA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5HA1A	GE /SFL	ANSI-SYM	65.00			34.02	(-47.7%)	
B 5HA1B	GE /SGL4	ANSI-SYM	65.00			34.02	(-47.7%)	
B 9HA2A	GE /SGL4	ANSI-SYM	65.00			34.02	(-47.7%)	
B 9HA2B	GE /SFL	ANSI-SYM	65.00			34.02	(-47.7%)	
B TX T9LDPB	GE /SFL	ANSI-SYM	65.00			34.02	(-47.7%)	
B TX T9LDPA	GE /SFL	ANSI-SYM	65.00			34.02	(-47.7%)	
B TX T5LDPA	GE /SFL	ANSI-SYM	65.00			34.02	(-47.7%)	
B TX T5LDPB	GE /SGL4	ANSI-SYM	65.00			34.02	(-47.7%)	
B ELEV 560	GE /FBH	ANSI-SYM	100.00			33.92	(-66.1%)	
B CA	GE /FBH	ANSI-SYM	100.00			33.96	(-66.0%)	
B 5HA1C	GE /SGL4	ANSI-SYM	65.00			34.02	(-47.7%)	
B 5HA1D	GE /SFL	ANSI-SYM	65.00			34.02	(-47.7%)	
B 5HA1E	GE /SFL	ANSI-SYM	65.00			34.02	(-47.7%)	
B 5HDPA-MAIN	GE /SS-20	ANSI-SYM	65.00			33.86	(-47.9%)	
5HDPA	/	ANSI-SYM	65.00			34.02	(-47.7%)	

Equipment Duty Comparison Report For Bus:

5LA1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5LA1A-BR	GE /THQB	ANSI-SYM	10.00			8.58	(-14.2%)	
5LA1A	/	ANSI-SYM	10.00			8.58	(-14.2%)	

Equipment Duty Comparison Report For Bus:

5LAC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA)	Interrupting (%)	
B 5LAC1A-BR	GE /THQB	ANSI-SYM	10.00			8.58	(-14.2%)	
5LAC1A	/	ANSI-SYM	10.00			8.58	(-14.2%)	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

5LAC1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))
B 5LAC1B-BR	GE /THQB	ANSI-SYM	10.00			8.58 (-14.2%)	
5LAC1B	/	ANSI-SYM	10.00			8.58 (-14.2%)	

Equipment Duty Comparison Report For Bus:

5LB1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))
B 5LB1A-BR	GE /THHQB	ANSI-SYM	22.00			10.48 (-52.4%)	
5LB1A	/	ANSI-SYM	22.00			10.48 (-52.4%)	

Equipment Duty Comparison Report For Bus:

5LB1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))
B 5LB1B-BR	GE /THHQB	ANSI-SYM	22.00			10.27 (-53.3%)	
5LB1B	/	ANSI-SYM	22.00			10.27 (-53.3%)	

Equipment Duty Comparison Report For Bus:

5LB1C Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))
B LB1C MAIN	GE /TQD	ANSI-SYM	10.00			4.73 (-52.7%)	
B 5LB1C-BR	GE /THQB	ANSI-SYM	10.00			4.73 (-52.7%)	
5LB1C	/	ANSI-SYM	10.00			4.73 (-52.7%)	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

5LBC1A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 5LBC1A-BR	GE	/THHQB	ANSI-SYM	22.00			9.78 (-55.5%)		
5LBC1A		/	ANSI-SYM	22.00			9.78 (-55.5%)		

Equipment Duty Comparison Report For Bus:

5LBC1B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 5LBC1B-BR	GE	/THHQB	ANSI-SYM	22.00			10.38 (-52.8%)		
5LBC1B		/	ANSI-SYM	22.00			10.38 (-52.8%)		

Equipment Duty Comparison Report For Bus:

5LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 5LDPA-BR	GE	/TEY	ANSI-SYM	65.00			9.40 (-85.5%)		
B 5LAC1A	GE	/SFH	ANSI-SYM	65.00			9.40 (-85.5%)		
B 5LAC1B	GE	/SFH	ANSI-SYM	65.00			9.40 (-85.5%)		
B 5LA1A	GE	/SFH	ANSI-SYM	65.00			9.40 (-85.5%)		
B 5LDPA-MAIN	GE	/SGD	ANSI-SYM	65.00			9.40 (-85.5%)		
5LDPA		/	ANSI-SYM	65.00			9.40 (-85.5%)		

Equipment Duty Comparison Report For Bus:

5LDPB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment				Ratings			Duties		Comments
ID	Manufacturer	Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle (kA %)	Interrupting (kA %)	
B 4LDPB-SPARE	GE	/THQD	ANSI-SYM	22.00			11.75 (-46.6%)		
B 5LBC1A	GE	/SFL	ANSI-SYM	100.00			11.75 (-88.3%)		
B 5LBC1B	GE	/SFL	ANSI-SYM	100.00			11.75 (-88.3%)		
B 5LB1A	GE	/SFL	ANSI-SYM	100.00			11.75 (-88.3%)		
B 5LB1C	GE	/SFL	ANSI-SYM	100.00			11.75 (-88.3%)		
B 5LB1B	GE	/SFL	ANSI-SYM	100.00			11.75 (-88.3%)		

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

B 5LDPB-MAIN	GE	/SKH8	ANSI-SYM	65.00	11.75(-81.9%)
5LDPB		/	ANSI-SYM	22.00	11.75(-46.6%)

Equipment Duty Comparison Report For Bus:

6EH1 Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 6EH1-BR	GE /TEY	ANSI-SYM	14.00		1.33(-90.5%)			
B 6EL1	GE /TEY	ANSI-SYM	14.00		1.33(-90.5%)			
6EH1	/	ANSI-SYM	14.00		1.33(-90.5%)			

Equipment Duty Comparison Report For Bus:

6EL1 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 6EL1-BR	GE /THQL	ANSI-SYM	10.00		1.38(-86.2%)			
B 6EL1-MAIN	GE /THQL	ANSI-SYM	10.00		1.38(-86.2%)			
6EL1	/	ANSI-SYM	22.00		1.38(-93.7%)			

Equipment Duty Comparison Report For Bus:

9HA2A Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 9HA2A-BR	GE /FBN	ANSI-SYM	65.00		21.17(-67.4%)			
9HA2A	/	ANSI-SYM	42.00		21.17(-49.6%)			

Equipment Duty Comparison Report For Bus:

9HA2B Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA (%))	Interrupting (kA (%))		
B 9HA2B-BR2	GE /FBN	ANSI-SYM	65.00		27.12(-58.3%)			
B 9HA2B-BR	GE /THED (277V)	ANSI-SYM	65.00		27.12(-58.3%)			
9HA2B	/	ANSI-SYM	42.00		27.12(-35.4%)			

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

9LA2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle Interrupting kA (%)	Interrupting kA (%)
B 9LA2A-BR	GE /THQB	ANSI-SYM	10.00			8.05 (-19.5%)	
9LA2A	/	ANSI-SYM	10.00			8.05 (-19.5%)	

Equipment Duty Comparison Report For Bus:

9LAC2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle Interrupting kA (%)	Interrupting kA (%)
B 9LAC2A-BR	GE /THQB	ANSI-SYM	10.00			8.54 (-14.6%)	
9LAC2A	/	ANSI-SYM	10.00			8.54 (-14.6%)	

Equipment Duty Comparison Report For Bus:

9LAC2B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle Interrupting kA (%)	Interrupting kA (%)
B 9LAC2B-BR	GE /THQB	ANSI-SYM	10.00			8.54 (-14.6%)	
9LAC2B	/	ANSI-SYM	10.00			8.54 (-14.6%)	

Equipment Duty Comparison Report For Bus:

9LB2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle Interrupting kA (%)	Interrupting kA (%)
B 9LB2A-BR	GE /THQB	ANSI-SYM	10.00			7.51 (-24.9%)	
9LB2A	/	ANSI-SYM	10.00			7.51 (-24.9%)	

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Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

9LBC2A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LBC2A-BR	GE /THQB	ANSI-SYM	10.00		7.93 (-20.7%)		
9LBC2A	/	ANSI-SYM	10.00		7.93 (-20.7%)		

Equipment Duty Comparison Report For Bus:

9LBC2B Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LBC2B-BR	GE /THQB	ANSI-SYM	10.00		7.93 (-20.7%)		
9LBC2B	/	ANSI-SYM	10.00		7.93 (-20.7%)		

Equipment Duty Comparison Report For Bus:

9LDPA Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LAC2A	GE /THQD	ANSI-SYM	22.00		9.36 (-57.5%)		
B 9LAC2B	GE /THQD	ANSI-SYM	22.00		9.36 (-57.5%)		
B 9LA2A	GE /THQD	ANSI-SYM	22.00		9.36 (-57.5%)		
B 9LDPA-MAIN	GE /SGD	ANSI-SYM	65.00		9.36 (-85.6%)		
9LDPA	/	ANSI-SYM	22.00		9.36 (-57.5%)		

Equipment Duty Comparison Report For Bus:

9LDPB Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 9LDPB	GE /SFH	ANSI-SYM	65.00		8.61 (-86.8%)		
B 9LBC2A	GE /SFH	ANSI-SYM	65.00		8.61 (-86.8%)		
B 9LBC2B	GE /SFH	ANSI-SYM	65.00		8.61 (-86.8%)		
B 9LB2A	GE /SFH	ANSI-SYM	65.00		8.61 (-86.8%)		
B 9LDPB-MAIN	GE /SGH6	ANSI-SYM	65.00		8.61 (-86.8%)		
9LDPB	/	ANSI-SYM	65.00		8.61 (-86.8%)		

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Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

MCCA Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
MCCA	/	ANSI-SYM	65.00			37.73	(-42.0%)	

Equipment Duty Comparison Report For Bus:

MDB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
B MDB	GE /SS-40	ANSI-SYM	100.00			56.77	(-43.2%)	
MDB	/	ANSI-SYM	65.00			54.73	(-15.8%)	

Equipment Duty Comparison Report For Bus:

MSB Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
B MSB-ATS EH2A	GE /SGL4	ANSI-SYM	65.00			55.87	(-14.1%)	
B MSB-SPARE	GE /SFL	ANSI-SYM	65.00			55.87	(-14.1%)	
B 1HDPA	GE /SKL8	ANSI-SYM	65.00			55.73	(-14.3%)	
B 2HDPA	GE /SKL12	ANSI-SYM	65.00			55.87	(-14.1%)	
B MCCA	GE /SGL4	ANSI-SYM	65.00			55.87	(-14.1%)	
B 5HDPA	GE /SS-20	ANSI-SYM	65.00			55.65	(-14.4%)	
MSB	/	ANSI-SYM	65.00			53.94	(-17.0%)	

Equipment Duty Comparison Report For Bus:

TX 1EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle Interrupting (kA) (kA) Cyc			1/2 Cycle Interrupting kA (%) kA (%)		
B 1EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00			1.69	(-90.6%)	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

TX 1EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 1EL1-MAIN	GE /THQL	ANSI-SYM	10.00		1.44	(-85.6%)	

Equipment Duty Comparison Report For Bus:

TX 2EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		8.79	(-51.2%)	

Equipment Duty Comparison Report For Bus:

TX 2EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 2EL1-MAIN	GE /THQL	ANSI-SYM	10.00		1.56	(-84.4%)	

Equipment Duty Comparison Report For Bus:

TX 3EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 3EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		3.53	(-80.4%)	

Equipment Duty Comparison Report For Bus:

TX 3EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 3EL1-MAIN	GE /THQL	ANSI-SYM	10.00		2.87	(-71.3%)	

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

TX 4EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		2.08 (-88.4%)		

Equipment Duty Comparison Report For Bus:

TX 4EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4EL1-MAIN	GE /THQL	ANSI-SYM	10.00		2.70 (-73.0%)		

Equipment Duty Comparison Report For Bus:

TX 4EL2 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4EL2- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		2.00 (-88.9%)		

Equipment Duty Comparison Report For Bus:

TX 4EL2 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 4EL2-MAIN	GE /THQL	ANSI-SYM	10.00		2.67 (-73.3%)		

Equipment Duty Comparison Report For Bus:

TX 5EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 5EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		3.02 (-83.2%)		

^(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

TX 5EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 5EL1-MAIN	GE /THQL	ANSI-SYM	10.00		2.83 (-71.7%)		

Equipment Duty Comparison Report For Bus:

TX 6EL1 H Area: 1 Zone: 1 Bus kV: 0.48 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 6EL1- HI MAIN	GE /TED (600V)	ANSI-SYM	18.00		1.20 (-93.3%)		

Equipment Duty Comparison Report For Bus:

TX 6EL1 L Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B 6EL1-MAIN	GE /THQL	ANSI-SYM	10.00		1.38 (-86.2%)		

Equipment Duty Comparison Report For Bus:

UPS 5I Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
UPS 5I	/	ANSI-SYM	10.00		2.65 (-73.5%)		

Equipment Duty Comparison Report For Bus:

UPS 50 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
UPS 50	/	ANSI-SYM	10.00		0.33 (-96.7%)		

(Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS

Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

UPS 8I Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
UPS 8I	/	ANSI-SYM	10.00		2.69	(-73.1%)	

Equipment Duty Comparison Report For Bus:

UPS 80 Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
UPS 80	/	ANSI-SYM	10.00		0.33	(-96.7%)	

Equipment Duty Comparison Report For Bus:

UPS3A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B UPS3A-BR	GE /THQB	ANSI-SYM	10.00		0.36	(-96.4%)	
B UPS 3A-MAIN	GE /THQB	ANSI-SYM	10.00		0.36	(-96.4%)	
UPS3A	/	ANSI-SYM	10.00		0.32	(-96.8%)	

Equipment Duty Comparison Report For Bus:

UPS5A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment		Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA) Cyc	1/2 Cycle (kA) (%)	Interrupting (kA) (%)	
B UPS 5A-MAIN	GE /THQB	ANSI-SYM	10.00		0.37	(-96.3%)	
UPS5A	/	ANSI-SYM	10.00		0.32	(-96.8%)	

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
Comment: Ground Fault - Equipment Duty Report

EQUIPMENT DUTY VIOLATION AND WARNING DETAILED REPORTS
Driving Point Voltage (P.U.) = 1.00000

Equipment Duty Comparison Report For Bus:

UPS8A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B UPS8A-BR	GE /THQB	ANSI-SYM	10.00			0.33 (-96.7%)		
B UPS 8A-MAIN	GE /THQB	ANSI-SYM	10.00			0.33 (-96.7%)		
UPS8A	/	ANSI-SYM	10.00			0.31 (-96.9%)		

Equipment Duty Comparison Report For Bus:

UPS9A Area: 1 Zone: 1 Bus kV: 0.21 kV

Equipment			Ratings			Duties		Comments
ID	Manufacturer / Style	Test Standard	1/2 Cycle (kA)	Interrupting (kA)	Cyc	1/2 Cycle kA (%)	Interrupting kA (%)	
B UPS 9A-MAIN	GE /THQB	ANSI-SYM	10.00			0.32 (-96.8%)		
B UPS9A-BR	GE /THQB	ANSI-SYM	10.00			0.32 (-96.8%)		
UPS9A	/	ANSI-SYM	10.00			0.30 (-97.0%)		

Ground Fault

Low Voltage Momentary Report

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 1EH1 0.480 kV, Zone 1, Area 1
 E/Z = 1.958 kA (1.63 MVA) At -15.66DEG, X/R = 0.28
 Z1 = 29.745278 +j 9.447475 pu, Z0 = 117.981507 +j 30.848665 pu
 1.6*ISYM= 3.132 IASYM Based on X/R ratio = 1.958

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		1EH1	1.96	-15.66	Branch	1	1	C 1EH1
TX 1EL1 H		1EH1	0.00	0.00	Branch	1	1	C 1EL1

*Bus 1EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.440 kA (0.52 MVA) At -52.46DEG, X/R = 1.30
 Z1 = 133.965562 +j 163.760707 pu, Z0 = 84.382340 +j 131.007698 pu
 1.6*ISYM= 2.304 IASYM Based on X/R ratio = 1.464

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1 L		1EL1	1.44	-52.46	Branch	1	1	B 1EL1-MAIN

*Bus 1HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 11.632 kA (9.67 MVA) At -58.68DEG, X/R = 1.64
 Z1 = 2.832650 +j 5.550673 pu, Z0 = 10.459487 +j 15.400140 pu
 1.6*ISYM= 18.611 IASYM Based on X/R ratio = 12.052

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIA	11.63	-58.68	Branch	1	1	C 1HAIA

*Bus 1HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 11.572 kA (9.62 MVA) At -58.55DEG, X/R = 1.63
 Z1 = 2.856901 +j 5.567373 pu, Z0 = 10.556491 +j 15.466938 pu
 1.6*ISYM= 18.515 IASYM Based on X/R ratio = 11.983

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIB	11.57	-58.55	Branch	1	1	C 1HAIB

*Bus 1HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 11.512 kA (9.57 MVA) At -58.42DEG, X/R = 1.63
 Z1 = 2.881152 +j 5.584072 pu, Z0 = 10.653494 +j 15.533737 pu
 1.6*ISYM= 18.420 IASYM Based on X/R ratio = 11.915

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIC	11.51	-58.42	Branch	1	1	C 1HAIC

*Bus 1HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 12.537 kA (10.42 MVA) At -60.69DEG, X/R = 1.78
 Z1 = 2.493137 +j 5.316879 pu, Z0 = 9.101438 +j 14.464959 pu
 1.6*ISYM= 20.059 IASYM Based on X/R ratio = 13.108

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		1HDPA	12.46	-60.62	Branch	1	1	C 1HDPA
1HAIA		1HDPA	0.00	0.00	Branch	1	1	C 1HAIA
1HAIB		1HDPA	0.00	0.00	Branch	1	1	C 1HAIB
1HAIC		1HDPA	0.00	0.00	Branch	1	1	C 1HAIC
ELEV 160		1HDPA	0.08	-72.51	Branch	1	1	C ELEV 160
TX T1LDPA H		1HDPA	0.00	0.00	Branch	1	1	C TX T1LDPA

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 1LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 7.053 kA (2.54 MVA) At -59.60DEG, X/R = 1.70
 Z1 = 19.724265 +j 35.432567 pu, Z0 = 20.289636 +j 30.964160 pu
 1.6*ISYM= 11.285 IASYM Based on X/R ratio = 7.337

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LA1A	7.05	-59.60	Branch	1	1	C 1LA1A

*Bus 1LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.053 kA (2.54 MVA) At -59.60DEG, X/R = 1.70
 Z1 = 19.724265 +j 35.432567 pu, Z0 = 20.289636 +j 30.964160 pu
 1.6*ISYM= 11.285 IASYM Based on X/R ratio = 7.337

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LA2A	7.05	-59.60	Branch	1	1	C 1LA2A

*Bus 1LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 7.053 kA (2.54 MVA) At -59.60DEG, X/R = 1.70
 Z1 = 19.724265 +j 35.432567 pu, Z0 = 20.289636 +j 30.964160 pu
 1.6*ISYM= 11.285 IASYM Based on X/R ratio = 7.337

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LAC1A	7.05	-59.60	Branch	1	1	C 1LAC1A

*Bus 1LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.053 kA (2.54 MVA) At -59.60DEG, X/R = 1.70
 Z1 = 19.724265 +j 35.432567 pu, Z0 = 20.289636 +j 30.964160 pu
 1.6*ISYM= 11.285 IASYM Based on X/R ratio = 7.337

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LAC2A	7.05	-59.60	Branch	1	1	C 1LAC2A

*Bus 1LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 7.597 kA (2.74 MVA) At -61.68DEG, X/R = 1.86
 Z1 = 18.432796 +j 34.543239 pu, Z0 = 15.123771 +j 27.406837 pu
 1.6*ISYM= 12.156 IASYM Based on X/R ratio = 7.984

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA	T1L	1LDPA	7.60	-61.68	Branch	1	1	C 1LDPA
1LAC1A		1LDPA	0.00	0.00	Branch	1	1	C 1LAC1A
1LAC2A		1LDPA	0.00	0.00	Branch	1	1	C 1LAC2A
1LA1A		1LDPA	0.00	0.00	Branch	1	1	C 1LA1A
1LA2A		1LDPA	0.00	0.00	Branch	1	1	C 1LA2A

*Bus 2EH1 0.480 kV, Zone 1, Area 1
 E/Z = 24.551 kA (20.41 MVA) At -49.87DEG, X/R = 1.19
 Z1 = 1.745266 +j 3.030050 pu, Z0 = 5.982499 +j 5.177733 pu
 1.6*ISYM= 39.281 IASYM Based on X/R ratio = 24.828

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		2EH1	24.55	-49.87	Branch	1	1	C 2EH1
TX 2EL1	H	2EH1	0.00	0.00	Branch	1	1	C 2EL1

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 2EHDP 0.480 kV, Zone 1, Area 1
E/Z = 32.880 kA (27.34 MVA) At -66.55DEG, X/R = 2.30
Z1 = 0.894437 +j 2.835045 pu, Z0 = 2.579196 +j 4.397715 pu
1.6*ISYM= 52.608 IASYM Based on X/R ratio = 35.688

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
ATS EH2A1		2EHDP	32.88	-66.55	Branch	1	1	C 2EHDP
1EH1		2EHDP	0.00	0.00	Branch	1	1	C 1EH1
3EH1		2EHDP	0.00	0.00	Branch	1	1	C 3EH1
2EH1		2EHDP	0.00	0.00	Branch	1	1	C 2EH1
4EH1		2EHDP	0.00	0.00	Branch	1	1	C 4EH1
5EH1		2EHDP	0.00	0.00	Branch	1	1	C 5EH1
6EH1		2EHDP	0.00	0.00	Branch	1	1	C 6EH1
4EH2		2EHDP	0.00	0.00	Branch	1	1	C 4EH2

*Bus 2EL1 0.208 kV, Zone 1, Area 1
E/Z = 1.556 kA (0.56 MVA) At -56.38DEG, X/R = 1.50
Z1 = 105.965553 +j 157.343284 pu, Z0 = 84.382340 +j 131.007698 pu
1.6*ISYM= 2.489 IASYM Based on X/R ratio = 1.598

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1 L		2EL1	1.56	-56.38	Branch	1	1	B 2EL1-MAIN

*Bus 2HAIA 0.480 kV, Zone 1, Area 1
E/Z = 43.128 kA (35.86 MVA) At -69.80DEG, X/R = 2.72
Z1 = 0.648026 +j 2.465744 pu, Z0 = 1.593571 +j 2.920524 pu
1.6*ISYM= 69.005 IASYM Based on X/R ratio = 48.220

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIA	43.13	-69.80	Branch	1	1	C 2HAIA

*Bus 2HAIB 0.480 kV, Zone 1, Area 1
E/Z = 41.667 kA (34.64 MVA) At -73.53DEG, X/R = 3.38
Z1 = 0.575665 +j 2.541212 pu, Z0 = 1.304129 +j 3.222395 pu
1.6*ISYM= 66.667 IASYM Based on X/R ratio = 48.686

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIB	41.67	-73.53	Branch	1	1	C 2HAIB

*Bus 2HAIC 0.480 kV, Zone 1, Area 1
E/Z = 38.998 kA (32.42 MVA) At -66.01DEG, X/R = 2.25
Z1 = 0.793532 +j 2.565941 pu, Z0 = 2.175592 +j 3.321316 pu
1.6*ISYM= 62.397 IASYM Based on X/R ratio = 42.149

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIC	39.00	-66.01	Branch	1	1	C 2HAIC

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9
 Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 2HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 51.559 kA (42.87 MVA) At -78.17DEG, X/R = 4.77
 Z1 = 0.405517 +j 2.298748 pu, Z0 = 0.623536 +j 2.252538 pu
 1.6*ISYM= 82.495 IASYM Based on X/R ratio = 64.832

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		2HDPA	51.56	-78.17	Branch	1	1	C 2HDPA
2HAIA		2HDPA	0.00	0.00	Branch	1	1	C 2HAIA
2HAIB		2HDPA	0.00	0.00	Branch	1	1	C 2HAIB
2HAIC		2HDPA	0.00	0.00	Branch	1	1	C 2HAIC
TX T2LDPA H		2HDPA	0.00	0.00	Branch	1	1	C TX T2LDPA

*Bus 2LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 11.201 kA (4.04 MVA) At -67.51DEG, X/R = 2.42
 Z1 = 8.415895 +j 23.439273 pu, Z0 = 11.606581 +j 21.810593 pu
 1.6*ISYM= 17.922 IASYM Based on X/R ratio = 12.256

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1A	11.20	-67.51	Branch	1	1	C 2LA1A

*Bus 2LA1B 0.208 kV, Zone 1, Area 1
 E/Z = 11.201 kA (4.04 MVA) At -67.51DEG, X/R = 2.42
 Z1 = 8.415895 +j 23.439273 pu, Z0 = 11.606581 +j 21.810593 pu
 1.6*ISYM= 17.922 IASYM Based on X/R ratio = 12.256

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1B	11.20	-67.51	Branch	1	1	C 2LA1B

*Bus 2LA1KA 0.208 kV, Zone 1, Area 1
 E/Z = 8.466 kA (3.05 MVA) At -58.83DEG, X/R = 1.65
 Z1 = 12.161155 +j 26.018326 pu, Z0 = 26.587591 +j 32.126830 pu
 1.6*ISYM= 13.545 IASYM Based on X/R ratio = 8.777

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KA	8.47	-58.83	Branch	1	1	C 2LA1KA

*Bus 2LA1KB 0.208 kV, Zone 1, Area 1
 E/Z = 8.466 kA (3.05 MVA) At -58.83DEG, X/R = 1.65
 Z1 = 12.161155 +j 26.018326 pu, Z0 = 26.587591 +j 32.126830 pu
 1.6*ISYM= 13.545 IASYM Based on X/R ratio = 8.777

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KB	8.47	-58.83	Branch	1	1	C 2LA1KB

*Bus 2LA1KC 0.208 kV, Zone 1, Area 1
 E/Z = 8.466 kA (3.05 MVA) At -58.83DEG, X/R = 1.65
 Z1 = 12.161155 +j 26.018326 pu, Z0 = 26.587591 +j 32.126830 pu
 1.6*ISYM= 13.545 IASYM Based on X/R ratio = 8.777

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KC	8.47	-58.83	Branch	1	1	C 2LA1KC

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 2LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 11.201 kA (4.04 MVA) At -67.51DEG, X/R = 2.42
 Z1 = 8.415895 +j 23.439273 pu, Z0 = 11.606581 +j 21.810593 pu
 1.6*ISYM= 17.922 IASYM Based on X/R ratio = 12.256

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LAC1A	11.20	-67.51	Branch	1	1	C 2LAC1A

*Bus 2LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 12.495 kA (4.50 MVA) At -71.91DEG, X/R = 3.06
 Z1 = 7.124427 +j 22.549945 pu, Z0 = 6.440715 +j 18.253271 pu
 1.6*ISYM= 19.991 IASYM Based on X/R ratio = 14.303

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA T2L		2LDPA	12.49	-71.91	Branch	1	1	C 2LDPA
2LAC1A		2LDPA	0.00	0.00	Branch	1	1	C 2LAC1A
2LA1A		2LDPA	0.00	0.00	Branch	1	1	C 2LA1A
2LA1B		2LDPA	0.00	0.00	Branch	1	1	C 2LA1B
2LA1KA		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KA
2LA1KB		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KB
2LA1KC		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KC

*Bus 3EH1 0.480 kV, Zone 1, Area 1
 E/Z = 3.977 kA (3.31 MVA) At -18.50DEG, X/R = 0.33
 Z1 = 14.507703 +j 5.955119 pu, Z0 = 57.031917 +j 16.878278 pu
 1.6*ISYM= 6.363 IASYM Based on X/R ratio = 3.977

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		3EH1	3.98	-18.50	Branch	1	1	C 3EH1
TX 3EL1 H		3EH1	0.00	0.00	Branch	1	1	C 3EL1

*Bus 3EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.873 kA (1.03 MVA) At -53.79DEG, X/R = 1.37
 Z1 = 64.998262 +j 83.901421 pu, Z0 = 41.254597 +j 66.098305 pu
 1.6*ISYM= 4.596 IASYM Based on X/R ratio = 2.929

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 8I		3EL1	0.00	0.00	Branch	1	1	C UPS 8
TX 3EL1 L		3EL1	2.87	-53.79	Branch	1	1	B 3EL1-MAIN

*Bus 4EDP1 0.208 kV, Zone 1, Area 1
 E/Z = 2.323 kA (0.84 MVA) At -43.94DEG, X/R = 0.96
 Z1 = 87.611179 +j 89.353990 pu, Z0 = 82.901695 +j 70.002430 pu
 1.6*ISYM= 3.717 IASYM Based on X/R ratio = 2.333

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4EL2		4EDP1	2.32	-43.94	Branch	1	1	C 4EDP1

*Bus 4EH1 0.480 kV, Zone 1, Area 1
 E/Z = 2.228 kA (1.85 MVA) At -16.04DEG, X/R = 0.29
 Z1 = 26.109917 +j 8.614273 pu, Z0 = 103.440269 +j 27.515565 pu
 1.6*ISYM= 3.565 IASYM Based on X/R ratio = 2.228

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		4EH1	2.23	-16.04	Branch	1	1	C 4EH1
TX 4EL1 H		4EH1	0.00	0.00	Branch	1	1	C 4EL1

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 4EH2 0.480 kV, Zone 1, Area 1
 E/Z = 2.139 kA (1.78 MVA) At -19.26DEG, X/R = 0.35
 Z1 = 26.708828 +j 10.431665 pu, Z0 = 105.836388 +j 34.785088 pu
 1.6*ISYM= 3.422 IASYM Based on X/R ratio = 2.139

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		4EH2	2.14	-19.26	Branch	1	1	C 4EH2
TX 4EL2 H		4EH2	0.00	0.00	Branch	1	1	C 4EL2

*Bus 4EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.701 kA (0.97 MVA) At -50.89DEG, X/R = 1.23
 Z1 = 76.600471 +j 86.560567 pu, Z0 = 41.254597 +j 66.098306 pu
 1.6*ISYM= 4.322 IASYM Based on X/R ratio = 2.737

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1 L		4EL1	2.70	-50.89	Branch	1	1	B 4EL1-MAIN

*Bus 4EL2 0.208 kV, Zone 1, Area 1
 E/Z = 2.670 kA (0.96 MVA) At -51.14DEG, X/R = 1.24
 Z1 = 77.199382 +j 88.377959 pu, Z0 = 41.254597 +j 66.098306 pu
 1.6*ISYM= 4.272 IASYM Based on X/R ratio = 2.706

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4EDP1		4EL2	0.00	0.00	Branch	1	1	C 4EDP1
TX 4EL2 L		4EL2	2.67	-51.14	Branch	1	1	B 4EL2-MAIN

*Bus 5EH1 0.480 kV, Zone 1, Area 1
 E/Z = 3.347 kA (2.78 MVA) At -17.61DEG, X/R = 0.32
 Z1 = 17.292235 +j 6.593316 pu, Z0 = 68.169936 +j 19.431189 pu
 1.6*ISYM= 5.355 IASYM Based on X/R ratio = 3.347

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		5EH1	3.35	-17.61	Branch	1	1	C 5EH1
TX 5EL1 H		5EH1	0.00	0.00	Branch	1	1	C 5EL1

*Bus 5EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.830 kA (1.02 MVA) At -53.06DEG, X/R = 1.33
 Z1 = 67.782794 +j 84.539618 pu, Z0 = 41.254597 +j 66.098305 pu
 1.6*ISYM= 4.528 IASYM Based on X/R ratio = 2.880

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 5I		5EL1	0.00	0.00	Branch	1	1	C UPS 5
TX 5EL1 L		5EL1	2.83	-53.06	Branch	1	1	B 5EL1-MAIN

*Bus 5HA1A 0.480 kV, Zone 1, Area 1
 E/Z = 26.492 kA (22.03 MVA) At -61.86DEG, X/R = 1.87
 Z1 = 1.233620 +j 3.153835 pu, Z0 = 3.955804 +j 5.703652 pu
 1.6*ISYM= 42.387 IASYM Based on X/R ratio = 27.867

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1A	26.49	-61.86	Branch	1	1	C 5HA1A

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 5HA1B 0.480 kV, Zone 1, Area 1
 E/Z = 27.464 kA (22.83 MVA) At -65.88DEG, X/R = 2.23
 Z1 = 1.058122 +j 3.150499 pu, Z0 = 3.253816 +j 5.690301 pu
 1.6*ISYM= 43.942 IASYM Based on X/R ratio = 29.653

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1B	27.46	-65.88	Branch	1	1	C 5HA1B

*Bus 5HA1C 0.480 kV, Zone 1, Area 1
 E/Z = 26.937 kA (22.39 MVA) At -65.50DEG, X/R = 2.19
 Z1 = 1.089075 +j 3.183565 pu, Z0 = 3.377625 +j 5.822564 pu
 1.6*ISYM= 43.098 IASYM Based on X/R ratio = 29.001

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1C	26.94	-65.50	Branch	1	1	C 5HA1C

*Bus 5HA1D 0.480 kV, Zone 1, Area 1
 E/Z = 25.603 kA (21.29 MVA) At -60.88DEG, X/R = 1.79
 Z1 = 1.306373 +j 3.203934 pu, Z0 = 4.246815 +j 5.904048 pu
 1.6*ISYM= 40.965 IASYM Based on X/R ratio = 26.793

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1D	25.60	-60.88	Branch	1	1	C 5HA1D

*Bus 5HA1E 0.480 kV, Zone 1, Area 1
 E/Z = 26.492 kA (22.03 MVA) At -61.86DEG, X/R = 1.87
 Z1 = 1.233620 +j 3.153835 pu, Z0 = 3.955804 +j 5.703652 pu
 1.6*ISYM= 42.387 IASYM Based on X/R ratio = 27.867

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1E	26.49	-61.86	Branch	1	1	C 5HA1E

*Bus 5HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 34.022 kA (28.29 MVA) At -70.66DEG, X/R = 2.85
 Z1 = 0.748602 +j 2.819843 pu, Z0 = 2.015735 +j 4.367680 pu
 1.6*ISYM= 54.436 IASYM Based on X/R ratio = 38.389

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		5HDPA	33.86	-70.65	Branch	1	1	C 5HDPA
5HA1A		5HDPA	0.00	0.00	Branch	1	1	C 5HA1A
5HA1B		5HDPA	0.00	0.00	Branch	1	1	C 5HA1B
9HA2A		5HDPA	0.00	0.00	Branch	1	1	C 9HA2A
9HA2B		5HDPA	0.00	0.00	Branch	1	1	C 9HA2B
TX T9LDPB H		5HDPA	0.00	0.00	Branch	1	1	C TX T9LDPB
TX T9LDPA H		5HDPA	0.00	0.00	Branch	1	1	C TX T9LDPA
TX T5LDPA H		5HDPA	0.00	0.00	Branch	1	1	C TX T5LDPA
TX T5LDPB H		5HDPA	0.00	0.00	Branch	1	1	C TX T5LDPB
ELEV 560		5HDPA	0.10	-72.99	Branch	1	1	C ELEV 560
CA		5HDPA	0.06	-68.05	Branch	1	1	C CA
5HA1C		5HDPA	0.00	0.00	Branch	1	1	C 5HA1C
5HA1D		5HDPA	0.00	0.00	Branch	1	1	C 5HA1D
5HA1E		5HDPA	0.00	0.00	Branch	1	1	C 5HA1E

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Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 5LA1A 0.208 kV, Zone 1, Area 1
E/Z = 8.580 kA (3.09 MVA) At -59.51DEG, X/R = 1.70
Z1 = 15.522761 +j 28.302229 pu, Z0 = 18.201231 +j 27.025863 pu
1.6*ISYM= 13.728 IASYM Based on X/R ratio = 8.921

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LA1A	8.58	-59.51	Branch	1	1	C 5LA1A

*Bus 5LAC1A 0.208 kV, Zone 1, Area 1
E/Z = 8.580 kA (3.09 MVA) At -59.51DEG, X/R = 1.70
Z1 = 15.522761 +j 28.302229 pu, Z0 = 18.201231 +j 27.025863 pu
1.6*ISYM= 13.728 IASYM Based on X/R ratio = 8.921

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LAC1A	8.58	-59.51	Branch	1	1	C 5LAC1A

*Bus 5LAC1B 0.208 kV, Zone 1, Area 1
E/Z = 8.580 kA (3.09 MVA) At -59.51DEG, X/R = 1.70
Z1 = 15.522761 +j 28.302229 pu, Z0 = 18.201231 +j 27.025863 pu
1.6*ISYM= 13.728 IASYM Based on X/R ratio = 8.921

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LAC1B	8.58	-59.51	Branch	1	1	C 5LAC1B

*Bus 5LB1A 0.208 kV, Zone 1, Area 1
E/Z = 10.480 kA (3.78 MVA) At -66.48DEG, X/R = 2.30
Z1 = 9.795585 +j 25.342444 pu, Z0 = 12.123167 +j 22.166326 pu
1.6*ISYM= 16.769 IASYM Based on X/R ratio = 11.369

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1A	10.48	-66.48	Branch	1	1	C 5LB1A

*Bus 5LB1B 0.208 kV, Zone 1, Area 1
E/Z = 10.273 kA (3.70 MVA) At -65.77DEG, X/R = 2.22
Z1 = 10.053879 +j 25.520309 pu, Z0 = 13.156340 +j 22.877790 pu
1.6*ISYM= 16.437 IASYM Based on X/R ratio = 11.083

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1B	10.27	-65.77	Branch	1	1	C 5LB1B

*Bus 5LB1C 0.208 kV, Zone 1, Area 1
E/Z = 4.731 kA (1.70 MVA) At -48.36DEG, X/R = 1.12
Z1 = 24.001741 +j 35.125055 pu, Z0 = 68.947688 +j 61.296873 pu
1.6*ISYM= 7.569 IASYM Based on X/R ratio = 4.773

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1C	4.73	-48.36	Branch	1	1	C 5LB1C

*Bus 5LBC1A 0.208 kV, Zone 1, Area 1
E/Z = 9.783 kA (3.52 MVA) At -64.13DEG, X/R = 2.06
Z1 = 10.699613 +j 25.964973 pu, Z0 = 15.739273 +j 24.656451 pu
1.6*ISYM= 15.653 IASYM Based on X/R ratio = 10.433

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LBC1A	9.78	-64.13	Branch	1	1	C 5LBC1A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 5LBC1B 0.208 kV, Zone 1, Area 1
 E/Z = 10.376 kA (3.74 MVA) At -66.12DEG, X/R = 2.26
 Z1 = 9.924732 +j 25.431376 pu, Z0 = 12.639754 +j 22.522058 pu
 1.6*ISYM= 16.601 IASYM Based on X/R ratio = 11.224

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LBC1B	10.38	-66.12	Branch	1	1	C 5LBC1B

*Bus 5LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 9.397 kA (3.39 MVA) At -62.08DEG, X/R = 1.89
 Z1 = 14.231292 +j 27.412901 pu, Z0 = 13.035366 +j 23.468541 pu
 1.6*ISYM= 15.036 IASYM Based on X/R ratio = 9.897

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPA L		5LDPA	9.40	-62.08	Branch	1	1	C 5LDPA
5LAC1A		5LDPA	0.00	0.00	Branch	1	1	C 5LAC1A
5LAC1B		5LDPA	0.00	0.00	Branch	1	1	C 5LAC1B
5LA1A		5LDPA	0.00	0.00	Branch	1	1	C 5LA1A

*Bus 5LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 11.748 kA (4.23 MVA) At -70.90DEG, X/R = 2.89
 Z1 = 8.374970 +j 24.364182 pu, Z0 = 6.440715 +j 18.253271 pu
 1.6*ISYM= 18.797 IASYM Based on X/R ratio = 13.292

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB L		5LDPB	11.75	-70.90	Branch	1	1	C 5LDPB
5LBC1A		5LDPB	0.00	0.00	Branch	1	1	C 5LBC1A
5LBC1B		5LDPB	0.00	0.00	Branch	1	1	C 5LBC1B
5LB1A		5LDPB	0.00	0.00	Branch	1	1	C 5LB1A
5LB1C		5LDPB	0.00	0.00	Branch	1	1	C 5LB1C
5LB1B		5LDPB	0.00	0.00	Branch	1	1	C 5LB1B

*Bus 6EH1 0.480 kV, Zone 1, Area 1
 E/Z = 1.326 kA (1.10 MVA) At -18.17DEG, X/R = 0.33
 Z1 = 43.264381 +j 15.303608 pu, Z0 = 172.057690 +j 54.274453 pu
 1.6*ISYM= 2.121 IASYM Based on X/R ratio = 1.326

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		6EH1	1.33	-18.17	Branch	1	1	C 6EH1
TX 6EL1 H		6EH1	0.00	0.00	Branch	1	1	C 6EL1

*Bus 6EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.378 kA (0.50 MVA) At -51.11DEG, X/R = 1.24
 Z1 = 147.484664 +j 169.616840 pu, Z0 = 84.382340 +j 131.007698 pu
 1.6*ISYM= 2.205 IASYM Based on X/R ratio = 1.397

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1 L		6EL1	1.38	-51.11	Branch	1	1	B 6EL1-MAIN

*Bus 9HA2A 0.480 kV, Zone 1, Area 1
 E/Z = 21.170 kA (17.60 MVA) At -61.41DEG, X/R = 1.84
 Z1 = 1.522404 +j 3.646484 pu, Z0 = 5.110939 +j 7.674234 pu
 1.6*ISYM= 33.872 IASYM Based on X/R ratio = 22.215

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		9HA2A	21.17	-61.41	Branch	1	1	C 9HA2A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 9HA2B 0.480 kV, Zone 1, Area 1
 E/Z = 27.115 kA (22.54 MVA) At -62.56DEG, X/R = 1.93
 Z1 = 1.185118 +j 3.120436 pu, Z0 = 3.761797 +j 5.570055 pu
 1.6*ISYM= 43.384 IASYM Based on X/R ratio = 28.635

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		9HA2B	27.12	-62.56	Branch	1	1	C 9HA2B

*Bus 9LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.047 kA (2.90 MVA) At -57.81DEG, X/R = 1.59
 Z1 = 16.658119 +j 29.028601 pu, Z0 = 21.817337 +j 29.515990 pu
 1.6*ISYM= 12.875 IASYM Based on X/R ratio = 8.308

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LA2A	8.05	-57.81	Branch	1	1	C 9LA2A

*Bus 9LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.544 kA (3.08 MVA) At -59.34DEG, X/R = 1.69
 Z1 = 15.754091 +j 28.406071 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 13.670 IASYM Based on X/R ratio = 8.876

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LAC2A	8.54	-59.34	Branch	1	1	C 9LAC2A

*Bus 9LAC2B 0.208 kV, Zone 1, Area 1
 E/Z = 8.544 kA (3.08 MVA) At -59.34DEG, X/R = 1.69
 Z1 = 15.754091 +j 28.406071 pu, Z0 = 18.201231 +j 27.025863 pu
 1.6*ISYM= 13.670 IASYM Based on X/R ratio = 8.876

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LAC2B	8.54	-59.34	Branch	1	1	C 9LAC2B

*Bus 9LB2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.512 kA (2.71 MVA) At -60.54DEG, X/R = 1.77
 Z1 = 17.086460 +j 33.074505 pu, Z0 = 20.346222 +j 30.366664 pu
 1.6*ISYM= 12.019 IASYM Based on X/R ratio = 7.848

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LB2A	7.51	-60.54	Branch	1	1	C 9LB2A

*Bus 9LBC2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.933 kA (2.86 MVA) At -62.11DEG, X/R = 1.89
 Z1 = 16.182431 +j 32.451975 pu, Z0 = 16.730116 +j 27.876538 pu
 1.6*ISYM= 12.693 IASYM Based on X/R ratio = 8.356

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LBC2A	7.93	-62.11	Branch	1	1	C 9LBC2A

*Bus 9LBC2B 0.208 kV, Zone 1, Area 1
 E/Z = 7.933 kA (2.86 MVA) At -62.11DEG, X/R = 1.89
 Z1 = 16.182431 +j 32.451975 pu, Z0 = 16.730116 +j 27.876538 pu
 1.6*ISYM= 12.693 IASYM Based on X/R ratio = 8.356

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LBC2B	7.93	-62.11	Branch	1	1	C 9LBC2B

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Driving Point Voltage (P.U.) = 1.00000

*Bus 9LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 9.355 kA (3.37 MVA) At -61.87DEG, X/R = 1.87
 Z1 = 14.462622 +j 27.516743 pu, Z0 = 13.035366 +j 23.468541 pu
 1.6*ISYM= 14.968 IASYM Based on X/R ratio = 9.841

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA	L	9LDPA	9.36	-61.87	Branch	1	1	C 9LDPA
9LAC2A		9LDPA	0.00	0.00	Branch	1	1	C 9LAC2A
9LAC2B		9LDPA	0.00	0.00	Branch	1	1	C 9LAC2B
9LA2A		9LDPA	0.00	0.00	Branch	1	1	C 9LA2A

*Bus 9LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 8.609 kA (3.10 MVA) At -64.69DEG, X/R = 2.11
 Z1 = 14.890963 +j 31.562647 pu, Z0 = 11.564250 +j 24.319216 pu
 1.6*ISYM= 13.774 IASYM Based on X/R ratio = 9.216

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB	L	9LDPB	8.61	-64.69	Branch	1	1	C 9LDPB
9LBC2A		9LDPB	0.00	0.00	Branch	1	1	C 9LBC2A
9LBC2B		9LDPB	0.00	0.00	Branch	1	1	C 9LBC2B
9LB2A		9LDPB	0.00	0.00	Branch	1	1	C 9LB2A

*Bus ATS EH2A1 0.480 kV, Zone 1, Area 1
 E/Z = 37.178 kA (30.91 MVA) At -69.24DEG, X/R = 2.64
 Z1 = 0.739676 +j 2.669717 pu, Z0 = 1.960161 +j 3.736406 pu
 1.6*ISYM= 59.486 IASYM Based on X/R ratio = 41.338

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		ATS EH2A1	0.00	0.00	Branch	1	1	C 2EHDP
MSB		ATS EH2A1	37.18	-69.24	Branch	1	1	C MSB-ATS EH2A

*Bus CA 0.480 kV, Zone 1, Area 1
 E/Z = 4.977 kA (4.14 MVA) At -16.17DEG, X/R = 0.29
 Z1 = 11.680270 +j 4.575691 pu, Z0 = 46.266913 +j 11.041235 pu
 1.6*ISYM= 7.964 IASYM Based on X/R ratio = 4.977

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M CA		CA	0.04	-67.87	Motor	1	1	
5HDPA		CA	4.95	-15.80	Branch	1	1	C CA

*Bus EGH1 0.480 kV, Zone 1, Area 1
 E/Z = 2.412 kA (2.01 MVA) At -84.17DEG, X/R = 9.80
 Z1 = 7.184070 +j 70.400002 pu, Z0 = 0.816372 +j 8.000000 pu
 1.6*ISYM= 3.860 IASYM Based on X/R ratio = 3.473

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
GEN EGH1		EGH1	2.41	-84.17	Gen	1	1	
ATS EH2A1		EGH1	0.00	0.00	Branch	1	1	C EGH1-ATS EH2A

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Driving Point Voltage (P.U.) = 1.00000

*Bus ELEV 160 0.480 kV, Zone 1, Area 1
 E/Z = 3.970 kA (3.30 MVA) At -26.77DEG, X/R = 0.50
 Z1 = 13.444884 +j 8.060749 pu, Z0 = 54.272600 +j 24.817906 pu
 1.6*ISYM= 6.351 IASYM Based on X/R ratio = 3.970

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M ELEV 160		ELEV 160	0.06	-73.45	Motor	1	1	
1HDPA		ELEV 160	3.93	-26.08	Branch	1	1	C ELEV 160

*Bus ELEV 560 0.480 kV, Zone 1, Area 1
 E/Z = 18.327 kA (15.24 MVA) At -40.05DEG, X/R = 0.84
 Z1 = 2.660770 +j 3.264513 pu, Z0 = 9.750523 +j 6.140445 pu
 1.6*ISYM= 29.323 IASYM Based on X/R ratio = 18.364

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M ELEV 560		ELEV 560	0.08	-66.86	Motor	1	1	
5HDPA		ELEV 560	18.25	-39.94	Branch	1	1	C ELEV 560

*Bus MCCA 0.480 kV, Zone 1, Area 1
 E/Z = 37.730 kA (31.37 MVA) At -72.43DEG, X/R = 3.16
 Z1 = 0.647699 +j 2.676668 pu, Z0 = 1.592261 +j 3.764218 pu
 1.6*ISYM= 60.368 IASYM Based on X/R ratio = 43.461

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		MCCA	37.73	-72.43	Branch	1	1	C MCCA

*Bus MDB 0.480 kV, Zone 1, Area 1
 E/Z = 54.727 kA (45.50 MVA) At -80.78DEG, X/R = 6.16
 Z1 = 0.342628 +j 2.241990 pu, Z0 = 0.371320 +j 2.024354 pu
 1.6*ISYM= 87.563 IASYM Based on X/R ratio = 72.512

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		MDB	0.34	-75.40	Branch	1	1	C MSB
TX NPC L		MDB	54.39	-80.81	Branch	1	1	C MDB

*Bus MSB 0.480 kV, Zone 1, Area 1
 E/Z = 53.938 kA (44.84 MVA) At -80.38DEG, X/R = 5.90
 Z1 = 0.352775 +j 2.256396 pu, Z0 = 0.412567 +j 2.083133 pu
 1.6*ISYM= 86.300 IASYM Based on X/R ratio = 70.852

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDB		MSB	53.61	-80.41	Branch	1	1	C MSB
ATS EH2A1		MSB	0.00	0.00	Branch	1	1	C MSB-ATS EH2A
1HDPA		MSB	0.13	-75.84	Branch	1	1	C 1HDPA
2HDPA		MSB	0.00	0.00	Branch	1	1	C 2HDPA
MCCA		MSB	0.00	0.00	Branch	1	1	C MCCA
5HDPA		MSB	0.21	-74.80	Branch	1	1	C 5HDPA

*Bus TX 1EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 1.692 kA (1.41 MVA) At -13.79DEG, X/R = 0.25
 Z1 = 34.689635 +j 9.632852 pu, Z0 = 137.758839 +j 31.590673 pu
 1.6*ISYM= 2.707 IASYM Based on X/R ratio = 1.692

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1 L		TX 1EL1 H	0.00	0.00	Branch	1	1	TX 1EL1
1EH1		TX 1EL1 H	1.69	-13.79	Branch	1	1	C 1EL1

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Driving Point Voltage (P.U.) = 1.00000

*Bus TX 1EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.440 kA (0.52 MVA) At -52.46DEG, X/R = 1.30
 Z1 = 133.965561 +j 163.760707 pu, Z0 = 84.382340 +j 131.007697 pu
 1.6*ISYM= 2.304 IASYM Based on X/R ratio = 1.464

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1	H	TX 1EL1 L	1.44	-52.46	Branch	1	1	TX 1EL1
1EL1		TX 1EL1 L	0.00	0.00	Branch	1	1	B 1EL1-MAIN

*Bus TX 2EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 8.792 kA (7.31 MVA) At -17.51DEG, X/R = 0.32
 Z1 = 6.689624 +j 3.215427 pu, Z0 = 25.759950 +j 5.919301 pu
 1.6*ISYM= 14.067 IASYM Based on X/R ratio = 8.792

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1	L	TX 2EL1 H	0.00	0.00	Branch	1	1	TX 2EL1
2EH1		TX 2EL1 H	8.79	-17.51	Branch	1	1	C 2EL1

*Bus TX 2EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.556 kA (0.56 MVA) At -56.38DEG, X/R = 1.50
 Z1 = 105.965552 +j 157.343284 pu, Z0 = 84.382340 +j 131.007697 pu
 1.6*ISYM= 2.489 IASYM Based on X/R ratio = 1.598

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1	H	TX 2EL1 L	1.56	-56.38	Branch	1	1	TX 2EL1
2EL1		TX 2EL1 L	0.00	0.00	Branch	1	1	B 2EL1-MAIN

*Bus TX 3EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 3.529 kA (2.93 MVA) At -17.00DEG, X/R = 0.31
 Z1 = 16.462807 +j 6.138396 pu, Z0 = 64.852281 +j 17.611478 pu
 1.6*ISYM= 5.647 IASYM Based on X/R ratio = 3.529

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 3EL1	L	TX 3EL1 H	0.00	0.00	Branch	1	1	TX 3EL1
3EH1		TX 3EL1 H	3.53	-17.00	Branch	1	1	C 3EL1

*Bus TX 3EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.873 kA (1.03 MVA) At -53.79DEG, X/R = 1.37
 Z1 = 64.998262 +j 83.901421 pu, Z0 = 41.254597 +j 66.098305 pu
 1.6*ISYM= 4.596 IASYM Based on X/R ratio = 2.929

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 3EL1	H	TX 3EL1 L	2.87	-53.79	Branch	1	1	TX 3EL1
3EL1		TX 3EL1 L	0.00	0.00	Branch	1	1	B 3EL1-MAIN

*Bus TX 4EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 2.079 kA (1.73 MVA) At -15.32DEG, X/R = 0.27
 Z1 = 28.065021 +j 8.797550 pu, Z0 = 111.260610 +j 28.248837 pu
 1.6*ISYM= 3.327 IASYM Based on X/R ratio = 2.079

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1	L	TX 4EL1 H	0.00	0.00	Branch	1	1	TX 4EL1
4EH1		TX 4EL1 H	2.08	-15.32	Branch	1	1	C 4EL1

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Comment: Ground Fault - Low Voltage Momentary Report

First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus TX 4EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.701 kA (0.97 MVA) At -50.89DEG, X/R = 1.23
 Z1 = 76.600471 +j 86.560567 pu, Z0 = 41.254597 +j 66.098306 pu
 1.6*ISYM= 4.322 IASYM Based on X/R ratio = 2.737

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1 H		TX 4EL1 L	2.70	-50.89	Branch	1	1	TX 4EL1
4EL1		TX 4EL1 L	0.00	0.00	Branch	1	1	B 4EL1-MAIN

*Bus TX 4EL2 H 0.480 kV, Zone 1, Area 1
 E/Z = 2.003 kA (1.67 MVA) At -18.36DEG, X/R = 0.33
 Z1 = 28.663932 +j 10.614942 pu, Z0 = 113.656717 +j 35.518362 pu
 1.6*ISYM= 3.205 IASYM Based on X/R ratio = 2.003

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL2 L		TX 4EL2 H	0.00	0.00	Branch	1	1	TX 4EL2
4EH2		TX 4EL2 H	2.00	-18.36	Branch	1	1	C 4EL2

*Bus TX 4EL2 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.670 kA (0.96 MVA) At -51.14DEG, X/R = 1.24
 Z1 = 77.199382 +j 88.377959 pu, Z0 = 41.254597 +j 66.098306 pu
 1.6*ISYM= 4.272 IASYM Based on X/R ratio = 2.706

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL2 H		TX 4EL2 L	2.67	-51.14	Branch	1	1	TX 4EL2
4EL2		TX 4EL2 L	0.00	0.00	Branch	1	1	B 4EL2-MAIN

*Bus TX 5EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 3.023 kA (2.51 MVA) At -16.41DEG, X/R = 0.29
 Z1 = 19.247339 +j 6.776593 pu, Z0 = 75.990295 +j 20.164407 pu
 1.6*ISYM= 4.838 IASYM Based on X/R ratio = 3.023

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 5EL1 L		TX 5EL1 H	0.00	0.00	Branch	1	1	TX 5EL1
5EH1		TX 5EL1 H	3.02	-16.41	Branch	1	1	C 5EL1

*Bus TX 5EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.830 kA (1.02 MVA) At -53.06DEG, X/R = 1.33
 Z1 = 67.782794 +j 84.539618 pu, Z0 = 41.254597 +j 66.098305 pu
 1.6*ISYM= 4.528 IASYM Based on X/R ratio = 2.880

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 5EL1 H		TX 5EL1 L	2.83	-53.06	Branch	1	1	TX 5EL1
5EL1		TX 5EL1 L	0.00	0.00	Branch	1	1	B 5EL1-MAIN

*Bus TX 6EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 1.200 kA (1.00 MVA) At -16.61DEG, X/R = 0.30
 Z1 = 48.208739 +j 15.488985 pu, Z0 = 191.834921 +j 55.016670 pu
 1.6*ISYM= 1.919 IASYM Based on X/R ratio = 1.200

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1 L		TX 6EL1 H	0.00	0.00	Branch	1	1	TX 6EL1
6EH1		TX 6EL1 H	1.20	-16.61	Branch	1	1	C 6EL1

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First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus TX 6EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.378 kA (0.50 MVA) At -51.11DEG, X/R = 1.24
 Z1 = 147.484664 +j 169.616840 pu, Z0 = 84.382340 +j 131.007697 pu
 1.6*ISYM= 2.205 IASYM Based on X/R ratio = 1.397

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1	H	TX 6EL1 L	1.38	-51.11	Branch	1	1	TX 6EL1
6EL1		TX 6EL1 L	0.00	0.00	Branch	1	1	B 6EL1-MAIN

*Bus TX NPC L 0.480 kV, Zone 1, Area 1
 E/Z = 56.792 kA (47.22 MVA) At -81.83DEG, X/R = 6.97
 Z1 = 0.317251 +j 2.205967 pu, Z0 = 0.268200 +j 1.877406 pu
 1.6*ISYM= 90.867 IASYM Based on X/R ratio = 77.061

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
NPC		TX NPC L	56.45	-81.87	Util	1	1	
MDB		TX NPC L	0.34	-75.94	Branch	1	1	C MDB

*Bus TX T1LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 11.694 kA (9.72 MVA) At -57.89DEG, X/R = 1.59
 Z1 = 2.878688 +j 5.489949 pu, Z0 = 10.643633 +j 15.157243 pu
 1.6*ISYM= 18.711 IASYM Based on X/R ratio = 12.078

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA	T1L	TX T1LDPA H	0.00	0.00	Branch	1	1	TX T1LDPA
1HDPA		TX T1LDPA H	11.69	-57.89	Branch	1	1	C TX T1LDPA

*Bus TX T1LDPA T1L 0.208 kV, Zone 1, Area 1
 E/Z = 8.058 kA (2.90 MVA) At -62.10DEG, X/R = 1.89
 Z1 = 17.828719 +j 33.682419 pu, Z0 = 12.707466 +j 23.963559 pu
 1.6*ISYM= 12.892 IASYM Based on X/R ratio = 8.487

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA	H	TX T1LDPA T1L	8.06	-62.10	Branch	1	1	TX T1LDPA
1LDPA		TX T1LDPA T1L	0.00	0.00	Branch	1	1	C 1LDPA

*Bus TX T2LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 37.732 kA (31.37 MVA) At -71.72DEG, X/R = 3.03
 Z1 = 0.666411 +j 2.670526 pu, Z0 = 1.667110 +j 3.739651 pu
 1.6*ISYM= 60.371 IASYM Based on X/R ratio = 43.092

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA	T2L	TX T2LDPA H	0.00	0.00	Branch	1	1	TX T2LDPA
2HDPA		TX T2LDPA H	37.73	-71.72	Branch	1	1	C TX T2LDPA

*Bus TX T2LDPA T2L 0.208 kV, Zone 1, Area 1
 E/Z = 13.086 kA (4.71 MVA) At -72.74DEG, X/R = 3.22
 Z1 = 6.822388 +j 22.119535 pu, Z0 = 5.232563 +j 16.531632 pu
 1.6*ISYM= 20.937 IASYM Based on X/R ratio = 15.134

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA	H	TX T2LDPA T2L	13.09	-72.74	Branch	1	1	TX T2LDPA
2LDPA		TX T2LDPA T2L	0.00	0.00	Branch	1	1	C 2LDPA

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First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus TX T5LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 28.895 kA (24.02 MVA) At -62.19DEG, X/R = 1.90
 Z1 = 1.134152 +j 2.992913 pu, Z0 = 3.557933 +j 5.059963 pu
 1.6*ISYM= 46.232 IASYM Based on X/R ratio = 30.450

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPA L		TX T5LDPA H	0.00	0.00	Branch	1	1	TX T5LDPA
5HDPA		TX T5LDPA H	28.89	-62.19	Branch	1	1	C TX T5LDPA

*Bus TX T5LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 10.111 kA (3.64 MVA) At -62.62DEG, X/R = 1.93
 Z1 = 13.627215 +j 26.552081 pu, Z0 = 10.619061 +j 20.025263 pu
 1.6*ISYM= 16.178 IASYM Based on X/R ratio = 10.682

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPA H		TX T5LDPA L	10.11	-62.62	Branch	1	1	TX T5LDPA
5LDPA		TX T5LDPA L	0.00	0.00	Branch	1	1	C 5LDPA

*Bus TX T5LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 15.969 kA (13.28 MVA) At -62.25DEG, X/R = 1.90
 Z1 = 1.916954 +j 4.484764 pu, Z0 = 6.689124 +j 11.027357 pu
 1.6*ISYM= 25.550 IASYM Based on X/R ratio = 16.834

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB L		TX T5LDPB H	0.00	0.00	Branch	1	1	TX T5LDPB
5HDPA		TX T5LDPB H	15.97	-62.25	Branch	1	1	C TX T5LDPB

*Bus TX T5LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 12.272 kA (4.42 MVA) At -71.64DEG, X/R = 3.01
 Z1 = 8.072931 +j 23.933773 pu, Z0 = 5.232563 +j 16.531632 pu
 1.6*ISYM= 19.635 IASYM Based on X/R ratio = 14.002

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB H		TX T5LDPB L	12.27	-71.64	Branch	1	1	TX T5LDPB
5LDPB		TX T5LDPB L	0.00	0.00	Branch	1	1	C 5LDPB

*Bus TX T9LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 26.303 kA (21.87 MVA) At -58.27DEG, X/R = 1.62
 Z1 = 1.365482 +j 3.096755 pu, Z0 = 4.483252 +j 5.475333 pu
 1.6*ISYM= 42.084 IASYM Based on X/R ratio = 27.207

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA L		TX T9LDPA H	0.00	0.00	Branch	1	1	TX T9LDPA
5HDPA		TX T9LDPA H	26.30	-58.27	Branch	1	1	C TX T9LDPA

*Bus TX T9LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 10.063 kA (3.63 MVA) At -62.40DEG, X/R = 1.91
 Z1 = 13.858545 +j 26.655923 pu, Z0 = 10.619061 +j 20.025263 pu
 1.6*ISYM= 16.100 IASYM Based on X/R ratio = 10.617

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA H		TX T9LDPA L	10.06	-62.40	Branch	1	1	TX T9LDPA
9LDPA		TX T9LDPA L	0.00	0.00	Branch	1	1	C 9LDPA

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First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus TX T9LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 12.730 kA (10.58 MVA) At -47.29DEG, X/R = 1.08
 Z1 = 3.367700 +j 4.623401 pu, Z0 = 12.492084 +j 11.581935 pu
 1.6*ISYM= 20.367 IASYM Based on X/R ratio = 12.826

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB L		TX T9LDPB H	0.00	0.00	Branch	1	1	TX T9LDPB
5HDPB		TX T9LDPB H	12.73	-47.29	Branch	1	1	C TX T9LDPB

*Bus TX T9LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 8.968 kA (3.23 MVA) At -65.86DEG, X/R = 2.23
 Z1 = 14.329213 +j 31.111568 pu, Z0 = 9.317244 +j 22.514898 pu
 1.6*ISYM= 14.348 IASYM Based on X/R ratio = 9.681

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB H		TX T9LDPB L	8.97	-65.86	Branch	1	1	TX T9LDPB
9LDPB		TX T9LDPB L	0.00	0.00	Branch	1	1	C 9LDPB

*Bus UPS 5I 0.208 kV, Zone 1, Area 1
 E/Z = 2.652 kA (0.96 MVA) At -50.08DEG, X/R = 1.20
 Z1 = 71.901923 +j 85.483696 pu, Z0 = 57.731066 +j 69.874609 pu
 1.6*ISYM= 4.243 IASYM Based on X/R ratio = 2.683

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5EL1		UPS 5I	2.65	-50.08	Branch	1	1	C UPS 5

*Bus UPS 50 0.208 kV, Zone 1, Area 1
 E/Z = 0.333 kA (0.12 MVA) At -77.63DEG, X/R = 4.56
 Z1 = 178.565613 +j 813.977051 pu, Z0 = 178.565613 +j 813.977051 pu
 1.6*ISYM= 0.533 IASYM Based on X/R ratio = 0.415

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 5		UPS 50	0.33	-77.63	Gen	1	1	
UPS5A		UPS 50	0.00	0.00	Branch	1	1	C UPS5A

*Bus UPS 8I 0.208 kV, Zone 1, Area 1
 E/Z = 2.690 kA (0.97 MVA) At -50.72DEG, X/R = 1.22
 Z1 = 69.117391 +j 84.845499 pu, Z0 = 57.731066 +j 69.874609 pu
 1.6*ISYM= 4.305 IASYM Based on X/R ratio = 2.725

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3EL1		UPS 8I	2.69	-50.72	Branch	1	1	C UPS 8

*Bus UPS 80 0.208 kV, Zone 1, Area 1
 E/Z = 0.333 kA (0.12 MVA) At -77.63DEG, X/R = 4.56
 Z1 = 178.565613 +j 813.977051 pu, Z0 = 178.565613 +j 813.977051 pu
 1.6*ISYM= 0.533 IASYM Based on X/R ratio = 0.415

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 8		UPS 80	0.33	-77.63	Gen	1	1	
UPS8A		UPS 80	0.00	0.00	Branch	1	1	C UPS8A

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First Cycle Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus UPS3A 0.208 kV, Zone 1, Area 1
 E/Z = 0.319 kA (0.12 MVA) At -72.99DEG, X/R = 3.27
 Z1 = 216.461601 +j 822.662570 pu, Z0 = 330.149130 +j 848.719043 pu
 1.6*ISYM= 0.511 IASYM Based on X/R ratio = 0.370

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS5A		UPS3A	0.32	-72.99	Branch	1	1	C UPS3A

*Bus UPS5A 0.208 kV, Zone 1, Area 1
 E/Z = 0.321 kA (0.12 MVA) At -73.57DEG, X/R = 3.39
 Z1 = 211.518646 +j 821.529676 pu, Z0 = 310.377365 +j 844.187479 pu
 1.6*ISYM= 0.514 IASYM Based on X/R ratio = 0.375

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS3A		UPS5A	0.00	0.00	Branch	1	1	C UPS3A
UPS 50		UPS5A	0.32	-73.57	Branch	1	1	C UPS5A

*Bus UPS8A 0.208 kV, Zone 1, Area 1
 E/Z = 0.306 kA (0.11 MVA) At -69.10DEG, X/R = 2.62
 Z1 = 251.062286 +j 830.592827 pu, Z0 = 468.551483 +j 880.439995 pu
 1.6*ISYM= 0.490 IASYM Based on X/R ratio = 0.340

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 80		UPS8A	0.31	-69.10	Branch	1	1	C UPS8A
UPS9A		UPS8A	0.00	0.00	Branch	1	1	C UPS9A

*Bus UPS9A 0.208 kV, Zone 1, Area 1
 E/Z = 0.304 kA (0.11 MVA) At -68.57DEG, X/R = 2.55
 Z1 = 256.005241 +j 831.725721 pu, Z0 = 488.323248 +j 884.971559 pu
 1.6*ISYM= 0.487 IASYM Based on X/R ratio = 0.336

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS8A		UPS9A	0.30	-68.57	Branch	1	1	C UPS9A

Ground Fault

Low Voltage Interrupting Report

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Low Voltage Interrupting Report

Interrupting Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus 1EH1 0.480 kV, Zone 1, Area 1
 E/Z = 1.958 kA (1.628 MVA) At -15.66DEG, X/R = 1.05
 Z1 = 29.746640 +j 9.468826 pu, Z0 = 117.981507 +j 30.848665 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		1EH1	1.96	-15.66	Branch	1	1	C 1EH1
TX 1EL1 H		1EH1	0.00	0.00	Branch	1	1	C 1EL1

*Bus 1EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.440 kA (0.519 MVA) At -52.46DEG, X/R = 1.65
 Z1 = 133.966924 +j 163.782059 pu, Z0 = 84.382340 +j 131.007698 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1 L		1EL1	1.44	-52.46	Branch	1	1	B 1EL1-MAIN

*Bus 1HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 11.608 kA (9.650 MVA) At -58.68DEG, X/R = 1.92
 Z1 = 2.865876 +j 5.606999 pu, Z0 = 10.459487 +j 15.400140 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIA	11.61	-58.68	Branch	1	1	C 1HAIA

*Bus 1HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 11.548 kA (9.601 MVA) At -58.55DEG, X/R = 1.92
 Z1 = 2.890126 +j 5.623699 pu, Z0 = 10.556491 +j 15.466938 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIB	11.55	-58.55	Branch	1	1	C 1HAIB

*Bus 1HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 11.488 kA (9.551 MVA) At -58.42DEG, X/R = 1.91
 Z1 = 2.914377 +j 5.640398 pu, Z0 = 10.653494 +j 15.533737 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1HDPA		1HAIC	11.49	-58.42	Branch	1	1	C 1HAIC

*Bus 1HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 12.509 kA (10.400 MVA) At -60.69DEG, X/R = 2.04
 Z1 = 2.526363 +j 5.373204 pu, Z0 = 9.101438 +j 14.464959 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		1HDPA	12.47	-60.66	Branch	1	1	C 1HDPA
1HAIA		1HDPA	0.00	0.00	Branch	1	1	C 1HAIA
1HAIB		1HDPA	0.00	0.00	Branch	1	1	C 1HAIB
1HAIC		1HDPA	0.00	0.00	Branch	1	1	C 1HAIC
ELEV 160		1HDPA	0.04	-72.51	Branch	1	1	C ELEV 160
TX T1LDPA H		1HDPA	0.00	0.00	Branch	1	1	C TX T1LDPA

*Bus 1LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 7.050 kA (2.540 MVA) At -59.60DEG, X/R = 1.98
 Z1 = 19.757490 +j 35.488893 pu, Z0 = 20.289636 +j 30.964160 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LA1A	7.05	-59.60	Branch	1	1	C 1LA1A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 1LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.050 kA (2.540 MVA) At -59.60DEG, X/R = 1.98
 Z1 = 19.757490 +j 35.488893 pu, Z0 = 20.289636 +j 30.964160 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LA2A	7.05	-59.60	Branch	1	1	C 1LA2A

*Bus 1LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 7.050 kA (2.540 MVA) At -59.60DEG, X/R = 1.98
 Z1 = 19.757490 +j 35.488893 pu, Z0 = 20.289636 +j 30.964160 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LAC1A	7.05	-59.60	Branch	1	1	C 1LAC1A

*Bus 1LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.050 kA (2.540 MVA) At -59.60DEG, X/R = 1.98
 Z1 = 19.757490 +j 35.488893 pu, Z0 = 20.289636 +j 30.964160 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
1LDPA		1LAC2A	7.05	-59.60	Branch	1	1	C 1LAC2A

*Bus 1LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 7.593 kA (2.735 MVA) At -61.68DEG, X/R = 2.11
 Z1 = 18.466022 +j 34.599565 pu, Z0 = 15.123771 +j 27.406837 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA	T1L	1LDPA	7.59	-61.68	Branch	1	1	C 1LDPA
1LAC1A		1LDPA	0.00	0.00	Branch	1	1	C 1LAC1A
1LAC2A		1LDPA	0.00	0.00	Branch	1	1	C 1LAC2A
1LA1A		1LDPA	0.00	0.00	Branch	1	1	C 1LA1A
1LA2A		1LDPA	0.00	0.00	Branch	1	1	C 1LA2A

*Bus 2EH1 0.480 kV, Zone 1, Area 1
 E/Z = 24.522 kA (20.387 MVA) At -49.92DEG, X/R = 1.58
 Z1 = 1.746628 +j 3.051401 pu, Z0 = 5.982499 +j 5.177733 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		2EH1	24.52	-49.92	Branch	1	1	C 2EH1
TX 2EL1	H	2EH1	0.00	0.00	Branch	1	1	C 2EL1

*Bus 2EHDP 0.480 kV, Zone 1, Area 1
 E/Z = 32.820 kA (27.286 MVA) At -66.58DEG, X/R = 2.53
 Z1 = 0.895799 +j 2.856397 pu, Z0 = 2.579196 +j 4.397715 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
ATS EH2A1		2EHDP	32.82	-66.58	Branch	1	1	C 2EHDP
1EH1		2EHDP	0.00	0.00	Branch	1	1	C 1EH1
3EH1		2EHDP	0.00	0.00	Branch	1	1	C 3EH1
2EH1		2EHDP	0.00	0.00	Branch	1	1	C 2EH1
4EH1		2EHDP	0.00	0.00	Branch	1	1	C 4EH1
5EH1		2EHDP	0.00	0.00	Branch	1	1	C 5EH1
6EH1		2EHDP	0.00	0.00	Branch	1	1	C 6EH1
4EH2		2EHDP	0.00	0.00	Branch	1	1	C 4EH2

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Driving Point Voltage (P.U.) = 1.00000

*Bus 2EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.556 kA (0.561 MVA) At -56.38DEG, X/R = 1.81
 Z1 = 105.966915 +j 157.364636 pu, Z0 = 84.382340 +j 131.007698 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1 L		2EL1	1.56	-56.38	Branch	1	1	B 2EL1-MAIN

*Bus 2HAIA 0.480 kV, Zone 1, Area 1
 E/Z = 43.022 kA (35.768 MVA) At -69.84DEG, X/R = 2.92
 Z1 = 0.649389 +j 2.487096 pu, Z0 = 1.593571 +j 2.920524 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIA	43.02	-69.84	Branch	1	1	C 2HAIA

*Bus 2HAIB 0.480 kV, Zone 1, Area 1
 E/Z = 41.567 kA (34.558 MVA) At -73.56DEG, X/R = 3.54
 Z1 = 0.577028 +j 2.562564 pu, Z0 = 1.304129 +j 3.222395 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIB	41.57	-73.56	Branch	1	1	C 2HAIB

*Bus 2HAIC 0.480 kV, Zone 1, Area 1
 E/Z = 38.914 kA (32.352 MVA) At -66.05DEG, X/R = 2.49
 Z1 = 0.794894 +j 2.587293 pu, Z0 = 2.175592 +j 3.321316 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2HDPA		2HAIC	38.91	-66.05	Branch	1	1	C 2HAIC

*Bus 2HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 51.404 kA (42.736 MVA) At -78.20DEG, X/R = 4.89
 Z1 = 0.406880 +j 2.320100 pu, Z0 = 0.623536 +j 2.252538 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		2HDPA	51.40	-78.20	Branch	1	1	C 2HDPA
2HAIA		2HDPA	0.00	0.00	Branch	1	1	C 2HAIA
2HAIB		2HDPA	0.00	0.00	Branch	1	1	C 2HAIB
2HAIC		2HDPA	0.00	0.00	Branch	1	1	C 2HAIC
TX T2LDPA H		2HDPA	0.00	0.00	Branch	1	1	C TX T2LDPA

*Bus 2LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 11.198 kA (4.034 MVA) At -67.52DEG, X/R = 2.62
 Z1 = 8.417258 +j 23.460625 pu, Z0 = 11.606581 +j 21.810593 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1A	11.20	-67.52	Branch	1	1	C 2LA1A

*Bus 2LA1B 0.208 kV, Zone 1, Area 1
 E/Z = 11.198 kA (4.034 MVA) At -67.52DEG, X/R = 2.62
 Z1 = 8.417258 +j 23.460625 pu, Z0 = 11.606581 +j 21.810593 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1B	11.20	-67.52	Branch	1	1	C 2LA1B

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Driving Point Voltage (P.U.) = 1.00000

*Bus 2LA1KA 0.208 kV, Zone 1, Area 1
 E/Z = 8.464 kA (3.049 MVA) At -58.84DEG, X/R = 1.95
 Z1 = 12.162517 +j 26.039677 pu, Z0 = 26.587591 +j 32.126830 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KA	8.46	-58.84	Branch	1	1	C 2LA1KA

*Bus 2LA1KB 0.208 kV, Zone 1, Area 1
 E/Z = 8.464 kA (3.049 MVA) At -58.84DEG, X/R = 1.95
 Z1 = 12.162517 +j 26.039677 pu, Z0 = 26.587591 +j 32.126830 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KB	8.46	-58.84	Branch	1	1	C 2LA1KB

*Bus 2LA1KC 0.208 kV, Zone 1, Area 1
 E/Z = 8.464 kA (3.049 MVA) At -58.84DEG, X/R = 1.95
 Z1 = 12.162517 +j 26.039677 pu, Z0 = 26.587591 +j 32.126830 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LA1KC	8.46	-58.84	Branch	1	1	C 2LA1KC

*Bus 2LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 11.198 kA (4.034 MVA) At -67.52DEG, X/R = 2.62
 Z1 = 8.417258 +j 23.460625 pu, Z0 = 11.606581 +j 21.810593 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2LDPA		2LAC1A	11.20	-67.52	Branch	1	1	C 2LAC1A

*Bus 2LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 12.491 kA (4.500 MVA) At -71.92DEG, X/R = 3.22
 Z1 = 7.125789 +j 22.571297 pu, Z0 = 6.440715 +j 18.253271 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA T2L		2LDPA	12.49	-71.92	Branch	1	1	C 2LDPA
2LAC1A		2LDPA	0.00	0.00	Branch	1	1	C 2LAC1A
2LA1A		2LDPA	0.00	0.00	Branch	1	1	C 2LA1A
2LA1B		2LDPA	0.00	0.00	Branch	1	1	C 2LA1B
2LA1KA		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KA
2LA1KB		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KB
2LA1KC		2LDPA	0.00	0.00	Branch	1	1	C 2LA1KC

*Bus 3EH1 0.480 kV, Zone 1, Area 1
 E/Z = 3.977 kA (3.306 MVA) At -18.51DEG, X/R = 1.06
 Z1 = 14.509065 +j 5.976471 pu, Z0 = 57.031917 +j 16.878278 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHP		3EH1	3.98	-18.51	Branch	1	1	C 3EH1
TX 3EL1 H		3EH1	0.00	0.00	Branch	1	1	C 3EL1

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Driving Point Voltage (P.U.) = 1.00000

*Bus 3EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.872 kA (1.035 MVA) At -53.79DEG, X/R = 1.70
 Z1 = 64.999621 +j 83.922766 pu, Z0 = 41.254595 +j 66.098310 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 8I		3EL1	0.00	0.00	Branch	1	1	C UPS 8
TX 3EL1 L		3EL1	2.87	-53.79	Branch	1	1	B 3EL1-MAIN

*Bus 4EDP1 0.208 kV, Zone 1, Area 1
 E/Z = 2.323 kA (0.837 MVA) At -43.94DEG, X/R = 1.39
 Z1 = 87.612541 +j 89.375342 pu, Z0 = 82.901695 +j 70.002430 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4EL2		4EDP1	2.32	-43.94	Branch	1	1	C 4EDP1

*Bus 4EH1 0.480 kV, Zone 1, Area 1
 E/Z = 2.228 kA (1.852 MVA) At -16.04DEG, X/R = 1.05
 Z1 = 26.111279 +j 8.635625 pu, Z0 = 103.440269 +j 27.515565 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		4EH1	2.23	-16.04	Branch	1	1	C 4EH1
TX 4EL1 H		4EH1	0.00	0.00	Branch	1	1	C 4EL1

*Bus 4EH2 0.480 kV, Zone 1, Area 1
 E/Z = 2.139 kA (1.778 MVA) At -19.27DEG, X/R = 1.07
 Z1 = 26.710191 +j 10.453017 pu, Z0 = 105.836388 +j 34.785088 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		4EH2	2.14	-19.27	Branch	1	1	C 4EH2
TX 4EL2 H		4EH2	0.00	0.00	Branch	1	1	C 4EL2

*Bus 4EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.701 kA (0.973 MVA) At -50.90DEG, X/R = 1.59
 Z1 = 76.601833 +j 86.581919 pu, Z0 = 41.254597 +j 66.098306 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1 L		4EL1	2.70	-50.90	Branch	1	1	B 4EL1-MAIN

*Bus 4EL2 0.208 kV, Zone 1, Area 1
 E/Z = 2.670 kA (0.962 MVA) At -51.15DEG, X/R = 1.60
 Z1 = 77.200745 +j 88.399311 pu, Z0 = 41.254597 +j 66.098306 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
4EDP1		4EL2	0.00	0.00	Branch	1	1	C 4EDP1
TX 4EL2 L		4EL2	2.67	-51.15	Branch	1	1	B 4EL2-MAIN

*Bus 5EH1 0.480 kV, Zone 1, Area 1
 E/Z = 3.347 kA (2.783 MVA) At -17.62DEG, X/R = 1.05
 Z1 = 17.293597 +j 6.614668 pu, Z0 = 68.169936 +j 19.431189 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		5EH1	3.35	-17.62	Branch	1	1	C 5EH1
TX 5EL1 H		5EH1	0.00	0.00	Branch	1	1	C 5EL1

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Driving Point Voltage (P.U.) = 1.00000

*Bus 5EL1 0.208 kV, Zone 1, Area 1
 E/Z = 2.830 kA (1.020 MVA) At -53.06DEG, X/R = 1.67
 Z1 = 67.784154 +j 84.560963 pu, Z0 = 41.254595 +j 66.098310 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 5I		5EL1	0.00	0.00	Branch	1	1	C UPS 5
TX 5EL1 L		5EL1	2.83	-53.06	Branch	1	1	B 5EL1-MAIN

*Bus 5HA1A 0.480 kV, Zone 1, Area 1
 E/Z = 26.437 kA (21.979 MVA) At -61.90DEG, X/R = 2.14
 Z1 = 1.239949 +j 3.182878 pu, Z0 = 3.955804 +j 5.703652 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1A	26.44	-61.90	Branch	1	1	C 5HA1A

*Bus 5HA1B 0.480 kV, Zone 1, Area 1
 E/Z = 27.403 kA (22.783 MVA) At -65.90DEG, X/R = 2.46
 Z1 = 1.064452 +j 3.179542 pu, Z0 = 3.253816 +j 5.690301 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1B	27.40	-65.90	Branch	1	1	C 5HA1B

*Bus 5HA1C 0.480 kV, Zone 1, Area 1
 E/Z = 26.878 kA (22.346 MVA) At -65.52DEG, X/R = 2.42
 Z1 = 1.095404 +j 3.212607 pu, Z0 = 3.377625 +j 5.822564 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1C	26.88	-65.52	Branch	1	1	C 5HA1C

*Bus 5HA1D 0.480 kV, Zone 1, Area 1
 E/Z = 25.551 kA (21.243 MVA) At -60.91DEG, X/R = 2.07
 Z1 = 1.312702 +j 3.232976 pu, Z0 = 4.246815 +j 5.904048 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1D	25.55	-60.91	Branch	1	1	C 5HA1D

*Bus 5HA1E 0.480 kV, Zone 1, Area 1
 E/Z = 26.437 kA (21.979 MVA) At -61.90DEG, X/R = 2.14
 Z1 = 1.239949 +j 3.182878 pu, Z0 = 3.955804 +j 5.703652 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		5HA1E	26.44	-61.90	Branch	1	1	C 5HA1E

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Driving Point Voltage (P.U.) = 1.00000

*Bus 5HDPA 0.480 kV, Zone 1, Area 1
 E/Z = 33.928 kA (28.207 MVA) At -70.68DEG, X/R = 3.03
 Z1 = 0.754931 +j 2.848885 pu, Z0 = 2.015735 +j 4.367680 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		5HDPA	33.84	-70.68	Branch	1	1	C 5HDPA
5HA1A		5HDPA	0.00	0.00	Branch	1	1	C 5HA1A
5HA1B		5HDPA	0.00	0.00	Branch	1	1	C 5HA1B
9HA2A		5HDPA	0.00	0.00	Branch	1	1	C 9HA2A
9HA2B		5HDPA	0.00	0.00	Branch	1	1	C 9HA2B
TX T9LDPB H		5HDPA	0.00	0.00	Branch	1	1	C TX T9LDPB
TX T9LDPA H		5HDPA	0.00	0.00	Branch	1	1	C TX T9LDPA
TX T5LDPA H		5HDPA	0.00	0.00	Branch	1	1	C TX T5LDPA
TX T5LDPB H		5HDPA	0.00	0.00	Branch	1	1	C TX T5LDPB
ELEV 560		5HDPA	0.05	-73.01	Branch	1	1	C ELEV 560
CA		5HDPA	0.03	-68.07	Branch	1	1	C CA
5HA1C		5HDPA	0.00	0.00	Branch	1	1	C 5HA1C
5HA1D		5HDPA	0.00	0.00	Branch	1	1	C 5HA1D
5HA1E		5HDPA	0.00	0.00	Branch	1	1	C 5HA1E

*Bus 5LA1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.578 kA (3.090 MVA) At -59.51DEG, X/R = 1.97
 Z1 = 15.529090 +j 28.331271 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LA1A	8.58	-59.51	Branch	1	1	C 5LA1A

*Bus 5LAC1A 0.208 kV, Zone 1, Area 1
 E/Z = 8.578 kA (3.090 MVA) At -59.51DEG, X/R = 1.97
 Z1 = 15.529090 +j 28.331271 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LAC1A	8.58	-59.51	Branch	1	1	C 5LAC1A

*Bus 5LAC1B 0.208 kV, Zone 1, Area 1
 E/Z = 8.578 kA (3.090 MVA) At -59.51DEG, X/R = 1.97
 Z1 = 15.529090 +j 28.331271 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPA		5LAC1B	8.58	-59.51	Branch	1	1	C 5LAC1B

*Bus 5LB1A 0.208 kV, Zone 1, Area 1
 E/Z = 10.477 kA (3.774 MVA) At -66.48DEG, X/R = 2.51
 Z1 = 9.801915 +j 25.371486 pu, Z0 = 12.123167 +j 22.166326 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1A	10.48	-66.48	Branch	1	1	C 5LB1A

*Bus 5LB1B 0.208 kV, Zone 1, Area 1
 E/Z = 10.269 kA (3.700 MVA) At -65.78DEG, X/R = 2.44
 Z1 = 10.060209 +j 25.549352 pu, Z0 = 13.156340 +j 22.877790 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1B	10.27	-65.78	Branch	1	1	C 5LB1B

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Driving Point Voltage (P.U.) = 1.00000

*Bus 5LB1C 0.208 kV, Zone 1, Area 1
 E/Z = 4.730 kA (1.704 MVA) At -48.37DEG, X/R = 1.52
 Z1 = 24.008070 +j 35.154098 pu, Z0 = 68.947688 +j 61.296873 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LB1C	4.73	-48.37	Branch	1	1	C 5LB1C

*Bus 5LBC1A 0.208 kV, Zone 1, Area 1
 E/Z = 9.780 kA (3.523 MVA) At -64.13DEG, X/R = 2.30
 Z1 = 10.705943 +j 25.994016 pu, Z0 = 15.739273 +j 24.656451 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LBC1A	9.78	-64.13	Branch	1	1	C 5LBC1A

*Bus 5LBC1B 0.208 kV, Zone 1, Area 1
 E/Z = 10.372 kA (3.737 MVA) At -66.12DEG, X/R = 2.48
 Z1 = 9.931062 +j 25.460419 pu, Z0 = 12.639754 +j 22.522058 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5LDPB		5LBC1B	10.37	-66.12	Branch	1	1	C 5LBC1B

*Bus 5LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 9.394 kA (3.384 MVA) At -62.08DEG, X/R = 2.14
 Z1 = 14.237622 +j 27.441943 pu, Z0 = 13.035366 +j 23.468541 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB L		5LDPA	9.39	-62.08	Branch	1	1	C 5LDPA
5LAC1A		5LDPA	0.00	0.00	Branch	1	1	C 5LAC1A
5LAC1B		5LDPA	0.00	0.00	Branch	1	1	C 5LAC1B
5LA1A		5LDPA	0.00	0.00	Branch	1	1	C 5LA1A

*Bus 5LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 11.743 kA (4.231 MVA) At -70.91DEG, X/R = 3.06
 Z1 = 8.381299 +j 24.393225 pu, Z0 = 6.440715 +j 18.253271 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB L		5LDPB	11.74	-70.91	Branch	1	1	C 5LDPB
5LBC1A		5LDPB	0.00	0.00	Branch	1	1	C 5LBC1A
5LBC1B		5LDPB	0.00	0.00	Branch	1	1	C 5LBC1B
5LB1A		5LDPB	0.00	0.00	Branch	1	1	C 5LB1A
5LB1C		5LDPB	0.00	0.00	Branch	1	1	C 5LB1C
5LB1B		5LDPB	0.00	0.00	Branch	1	1	C 5LB1B

*Bus 6EH1 0.480 kV, Zone 1, Area 1
 E/Z = 1.326 kA (1.102 MVA) At -18.18DEG, X/R = 1.06
 Z1 = 43.265744 +j 15.324960 pu, Z0 = 172.057690 +j 54.274453 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		6EH1	1.33	-18.18	Branch	1	1	C 6EH1
TX 6EL1 H		6EH1	0.00	0.00	Branch	1	1	C 6EL1

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Driving Point Voltage (P.U.) = 1.00000

*Bus 6EL1 0.208 kV, Zone 1, Area 1
 E/Z = 1.378 kA (0.497 MVA) At -51.11DEG, X/R = 1.60
 Z1 = 147.486026 +j 169.638192 pu, Z0 = 84.382340 +j 131.007698 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1	L	6EL1	1.38	-51.11	Branch	1	1	B 6EL1-MAIN

*Bus 9HA2A 0.480 kV, Zone 1, Area 1
 E/Z = 21.135 kA (17.571 MVA) At -61.44DEG, X/R = 2.10
 Z1 = 1.528733 +j 3.675526 pu, Z0 = 5.110939 +j 7.674234 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		9HA2A	21.13	-61.44	Branch	1	1	C 9HA2A

*Bus 9HA2B 0.480 kV, Zone 1, Area 1
 E/Z = 27.057 kA (22.495 MVA) At -62.60DEG, X/R = 2.19
 Z1 = 1.191448 +j 3.149478 pu, Z0 = 3.761797 +j 5.570055 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5HDPA		9HA2B	27.06	-62.60	Branch	1	1	C 9HA2B

*Bus 9LA2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.045 kA (2.898 MVA) At -57.81DEG, X/R = 1.88
 Z1 = 16.664449 +j 29.057644 pu, Z0 = 21.817337 +j 29.515990 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LA2A	8.04	-57.81	Branch	1	1	C 9LA2A

*Bus 9LAC2A 0.208 kV, Zone 1, Area 1
 E/Z = 8.541 kA (3.077 MVA) At -59.34DEG, X/R = 1.96
 Z1 = 15.760421 +j 28.435114 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LAC2A	8.54	-59.34	Branch	1	1	C 9LAC2A

*Bus 9LAC2B 0.208 kV, Zone 1, Area 1
 E/Z = 8.541 kA (3.077 MVA) At -59.34DEG, X/R = 1.96
 Z1 = 15.760421 +j 28.435114 pu, Z0 = 18.201231 +j 27.025863 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPA		9LAC2B	8.54	-59.34	Branch	1	1	C 9LAC2B

*Bus 9LB2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.510 kA (2.706 MVA) At -60.54DEG, X/R = 2.04
 Z1 = 17.092789 +j 33.103548 pu, Z0 = 20.346222 +j 30.366664 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LB2A	7.51	-60.54	Branch	1	1	C 9LB2A

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Driving Point Voltage (P.U.) = 1.00000

*Bus 9LBC2A 0.208 kV, Zone 1, Area 1
 E/Z = 7.931 kA (2.857 MVA) At -62.12DEG, X/R = 2.14
 Z1 = 16.188761 +j 32.481018 pu, Z0 = 16.730116 +j 27.876538 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LBC2A	7.93	-62.12	Branch	1	1	C 9LBC2A

*Bus 9LBC2B 0.208 kV, Zone 1, Area 1
 E/Z = 7.931 kA (2.857 MVA) At -62.12DEG, X/R = 2.14
 Z1 = 16.188761 +j 32.481018 pu, Z0 = 16.730116 +j 27.876538 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
9LDPB		9LBC2B	7.93	-62.12	Branch	1	1	C 9LBC2B

*Bus 9LDPA 0.208 kV, Zone 1, Area 1
 E/Z = 9.352 kA (3.369 MVA) At -61.88DEG, X/R = 2.12
 Z1 = 14.468952 +j 27.545785 pu, Z0 = 13.035366 +j 23.468541 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA L		9LDPA	9.35	-61.88	Branch	1	1	C 9LDPA
9LAC2A		9LDPA	0.00	0.00	Branch	1	1	C 9LAC2A
9LAC2B		9LDPA	0.00	0.00	Branch	1	1	C 9LAC2B
9LA2A		9LDPA	0.00	0.00	Branch	1	1	C 9LA2A

*Bus 9LDPB 0.208 kV, Zone 1, Area 1
 E/Z = 8.606 kA (3.101 MVA) At -64.70DEG, X/R = 2.34
 Z1 = 14.897292 +j 31.591690 pu, Z0 = 11.564250 +j 24.319216 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB L		9LDPB	8.61	-64.70	Branch	1	1	C 9LDPB
9LBC2A		9LDPB	0.00	0.00	Branch	1	1	C 9LBC2A
9LBC2B		9LDPB	0.00	0.00	Branch	1	1	C 9LBC2B
9LB2A		9LDPB	0.00	0.00	Branch	1	1	C 9LB2A

*Bus ATS EH2A1 0.480 kV, Zone 1, Area 1
 E/Z = 37.100 kA (30.845 MVA) At -69.28DEG, X/R = 2.84
 Z1 = 0.741039 +j 2.691069 pu, Z0 = 1.960161 +j 3.736406 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
2EHDP		ATS EH2A1	0.00	0.00	Branch	1	1	C 2EHDP
MSB		ATS EH2A1	37.10	-69.28	Branch	1	1	C MSB-ATS EH2A

*Bus CA 0.480 kV, Zone 1, Area 1
 E/Z = 4.969 kA (4.132 MVA) At -16.10DEG, X/R = 1.04
 Z1 = 11.817653 +j 4.517289 pu, Z0 = 46.266913 +j 11.041235 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M CA		CA	0.02	-67.79	Motor	1	1	
5HDPA		CA	4.96	-15.91	Branch	1	1	C CA

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Driving Point Voltage (P.U.) = 1.00000

*Bus EGH1 0.480 kV, Zone 1, Area 1
 E/Z = 2.412 kA (2.006 MVA) At -84.17DEG, X/R = 9.85
 Z1 = 7.184066 +j 70.400008 pu, Z0 = 0.816372 +j 8.000000 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
GEN	EGH1	EGH1	2.41	-84.17	Gen	1	1	
ATS	EH2A1	EGH1	0.00	0.00	Branch	1	1	C EGH1-ATS EH2A

*Bus ELEV 160 0.480 kV, Zone 1, Area 1
 E/Z = 3.957 kA (3.290 MVA) At -26.61DEG, X/R = 1.11
 Z1 = 13.819151 +j 7.961464 pu, Z0 = 54.272600 +j 24.817906 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M	ELEV 160	ELEV 160	0.03	-73.29	Motor	1	1	
1HDPA		ELEV 160	3.93	-26.26	Branch	1	1	C ELEV 160

*Bus ELEV 560 0.480 kV, Zone 1, Area 1
 E/Z = 18.290 kA (15.206 MVA) At -40.06DEG, X/R = 1.32
 Z1 = 2.688631 +j 3.292078 pu, Z0 = 9.750523 +j 6.140445 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
M	ELEV 560	ELEV 560	0.04	-66.87	Motor	1	1	
5HDPA		ELEV 560	18.25	-40.00	Branch	1	1	C ELEV 560

*Bus MCCA 0.480 kV, Zone 1, Area 1
 E/Z = 37.648 kA (31.300 MVA) At -72.46DEG, X/R = 3.33
 Z1 = 0.649061 +j 2.698019 pu, Z0 = 1.592261 +j 3.764218 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		MCCA	37.65	-72.46	Branch	1	1	C MCCA

*Bus MDB 0.480 kV, Zone 1, Area 1
 E/Z = 54.553 kA (45.355 MVA) At -80.80DEG, X/R = 6.25
 Z1 = 0.343825 +j 2.263053 pu, Z0 = 0.371320 +j 2.024354 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MSB		MDB	0.17	-75.42	Branch	1	1	C MSB
TX NPC L		MDB	54.39	-80.81	Branch	1	1	C MDB

*Bus MSB 0.480 kV, Zone 1, Area 1
 E/Z = 53.767 kA (44.701 MVA) At -80.40DEG, X/R = 5.99
 Z1 = 0.354137 +j 2.277748 pu, Z0 = 0.412567 +j 2.083133 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
MDB		MSB	53.60	-80.41	Branch	1	1	C MSB
ATS	EH2A1	MSB	0.00	0.00	Branch	1	1	C MSB-ATS EH2A
1HDPA		MSB	0.06	-75.86	Branch	1	1	C 1HDPA
2HDPA		MSB	0.00	0.00	Branch	1	1	C 2HDPA
MCCA		MSB	0.00	0.00	Branch	1	1	C MCCA
5HDPA		MSB	0.10	-74.82	Branch	1	1	C 5HDPA

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Driving Point Voltage (P.U.) = 1.00000

*Bus TX 1EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 1.692 kA (1.406 MVA) At -13.80DEG, X/R = 1.04
 Z1 = 34.690998 +j 9.654204 pu, Z0 = 137.758839 +j 31.590673 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1 L		TX 1EL1 H	0.00	0.00	Branch	1	1	TX 1EL1
1EH1		TX 1EL1 H	1.69	-13.80	Branch	1	1	C 1EL1

*Bus TX 1EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.440 kA (0.519 MVA) At -52.46DEG, X/R = 1.65
 Z1 = 133.966924 +j 163.782059 pu, Z0 = 84.382340 +j 131.007697 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 1EL1 H		TX 1EL1 L	1.44	-52.46	Branch	1	1	TX 1EL1
1EL1		TX 1EL1 L	0.00	0.00	Branch	1	1	B 1EL1-MAIN

*Bus TX 2EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 8.791 kA (7.308 MVA) At -17.54DEG, X/R = 1.06
 Z1 = 6.690986 +j 3.236779 pu, Z0 = 25.759950 +j 5.919301 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1 L		TX 2EL1 H	0.00	0.00	Branch	1	1	TX 2EL1
2EH1		TX 2EL1 H	8.79	-17.54	Branch	1	1	C 2EL1

*Bus TX 2EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.556 kA (0.561 MVA) At -56.38DEG, X/R = 1.81
 Z1 = 105.966915 +j 157.364636 pu, Z0 = 84.382340 +j 131.007697 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 2EL1 H		TX 2EL1 L	1.56	-56.38	Branch	1	1	TX 2EL1
2EL1		TX 2EL1 L	0.00	0.00	Branch	1	1	B 2EL1-MAIN

*Bus TX 3EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 3.529 kA (2.934 MVA) At -17.01DEG, X/R = 1.05
 Z1 = 16.464169 +j 6.159748 pu, Z0 = 64.852281 +j 17.611478 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 3EL1 L		TX 3EL1 H	0.00	0.00	Branch	1	1	TX 3EL1
3EH1		TX 3EL1 H	3.53	-17.01	Branch	1	1	C 3EL1

*Bus TX 3EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.872 kA (1.035 MVA) At -53.79DEG, X/R = 1.70
 Z1 = 64.999621 +j 83.922766 pu, Z0 = 41.254594 +j 66.098310 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 3EL1 H		TX 3EL1 L	2.87	-53.79	Branch	1	1	TX 3EL1
3EL1		TX 3EL1 L	0.00	0.00	Branch	1	1	B 3EL1-MAIN

*Bus TX 4EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 2.079 kA (1.728 MVA) At -15.32DEG, X/R = 1.04
 Z1 = 28.066384 +j 8.818902 pu, Z0 = 111.260610 +j 28.248837 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1 L		TX 4EL1 H	0.00	0.00	Branch	1	1	TX 4EL1
4EH1		TX 4EL1 H	2.08	-15.32	Branch	1	1	C 4EL1

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Driving Point Voltage (P.U.) = 1.00000

*Bus TX 4EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.701 kA (0.973 MVA) At -50.90DEG, X/R = 1.59
 Z1 = 76.601833 +j 86.581919 pu, Z0 = 41.254597 +j 66.098306 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL1 H		TX 4EL1 L	2.70	-50.90	Branch	1	1	TX 4EL1
4EL1		TX 4EL1 L	0.00	0.00	Branch	1	1	B 4EL1-MAIN

*Bus TX 4EL2 H 0.480 kV, Zone 1, Area 1
 E/Z = 2.003 kA (1.665 MVA) At -18.37DEG, X/R = 1.06
 Z1 = 28.665295 +j 10.636294 pu, Z0 = 113.656717 +j 35.518362 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL2 L		TX 4EL2 H	0.00	0.00	Branch	1	1	TX 4EL2
4EH2		TX 4EL2 H	2.00	-18.37	Branch	1	1	C 4EL2

*Bus TX 4EL2 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.670 kA (0.962 MVA) At -51.15DEG, X/R = 1.60
 Z1 = 77.200745 +j 88.399311 pu, Z0 = 41.254597 +j 66.098306 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 4EL2 H		TX 4EL2 L	2.67	-51.15	Branch	1	1	TX 4EL2
4EL2		TX 4EL2 L	0.00	0.00	Branch	1	1	B 4EL2-MAIN

*Bus TX 5EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 3.023 kA (2.514 MVA) At -16.42DEG, X/R = 1.05
 Z1 = 19.248702 +j 6.797945 pu, Z0 = 75.990295 +j 20.164407 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 5EL1 L		TX 5EL1 H	0.00	0.00	Branch	1	1	TX 5EL1
5EH1		TX 5EL1 H	3.02	-16.42	Branch	1	1	C 5EL1

*Bus TX 5EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 2.830 kA (1.020 MVA) At -53.06DEG, X/R = 1.67
 Z1 = 67.784153 +j 84.560963 pu, Z0 = 41.254594 +j 66.098310 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 5EL1 H		TX 5EL1 L	2.83	-53.06	Branch	1	1	TX 5EL1
5EL1		TX 5EL1 L	0.00	0.00	Branch	1	1	B 5EL1-MAIN

*Bus TX 6EL1 H 0.480 kV, Zone 1, Area 1
 E/Z = 1.200 kA (0.997 MVA) At -16.62DEG, X/R = 1.06
 Z1 = 48.210102 +j 15.510337 pu, Z0 = 191.834921 +j 55.016670 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1 L		TX 6EL1 H	0.00	0.00	Branch	1	1	TX 6EL1
6EH1		TX 6EL1 H	1.20	-16.61	Branch	1	1	C 6EL1

*Bus TX 6EL1 L 0.208 kV, Zone 1, Area 1
 E/Z = 1.378 kA (0.497 MVA) At -51.11DEG, X/R = 1.60
 Z1 = 147.486026 +j 169.638191 pu, Z0 = 84.382340 +j 131.007697 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX 6EL1 H		TX 6EL1 L	1.38	-51.11	Branch	1	1	TX 6EL1
6EL1		TX 6EL1 L	0.00	0.00	Branch	1	1	B 6EL1-MAIN

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Driving Point Voltage (P.U.) = 1.00000

*Bus TX NPC L 0.480 kV, Zone 1, Area 1
 E/Z = 56.611 kA (47.066 MVA) At -81.85DEG, X/R = 7.05
 Z1 = 0.318045 +j 2.226317 pu, Z0 = 0.268200 +j 1.877406 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
NPC		TX NPC L	56.44	-81.87	Util	1	1	
MDB		TX NPC L	0.17	-75.96	Branch	1	1	C MDB

*Bus TX T1LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 11.669 kA (9.702 MVA) At -57.90DEG, X/R = 1.88
 Z1 = 2.911913 +j 5.546275 pu, Z0 = 10.643633 +j 15.157243 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA T1L		TX T1LDPA H	0.00	0.00	Branch	1	1	TX T1LDPA
1HDPA		TX T1LDPA H	11.67	-57.90	Branch	1	1	C TX T1LDPA

*Bus TX T1LDPA T1L 0.208 kV, Zone 1, Area 1
 E/Z = 8.053 kA (2.901 MVA) At -62.09DEG, X/R = 2.14
 Z1 = 17.861944 +j 33.738745 pu, Z0 = 12.707466 +j 23.963559 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T1LDPA H		TX T1LDPA T1L	8.05	-62.09	Branch	1	1	TX T1LDPA
1LDPA		TX T1LDPA T1L	0.00	0.00	Branch	1	1	C 1LDPA

*Bus TX T2LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 37.650 kA (31.302 MVA) At -71.75DEG, X/R = 3.20
 Z1 = 0.667774 +j 2.691878 pu, Z0 = 1.667110 +j 3.739651 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA T2L		TX T2LDPA H	0.00	0.00	Branch	1	1	TX T2LDPA
2HDPA		TX T2LDPA H	37.65	-71.75	Branch	1	1	C TX T2LDPA

*Bus TX T2LDPA T2L 0.208 kV, Zone 1, Area 1
 E/Z = 13.082 kA (4.713 MVA) At -72.75DEG, X/R = 3.37
 Z1 = 6.823751 +j 22.140887 pu, Z0 = 5.232563 +j 16.531632 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T2LDPA H		TX T2LDPA T2L	13.08	-72.75	Branch	1	1	TX T2LDPA
2LDPA		TX T2LDPA T2L	0.00	0.00	Branch	1	1	C 2LDPA

*Bus TX T5LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 28.829 kA (23.968 MVA) At -62.23DEG, X/R = 2.16
 Z1 = 1.140481 +j 3.021956 pu, Z0 = 3.557933 +j 5.059963 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPA L		TX T5LDPA H	0.00	0.00	Branch	1	1	TX T5LDPA
5HDPA		TX T5LDPA H	28.83	-62.23	Branch	1	1	C TX T5LDPA

*Bus TX T5LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 10.108 kA (3.642 MVA) At -62.63DEG, X/R = 2.18
 Z1 = 13.623544 +j 26.581124 pu, Z0 = 10.619061 +j 20.025263 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPA H		TX T5LDPA L	10.11	-62.63	Branch	1	1	TX T5LDPA
5LDPA		TX T5LDPA L	0.00	0.00	Branch	1	1	C 5LDPA

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Low Voltage Interrupting Report

Interrupting Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus TX T5LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 15.949 kA (13.259 MVA) At -62.27DEG, X/R = 2.15
 Z1 = 1.923284 +j 4.513806 pu, Z0 = 6.689124 +j 11.027357 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB L		TX T5LDPB H	0.00	0.00	Branch	1	1	TX T5LDPB
5HDPA		TX T5LDPB H	15.95	-62.27	Branch	1	1	C TX T5LDPB

*Bus TX T5LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 12.267 kA (4.419 MVA) At -71.64DEG, X/R = 3.17
 Z1 = 8.079261 +j 23.962815 pu, Z0 = 5.232563 +j 16.531632 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T5LDPB H		TX T5LDPB L	12.27	-71.64	Branch	1	1	TX T5LDPB
5LDPB		TX T5LDPB L	0.00	0.00	Branch	1	1	C 5LDPB

*Bus TX T9LDPA H 0.480 kV, Zone 1, Area 1
 E/Z = 26.249 kA (21.823 MVA) At -58.31DEG, X/R = 1.92
 Z1 = 1.371812 +j 3.125798 pu, Z0 = 4.483252 +j 5.475333 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA L		TX T9LDPA H	0.00	0.00	Branch	1	1	TX T9LDPA
5HDPA		TX T9LDPA H	26.25	-58.31	Branch	1	1	C TX T9LDPA

*Bus TX T9LDPA L 0.208 kV, Zone 1, Area 1
 E/Z = 10.059 kA (3.624 MVA) At -62.41DEG, X/R = 2.16
 Z1 = 13.864875 +j 26.684966 pu, Z0 = 10.619061 +j 20.025263 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPA H		TX T9LDPA L	10.06	-62.41	Branch	1	1	TX T9LDPA
9LDPA		TX T9LDPA L	0.00	0.00	Branch	1	1	C 9LDPA

*Bus TX T9LDPB H 0.480 kV, Zone 1, Area 1
 E/Z = 12.718 kA (10.574 MVA) At -47.32DEG, X/R = 1.48
 Z1 = 3.374030 +j 4.652443 pu, Z0 = 12.492084 +j 11.581935 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB L		TX T9LDPB H	0.00	0.00	Branch	1	1	TX T9LDPB
5HDPA		TX T9LDPB H	12.72	-47.32	Branch	1	1	C TX T9LDPB

*Bus TX T9LDPB L 0.208 kV, Zone 1, Area 1
 E/Z = 8.965 kA (3.230 MVA) At -65.86DEG, X/R = 2.45
 Z1 = 14.335542 +j 31.140610 pu, Z0 = 9.317244 +j 22.514898 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
TX T9LDPB H		TX T9LDPB L	8.96	-65.86	Branch	1	1	TX T9LDPB
9LDPB		TX T9LDPB L	0.00	0.00	Branch	1	1	C 9LDPB

*Bus UPS 5I 0.208 kV, Zone 1, Area 1
 E/Z = 2.651 kA (0.955 MVA) At -50.08DEG, X/R = 1.56
 Z1 = 71.903283 +j 85.505041 pu, Z0 = 57.731064 +j 69.874614 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
5EL1		UPS 5I	2.65	-50.08	Branch	1	1	C UPS 5

Power Quality Technical Services, Inc. (Serial #34798)

Project Name: CCSD East Career & Tech Academy E-Sh 5.02 Rev. 9

Comment: Ground Fault - Low Voltage Interrupting Report

Interrupting Results S L-GND

Driving Point Voltage (P.U.) = 1.00000

*Bus UPS 50 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 2.33
 Z1 = ***** +j ***** pu, Z0 = 178.565613 +j 813.977051 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 5		UPS 50	0.00	0.00	Gen	1	1	
UPS5A		UPS 50	0.00	0.00	Branch	1	1	C UPS5A

*Bus UPS 8I 0.208 kV, Zone 1, Area 1
 E/Z = 2.690 kA (0.969 MVA) At -50.72DEG, X/R = 1.58
 Z1 = 69.118750 +j 84.866844 pu, Z0 = 57.731064 +j 69.874614 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
3EL1		UPS 8I	2.69	-50.72	Branch	1	1	C UPS 8

*Bus UPS 80 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 2.33
 Z1 = ***** +j ***** pu, Z0 = 178.565613 +j 813.977051 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 8		UPS 80	0.00	0.00	Gen	1	1	
UPS8A		UPS 80	0.00	0.00	Branch	1	1	C UPS8A

*Bus UPS3A 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 2.33
 Z1 = ***** +j ***** pu, Z0 = 330.149130 +j 848.719043 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS5A		UPS3A	0.00	0.00	Branch	1	1	C UPS3A

*Bus UPS5A 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 2.33
 Z1 = ***** +j ***** pu, Z0 = 310.377365 +j 844.187479 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS3A		UPS5A	0.00	0.00	Branch	1	1	C UPS3A
UPS 50		UPS5A	0.00	0.00	Branch	1	1	C UPS5A

*Bus UPS8A 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 2.33
 Z1 = ***** +j ***** pu, Z0 = 468.551483 +j 880.439995 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS 80		UPS8A	0.00	0.00	Branch	1	1	C UPS8A
UPS9A		UPS8A	0.00	0.00	Branch	1	1	C UPS9A

*Bus UPS9A 0.208 kV, Zone 1, Area 1
 E/Z = 0.000 kA (0.000 MVA) At 0.00DEG, X/R = 2.33
 Z1 = ***** +j ***** pu, Z0 = 488.323248 +j 884.971559 pu

Contributions In kA

Bus	to	Bus	kA	Angle	Device	Zone	Area	Branch
UPS8A		UPS9A	0.00	0.00	Branch	1	1	C UPS9A

Breaker Settings

Clark County School District - East Career and Technical Academy E sheet 5.01
Adjustable Breaker Settings
10/4/2007

Adjustable Breaker Name	Manufacturer	Type	Style	Sensor/ Frame	Plug/ Tap	LTPU		LT Delay		STPU		Inst		Ground Trip	
						Name	Setting	Name	Band	Name	Setting	Band	Setting	Band	Setting
B 3LDPB-MAIN	GE	Spectra RMS	MCCB SG	400	400	LT Pickup	1	LT Delay	Fixed	ST Pickup	2	Fixed	Pickup	1540	Out
B 3LDPB-MAIN	GE	Spectra RMS	MCCB SK	800	800	LT Pickup	1	LT Delay	Fixed	ST Pickup	2	Fixed	Pickup	1640	Out
B 4HAIG-MAIN	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	3	Fixed	Pickup	3080	Out
B 4HDPB-MAIN	GE	Spectra RMS	MCCB SK	800	800	LT Pickup	1	LT Delay	Fixed	ST Pickup	3	Fixed	Pickup	1080	Out
B 4LDPB-MAIN	GE	Spectra RMS	MCCB SK	800	800	LT Pickup	1	LT Delay	Fixed	ST Pickup	3	Fixed	Pickup	8144	Out
B 8LDPB-MAIN	GE	Spectra RMS	MCCB SG	400	400	LT Pickup	1	LT Delay	Fixed	ST Pickup	2	Fixed	Pickup	3080	Out
B 8LDPB-MAIN	GE	Spectra RMS	MCCB SG	400	400	LT Pickup	1	LT Delay	Fixed	ST Pickup	2	Fixed	Pickup	1540	Out
B 8LDPB-MAIN	GE	Spectra RMS	MCCB SG	400	400	LT Pickup	1	LT Delay	Fixed	ST Pickup	2	Fixed	Pickup	1540	Out
B 3HAIB-BR	GE	Spectra RMS	MCCB SE	30A (15AT)	15	LT Pickup	1	LT Delay	Fixed	ST Pickup	Max	Fixed	Pickup	187.5	Out
B 3HAIC-BR2	GE	Spectra RMS	MCCB SE	30A (15AT)	15	LT Pickup	1	LT Delay	Fixed	ST Pickup	Max	Fixed	Pickup	187.5	Out
B 3HAID-BR3	GE	Spectra RMS	MCCB SE	30A (15AT)	15	LT Pickup	1	LT Delay	Fixed	ST Pickup	Max	Fixed	Pickup	187.5	Out
B 4HAIB-BR2	GE	Spectra RMS	MCCB SE	100A (90AT)	90	LT Pickup	1	LT Delay	Fixed	ST Pickup	Max	Fixed	Pickup	1125	Out
B 4HAIC-BR1	GE	Spectra RMS	MCCB SE	30A (15AT)	15	LT Pickup	1	LT Delay	Fixed	ST Pickup	Max	Fixed	Pickup	187.5	Out
B 4HAID-BR	GE	Spectra RMS	MCCB SE	30A (15AT)	15	LT Pickup	1	LT Delay	Fixed	ST Pickup	Max	Fixed	Pickup	187.5	Out
B 4HAIE-BR1	GE	Spectra RMS	MCCB SE	30A (15AT)	15	LT Pickup	1	LT Delay	Fixed	ST Pickup	Max	Fixed	Pickup	187.5	Out
B 4HAIF-BR	GE	Spectra RMS	MCCB SE	30A (15AT)	15	LT Pickup	1	LT Delay	Fixed	ST Pickup	Max	Fixed	Pickup	187.5	Out
B 4LA1A	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	4	Fixed	Pickup	1350	Out
B 4LA1C	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	4	Fixed	Pickup	1350	Out
B 4LACTA	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	4	Fixed	Pickup	1350	Out
B 4LACTB	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	4	Fixed	Pickup	1350	Out
B 4LA1KA	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	4	Fixed	Pickup	1350	Out
B 4LA1KB	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	4	Fixed	Pickup	1350	Out
B 4LA1KC	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	4	Fixed	Pickup	1350	Out
B 4LA1KD	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	4	Fixed	Pickup	1350	Out
B 4LBCIB	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	4	Fixed	Pickup	1350	Out
B 4LBIB	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	5	Fixed	Pickup	1755	Out
B 4LBID	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	5	Fixed	Pickup	1755	Out
B 4LBE	GE	Spectra RMS	MCCB SF	250	225	LT Pickup	1	LT Delay	Fixed	ST Pickup	5	Fixed	Pickup	1755	Out
B BH E-446	GE	Spectra RMS	MCCB SF	250	125	LT Pickup	1	LT Delay	Fixed	ST Pickup	5	Fixed	Pickup	1250	Out
B T3DP1	GE	Spectra RMS	MCCB SE	150A (125AT)	125	LT Pickup	1	LT Delay	Fixed	ST Pickup	Max	Fixed	Pickup	737.5	Out
B T4DP1	GE	Spectra RMS	MCCB SE	150A (125AT)	125	LT Pickup	1	LT Delay	Fixed	ST Pickup	6	Fixed	Pickup	1237.5	Out

Verify all Rating Plugs in Breakers. Notify Engineer if rating plugs vary from this Table

Confirm All I²t settings for Short Time Pick Up - Reference Manufacturer's Documentation regarding this setting.

Clark County School District - East Career and Technical Academy E sheet 5.01
 Thermal Magnetic Breakers
 10/4/2007

Thermal Magnetic Breaker	Manufacturer	Type	Style	Frame	Trip	Instantaneous	
						Setting	Trip (A)
B 3HA1A-BR	GE	E150	THED (277V)	150A(15-30AT)	20		
B 3HAIC-BR1	GE	E150	THED (1Pole)	150A(15-30AT)	20		
B 3HAID-BR1	GE	E150	THED (1Pole)	150A(15-30AT)	20		
B 3HAID-BR2	GE	Record Plus	FBN	100A (35AT)	35		
B 3HDP A-SPARE	GE	Record Plus	FBH	100A (70AT)	70		
B 3LA1A	GE	Q Line	THQD	225A(100-225AT)	225		
B 3LA1A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 3LAC1A	GE	Q Line	THQD	225A(100-225AT)	225		
B 3LAC1A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 3LAC1B	GE	Q Line	THQD	225A(100-225AT)	225		
B 3LAC1B-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 3LB1A	GE	Q Line	THQD	225A(100-225AT)	225		
B 3LB1A-BR	GE	Q Line	THHQB	100(15-20AT)	20		
B 3LB1B	GE	Q Line	THQD	225A(100-225AT)	225		
B 3LB1B-BR	GE	Q Line	THHQB	100(15-20AT)	20		
B 3LBC1A	GE	Q Line	THQD	225A(100-225AT)	225		
B 3LBC1A-BR	GE	Q Line	THHQB	100(15-20AT)	20		
B 3LBC1B	GE	Q Line	THQD	225A(100-225AT)	225		
B 3LBC1B-BR	GE	Q Line	THHQB	100(15-20AT)	20		
B 3LBC1C	GE	Q Line	THQD	225A(100-225AT)	225		
B 3LBC1C-BR	GE	Q Line	THHQB	100(15-20AT)	20		
B 3LDP A-BR	GE	E150	TEY	100A (100A)	100		
B 3LDPB-BR	GE	E150	TEY	100A (100A)	100		
B 4HAIA-BR1	GE	E150	THED (1Pole)	150A(15-30AT)	20		
B 4HAIB-BR1	GE	E150	THED (1Pole)	150A(15-30AT)	20		
B 4HAIC-BR2	GE	E150	THED (1Pole)	150A(15-30AT)	20		
B 4HAID-BR2	GE	E150	THED (1Pole)	150A(15-30AT)	20		
B 4HAIE-BR2	GE	E150	THED (1Pole)	150A(15-30AT)	20		
B 4HAIF-BR2	GE	E150	THED (1Pole)	150A(15-30AT)	20		
B 4HAIG-BR	GE	E150	THED (1Pole)	150A(15-30AT)	20		
B 4HAIG-BR2	GE	Record Plus	FBN	100A (15AT)	15		
B 4HAIH-BR	GE	E150	THED (277V)	150A(15-30AT)	20		
B 4LA1A-BR	GE	E150	TEY	100A (20A)	20		

Clark County School District - East Career and Technical Academy E sheet 5.01
 Thermal Magnetic Breakers
 10/4/2007

Thermal Magnetic Breaker	Manufacturer	Type	Style	Frame	Trip	Instantaneous	
						Setting	Trip (A)
B 4LA1C-BR	GE	E150	TEY	100A (20A)	20		
B 4LAC1A-BR	GE	E150	TEY	100A (20A)	20		
B 4LAC1B-BR	GE	E150	TEY	100A (20A)	20		
B 4LA1KA-BR	GE	Q Line	THHQB	100A (15-50AT)	15		
B 4LA1KB-BR	GE	Q Line	THHQB	100A (15-50AT)	15		
B 4LA1KC-BR	GE	Q Line	THHQB	100A (15-50AT)	20		
B 4LA1KD-BR	GE	Q Line	THHQB	100A (15-50AT)	20		
B 4LA1KE	GE	E150	TEY	100A (100A)	100		
B 4LA1KE-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 4LA1KF	GE	E150	TEY	100A (100A)	100		
B 4LA1KF-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 4LBC1B-BR	GE	E150	TEY	100A (20A)	20		
B 4LB1B-BR	GE	Q Line	THHQB	100A (15-50AT)	20		
B 4LB1B-MAIN	GE	Q Line	THQD	225A(100-225AT)	225		
B 4LB1D-BR	GE	Q Line	THHQB	100A (15-50AT)	20		
B 4LB1D-MAIN	GE	Q Line	THQD	225A(100-225AT)	225		
B 4LB1E-BR	GE	E150	TEY	100A (20A)	20		
B 6HA1A-BR	GE	E150	THED (277V)	150A(15-30AT)	20		
B 6HA1B-BR1	GE	E150	THED (277V)	150A(15-30AT)	20		
B 6HA1B-BR2	GE	Record Plus	FBN	100A (15AT)	15		
B 6HA1C-BR1	GE	E150	THED (277V)	150A(15-30AT)	20		
B 6HA1C-BR2	GE	Record Plus	FBN	100A (15AT)	15		
B 6LA1A -MAIN	GE	Q Line	TQD	225A(100-225AT)	225		
B 6LA1A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 6LAC1A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 6LAC1A-MAIN	GE	Q Line	TQD	225A(100-225AT)	225		
B 8HA2A-BR	GE	Record Plus	FBN	100A (20AT)	20		
B 8HA2B-BR1	GE	Record Plus	FBN	100A (15AT)	15		
B 8HA2B-BR2	GE	E150	THED (1Pole)	150A(15-30AT)	20		
B 8LA2A	GE	Q Line	THQD	225A(100-225AT)	225		
B 8LA2A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 8LAC2A	GE	Q Line	THQD	225A(100-225AT)	225		

Clark County School District - East Career and Technical Academy E sheet 5.01
 Thermal Magnetic Breakers
 10/4/2007

Thermal Magnetic Breaker	Manufacturer	Type	Style	Frame	Trip	Instantaneous	
						Setting	Trip (A)
B 8LAC2A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 8LAC2B	GE	Q Line	THQD	225A(100-225AT)	225		
B 8LAC2B-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 8LB2A	GE	Q Line	THQD	225A(100-225AT)	225		
B 8LB2A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 8LBC2A	GE	Q Line	THQD	225A(100-225AT)	225		
B 8LBC2A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 8LBC2B	GE	Q Line	THQD	225A(100-225AT)	225		
B 8LBC2B-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 8LDPB-BR	GE	E150	TEY	100A (100A)	100		
B CA	GE	Record Plus	FBN	100A (70AT)	70		
B ELEV	GE	Record Plus	FBH	100A (100AT)	100		

Clark County School District - East Career and Technical Academy E sheet 5.02
 Thermal Magnetic Breakers
 10/4/2007

Thermal Magnetic Breaker	Manufacturer	Type	Style	Frame	Trip	Instantaneous	
						Setting	Trip (A)
B 1EH1	GE	Record Plus	FCN	100A (100AT)	100		
B 1EH1-BR	GE	E150	THED (277V)	150A(15-30AT)	20		
B 1EH1-MAIN	GE	E150	TEY	100A (60A)	60		
B 1EL1	GE	E150	TEY	100A (30A)	30		
B 1EL1- HI MAIN	GE	E150	TED (600V)	150A(15-50AT)	40		
B 1EL1-BR	GE	Q Line	THQL	100A (15-50AT)	20		
B 1EL1-MAIN	GE	Q Line	THQL	100A (15-50AT)	50		
B 1HA1A-BR	GE	E150	THED (277V)	150A(15-30AT)	20		
B 1HA1B-BR	GE	E150	THED (277V)	150A(15-30AT)	20		
B 1HA1C-BR	GE	E150	THED (277V)	150A(15-30AT)	15		
B 1LA1A	GE	Q Line	TQD	225A(100-225AT)	225		
B 1LA1A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 1LA2A	GE	Q Line	TQD	225A(100-225AT)	225		
B 1LA2A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 1LAC1A	GE	Q Line	TQD	225A(100-225AT)	225		
B 1LAC1A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 1LAC2A	GE	Q Line	TQD	225A(100-225AT)	225		
B 1LAC2A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 1LDPA-BR	GE	E150	TEB	150A(90-100AT)	100		
B 2EH1	GE	Record Plus	FCN	100A (60AT)	60		
B 2EH1-BR	GE	E150	THED (277V)	150A(15-30AT)	20		
B 2EL1- HI MAIN	GE	E150	TED (600V)	150A(15-50AT)	40		
B 2EL1-BR	GE	Q Line	THQL	100A (15-50AT)	20		
B 2EL1-MAIN	GE	Q Line	THQL	100A (15-50AT)	50		
B 2HA1A-BR	GE	E150	THED (277V)	150A(15-30AT)	20		
B 2HA1B-BR2	GE	E150	THED (277V)	150A(15-30AT)	20		
B 2HA1C-BR2	GE	E150	THED (277V)	150A(15-30AT)	20		
B 2LA1A	GE	Q Line	THQD	225A(100-225AT)	225		
B 2LA1A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 2LA1B	GE	Q Line	THQD	225A(100-225AT)	225		
B 2LA1B-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 2LA1KA	GE	Q Line	THQD	225A(100-225AT)	225		
B 2LA1KA-BR	GE	Q Line	THQB	100A (15-50AT)	20		

Clark County School District - East Career and Technical Academy E sheet 5.02
 Thermal Magnetic Breakers
 10/4/2007

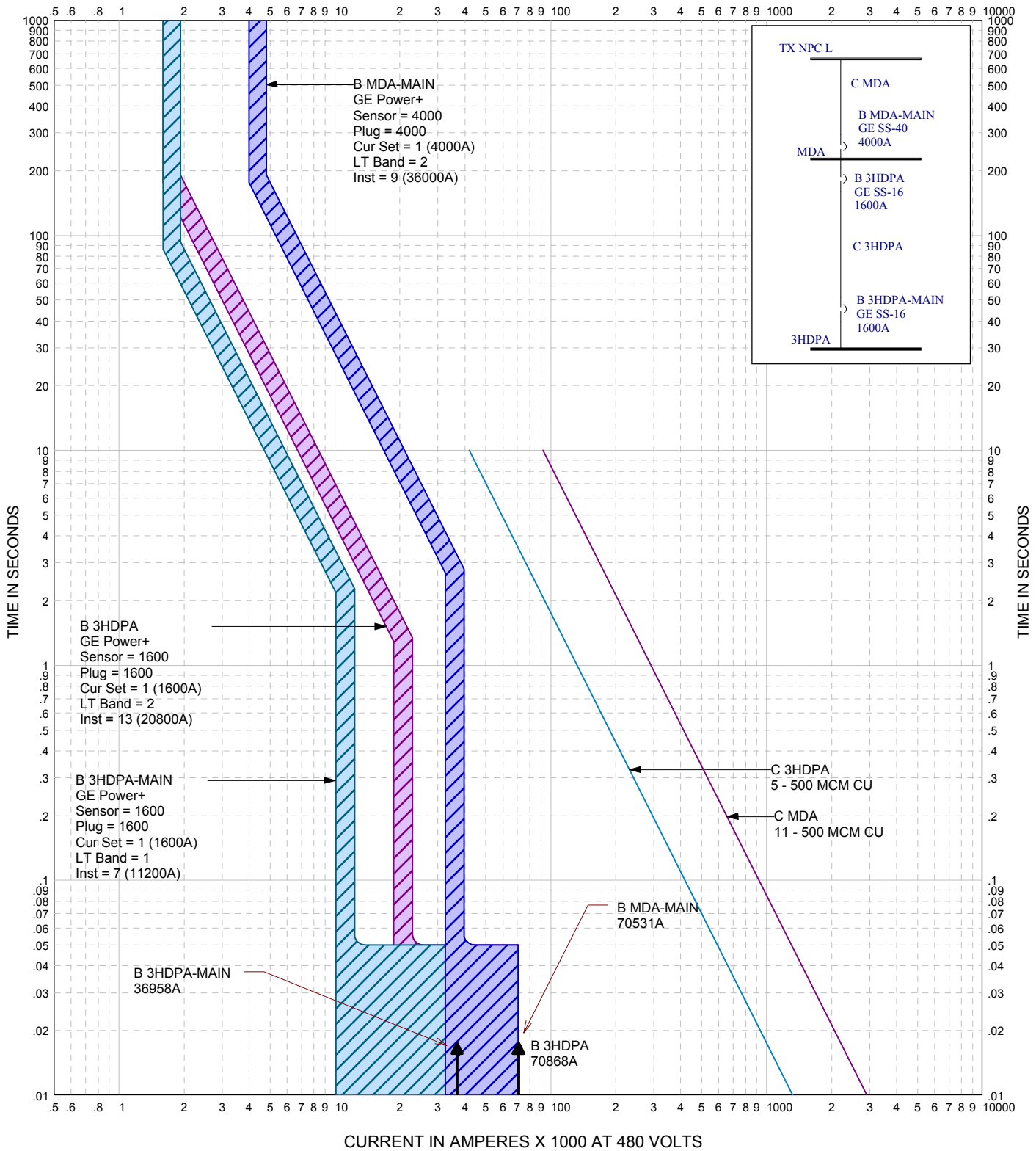
Thermal Magnetic Breaker	Manufacturer	Type	Style	Frame	Trip	Instantaneous	
						Setting	Trip (A)
B 2LA1KB	GE	Q Line	THQD	225A(100-225AT)	225		
B 2LA1KB-BR	GE	Q Line	THHQB	100A (15-50AT)	20		
B 2LA1KC	GE	Q Line	THQD	225A(100-225AT)	225		
B 2LAC1A	GE	Q Line	THQD	225A(100-225AT)	225		
B 2LAC1A-BR	GE	Q Line	THHQB	100A (15-50AT)	20		
B 2LDPA-BR	GE	Q Line	THQD	225A(100-225AT)	150		
B 3EH1	GE	Record Plus	FCN	100A (100AT)	100		
B 3EH1-BR	GE	E150	THED (277V)	150A(15-30AT)	20		
B 3EH1-MAIN	GE	E150	TEY	100A (100A)	100		
B 3EL1	GE	Record Plus	FBN	100A (45AT)	45		
B 3EL1- HI MAIN	GE	E150	TED (600V)	150A(15-50AT)	40		
B 3EL1-BR	GE	Q Line	THQL	100A (15-50AT)	20		
B 3EL1-MAIN	GE	Q Line	THQL	100A (15-50AT)	50		
B 4EDP1	GE	Q Line	THQL	100A (15-50AT)	50		
B 4EH1	GE	E150	TEY	100A (20A)	20		
B 4EH1-BR	GE	E150	TEY	100A (100A)	100		
B 4EH1-MAIN	GE	E150	TEY	100A (100A)	100		
B 4EH2	GE	E150	TEY	100A (20A)	20		
B 4EH2-BR	GE	E150	TEY	100A (100A)	100		
B 4EH2-MAIN	GE	E150	TEY	100A (40A)	40		
B 4EL1	GE	E150	TED (600V)	150A(60-80AT)	70		
B 4EL1- HI MAIN	GE	Q Line	THQL	100A (15-50AT)	20		
B 4EL1-BR	GE	Q Line	THQL	100A(60-100AT)	70		
B 4EL1-MAIN	GE	Q Line	TEY	100A (40A)	40		
B 4EL2	GE	E150	TED (600V)	150A(60-80AT)	70		
B 4EL2- HI MAIN	GE	Q Line	THQL	100A (15-50AT)	20		
B 4EL2-BR	GE	Q Line	THQL	100A (15-50AT)	20		
B 4EL2-MAIN	GE	Q Line	THQL	100A(60-100AT)	70		
B 4LDPB-SPARE	GE	Q Line	THQD	225A(100-225AT)	225		
B 5EH1	GE	Record Plus	FCN	100A (60AT)	60		
B 5EH1-BR	GE	E150	TEY	100A (20A)	20		
B 5EH1-MAIN	GE	E150	TEY	100A (100A)	100		
B 5EL1	GE	E150	TEY	100A (50A)	50		

Clark County School District - East Career and Technical Academy E sheet 5.02
 Thermal Magnetic Breakers
 10/4/2007

Thermal Magnetic Breaker	Manufacturer	Type	Style	Frame	Trip	Instantaneous	
						Setting	Trip (A)
B 9LAC2B-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 9LB2A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 9LBC2A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B 9LBC2B-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B CA	GE	Record Plus	FBH	100A (70AT)	70		
B ELEV 160	GE	Record Plus	FCN	100A (100AT)	100		
B ELEV 560	GE	Record Plus	FBH	100A (100AT)	100		
B LBIC MAIN	GE	Q Line	TQD	225A(100-225AT)	225		
B UPS 3A-MAIN	GE	Q Line	THQB	100A(60-100AT)	100		
B UPS 5	GE	Q Line	THQL	100A(60-100AT)	100		
B UPS 5A-MAIN	GE	Q Line	THQB	100A(60-100AT)	100		
B UPS 8	GE	Q Line	THQL	100A(60-100AT)	100		
B UPS 8A-MAIN	GE	Q Line	THQB	100A(60-100AT)	100		
B UPS 9A-MAIN	GE	Q Line	THQB	100A(60-100AT)	100		
B UPS3A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B UPS8A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
B UPS9A-BR	GE	Q Line	THQB	100A (15-50AT)	20		
KC 2LA1KC-BR	GE	Q Line	THQB	100A (15-50AT)	20		

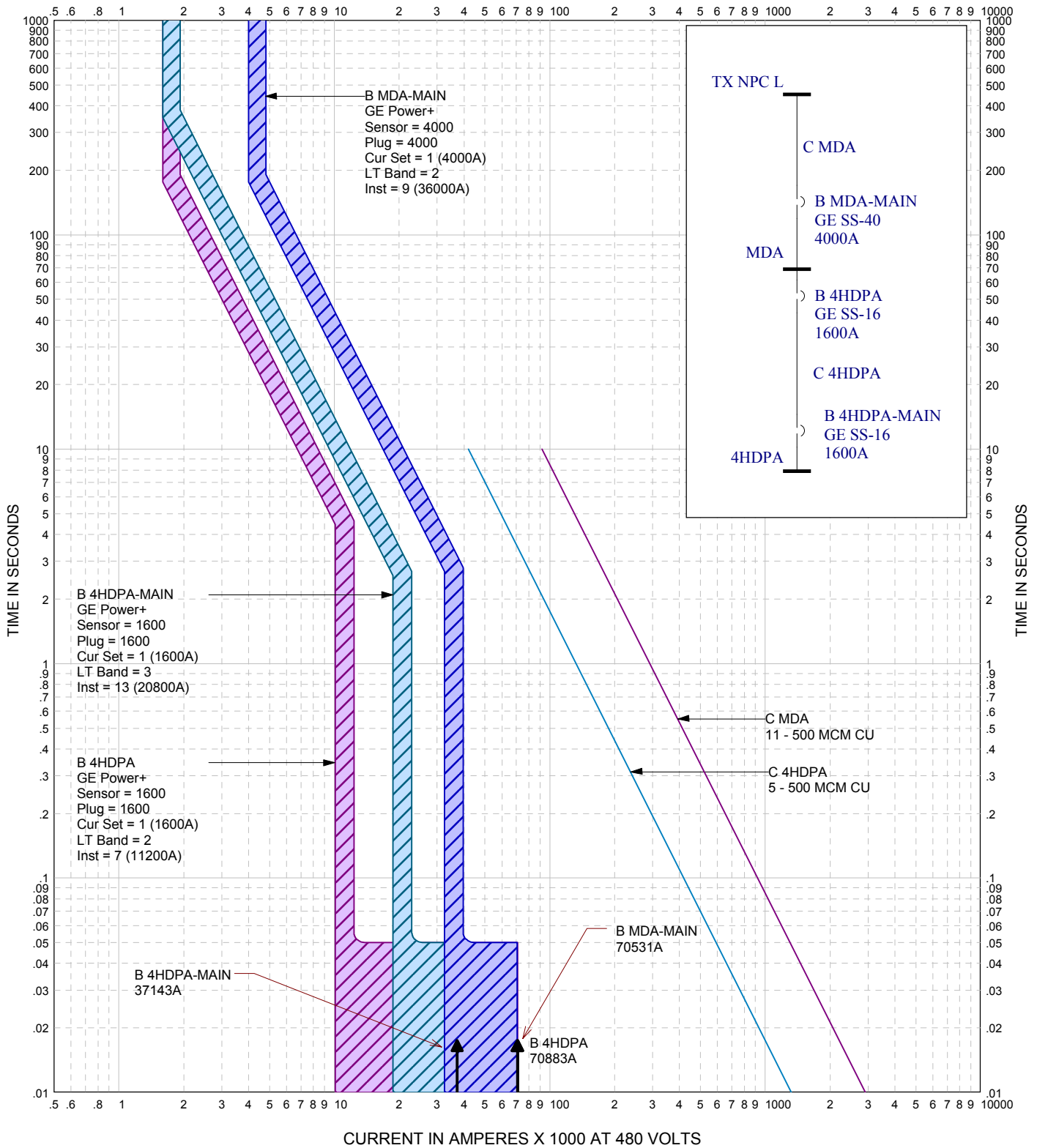
E Sheet 5.01 TCCs

CURRENT IN AMPERES X 1000 AT 480 VOLTS



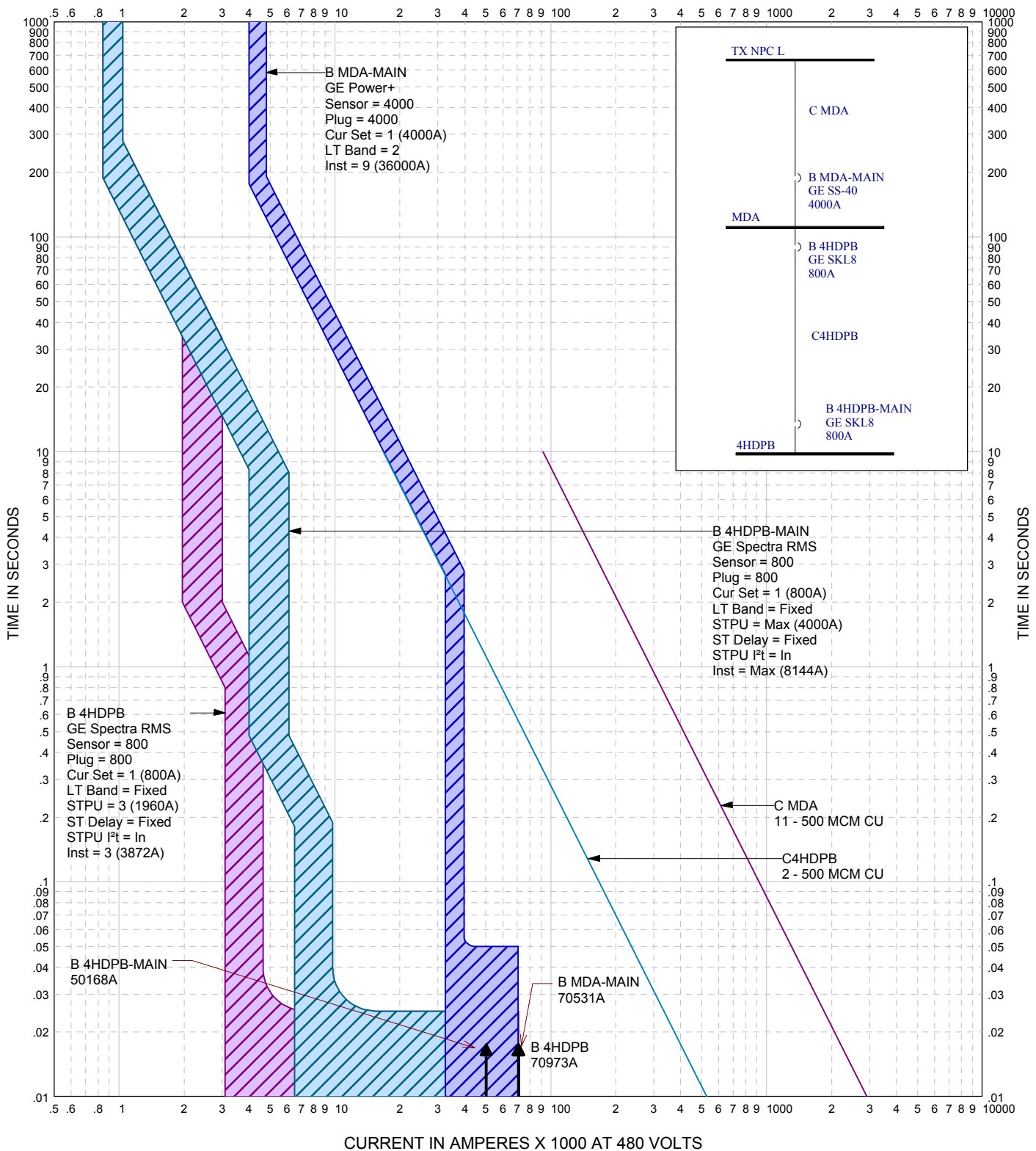
PQTSi	EasyPower® TIME-CURRENT CURVES	MDA to 3HDPA
East Career and Technical Academy - E5.01 Breaker Settings: MDA-Main, Feeder 3HDPA, 3HDP-Main		FAULT: Phase DATE: Oct 02, 2007 BY: J Dietrich REVISION: 0

CURRENT IN AMPERES X 1000 AT 480 VOLTS



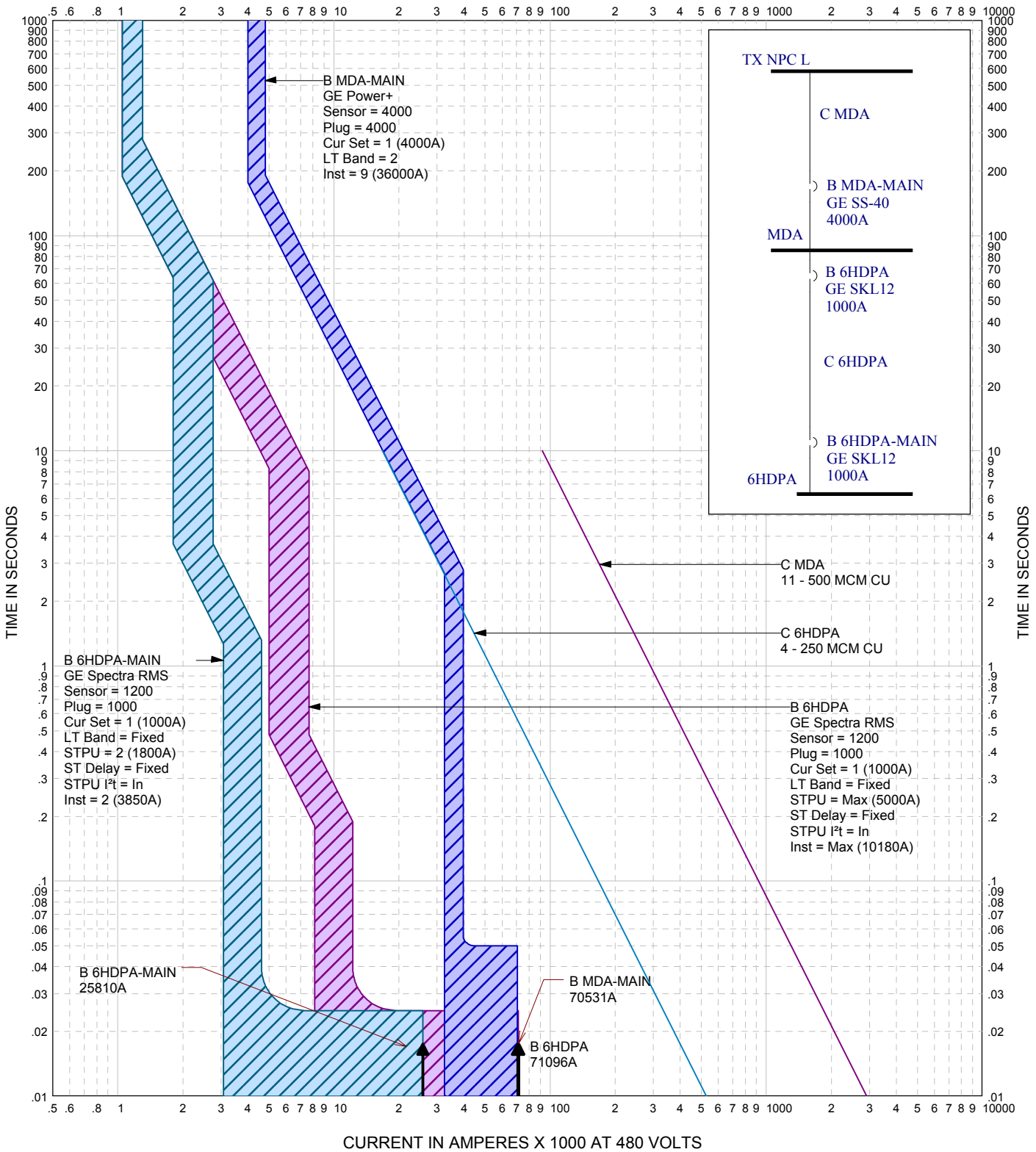
PQTSi	EasyPower® TIME-CURRENT CURVES	MDA TO 4HDPA
East Career and Technical Academy - E5.01		FAULT: Phase
Breaker Settings: MDA-Main, Feeder 4HDPA, 4HDPA-Main		DATE: October 2, 2007
		BY: J Dietrich
		REVISION: 0

CURRENT IN AMPERES X 1000 AT 480 VOLTS



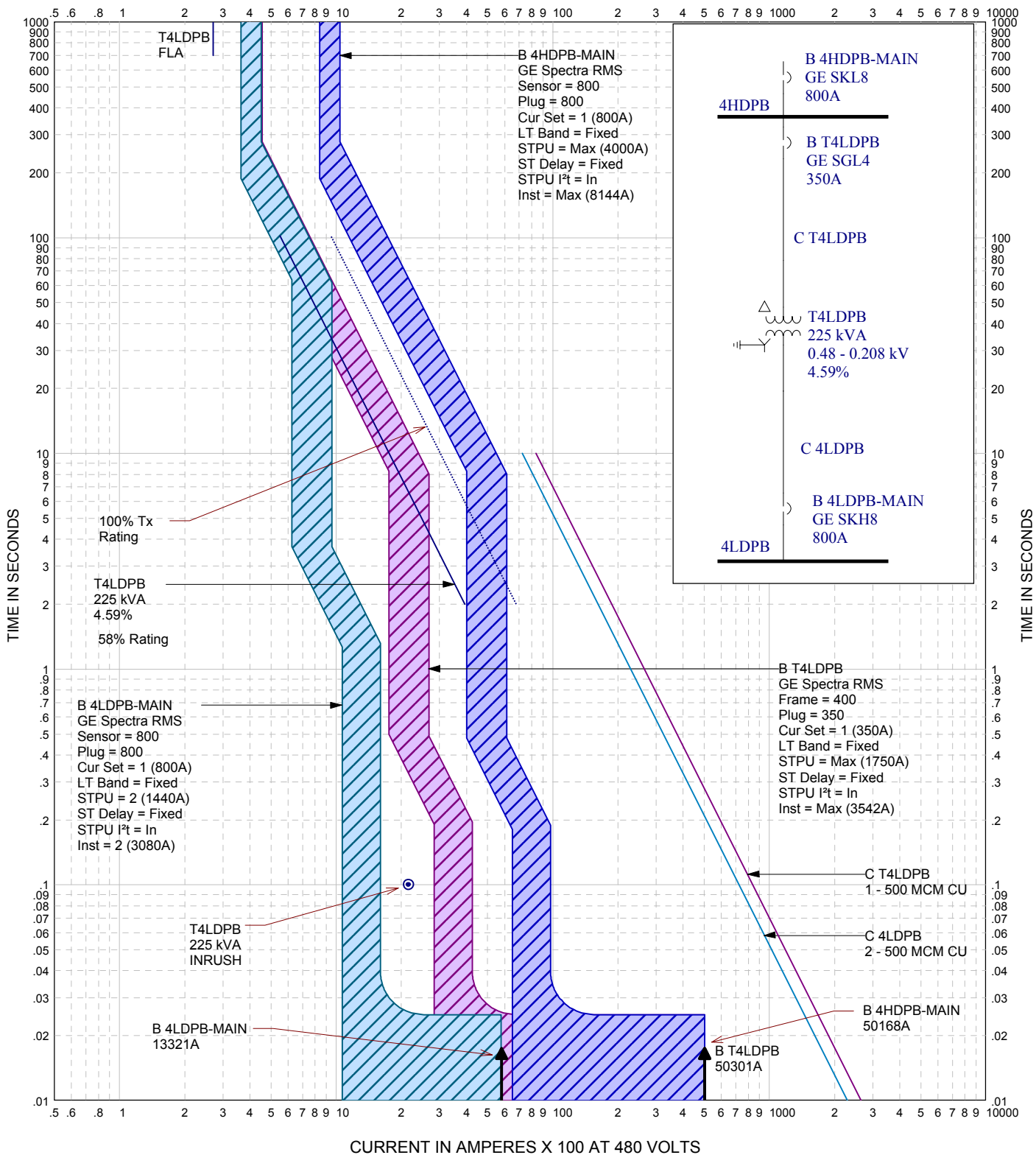
PQTSi	EasyPower® TIME-CURRENT CURVES	MDA to 4HDPB
East Career and Technical Academy - E5.01		FAULT: Phase
Breaker Settings: MDA-Main, Feeder 4HDPB, 4HDPB-Main		DATE: Oct 02, 2007
		BY: J Dietrich
		REVISION: 0

CURRENT IN AMPERES X 1000 AT 480 VOLTS



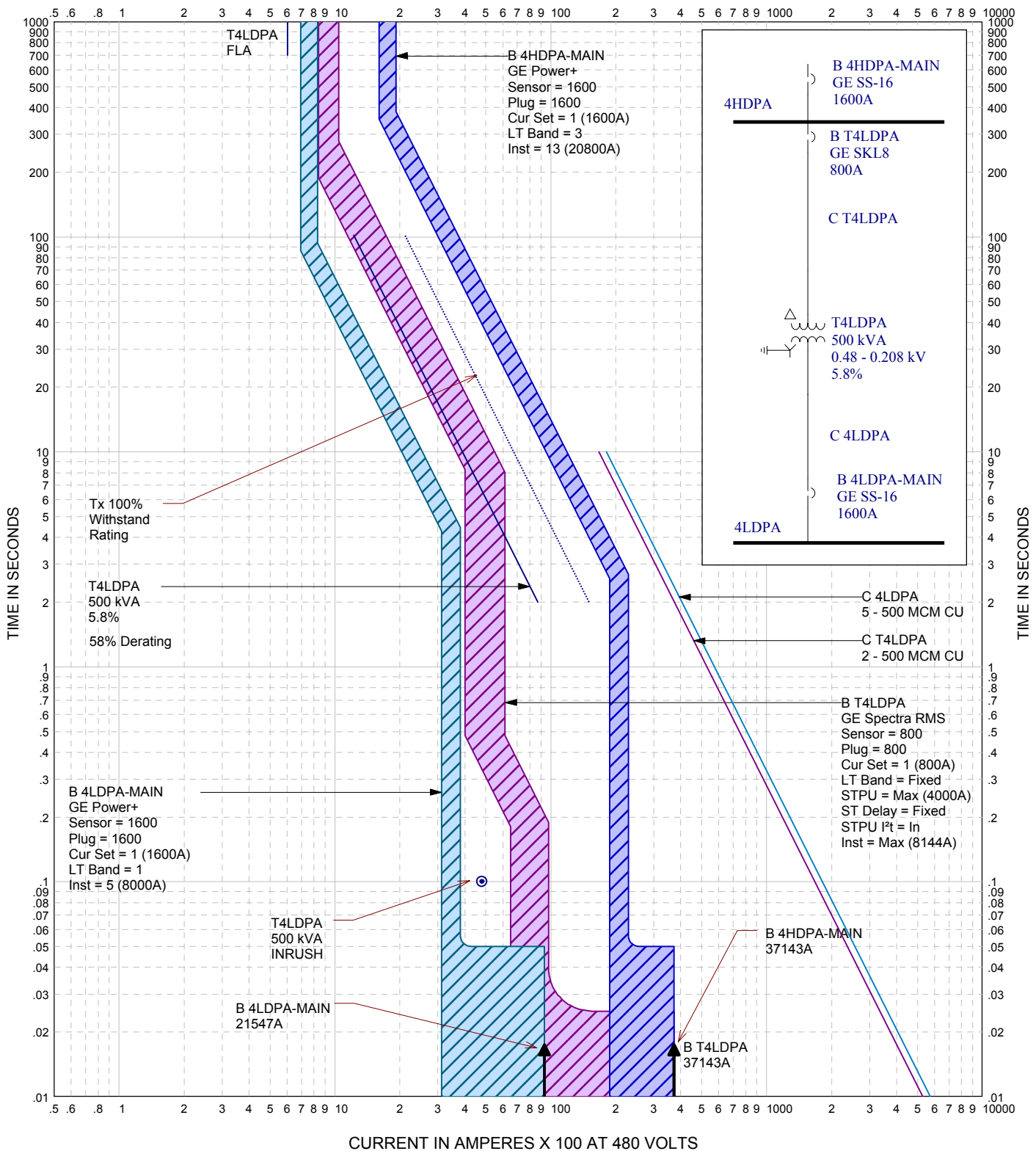
PQTSi	EasyPower® TIME-CURRENT CURVES	MDA to 6HDPA
East Career and Technical Academy - E5.01		FAULT: Phase
Breaker Settings: MDA-Main, Feeder 6HDPA, 6HDPA-Main		DATE: Oct 02, 2007
		BY: J Dietrich
		REVISION: 0

CURRENT IN AMPERES X 100 AT 480 VOLTS



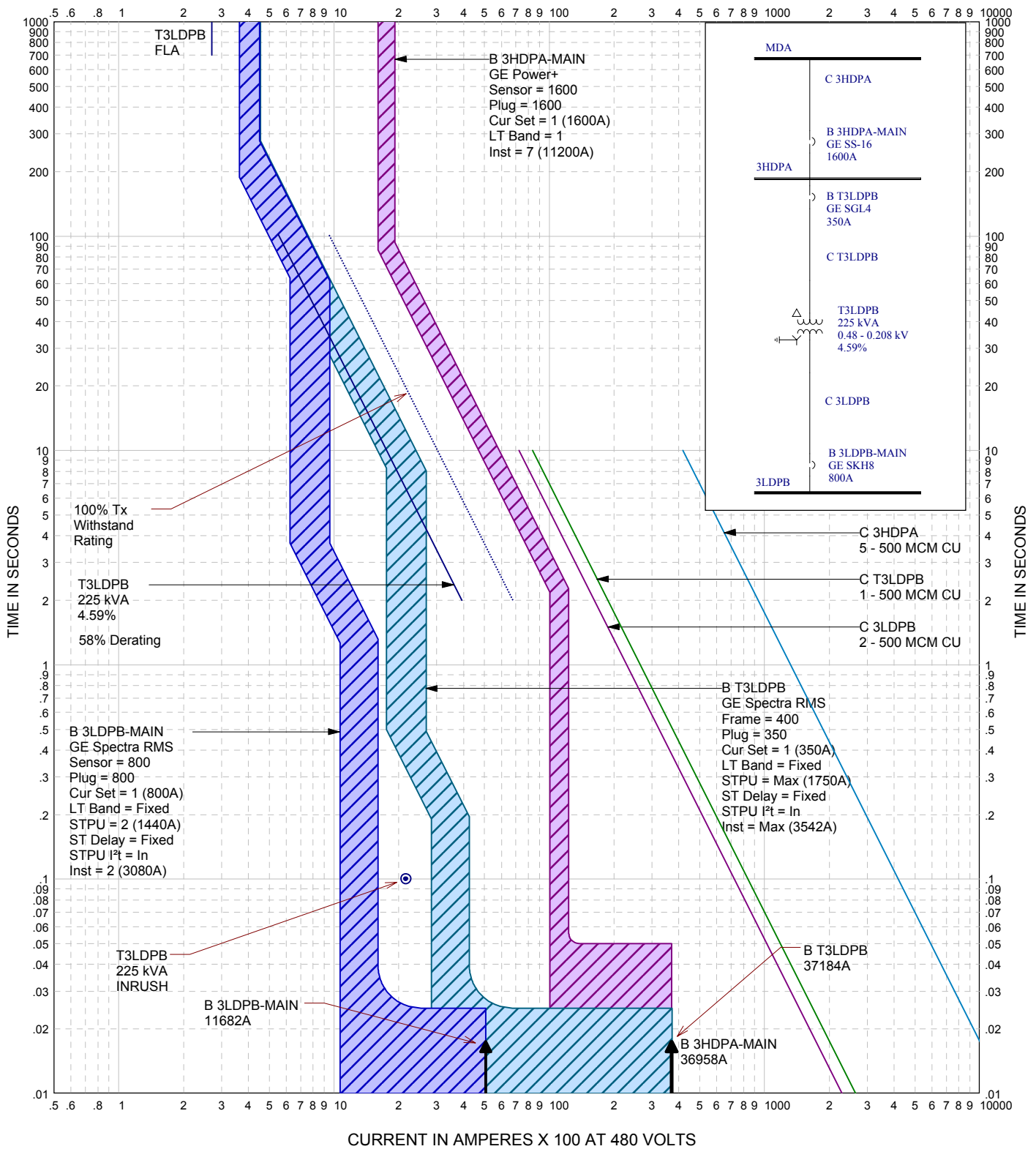
PQTSi	EasyPower[®] TIME-CURRENT CURVES	Tx T4LDPB
East Career and Technical Academy - E5.01 Breaker Settings: 4HDPB-Main, Feeder T4LDPB, 4LDPB-Main		FAULT: Phase DATE: Oct 02, 2007 BY: J Dietrich REVISION: 0

CURRENT IN AMPERES X 100 AT 480 VOLTS



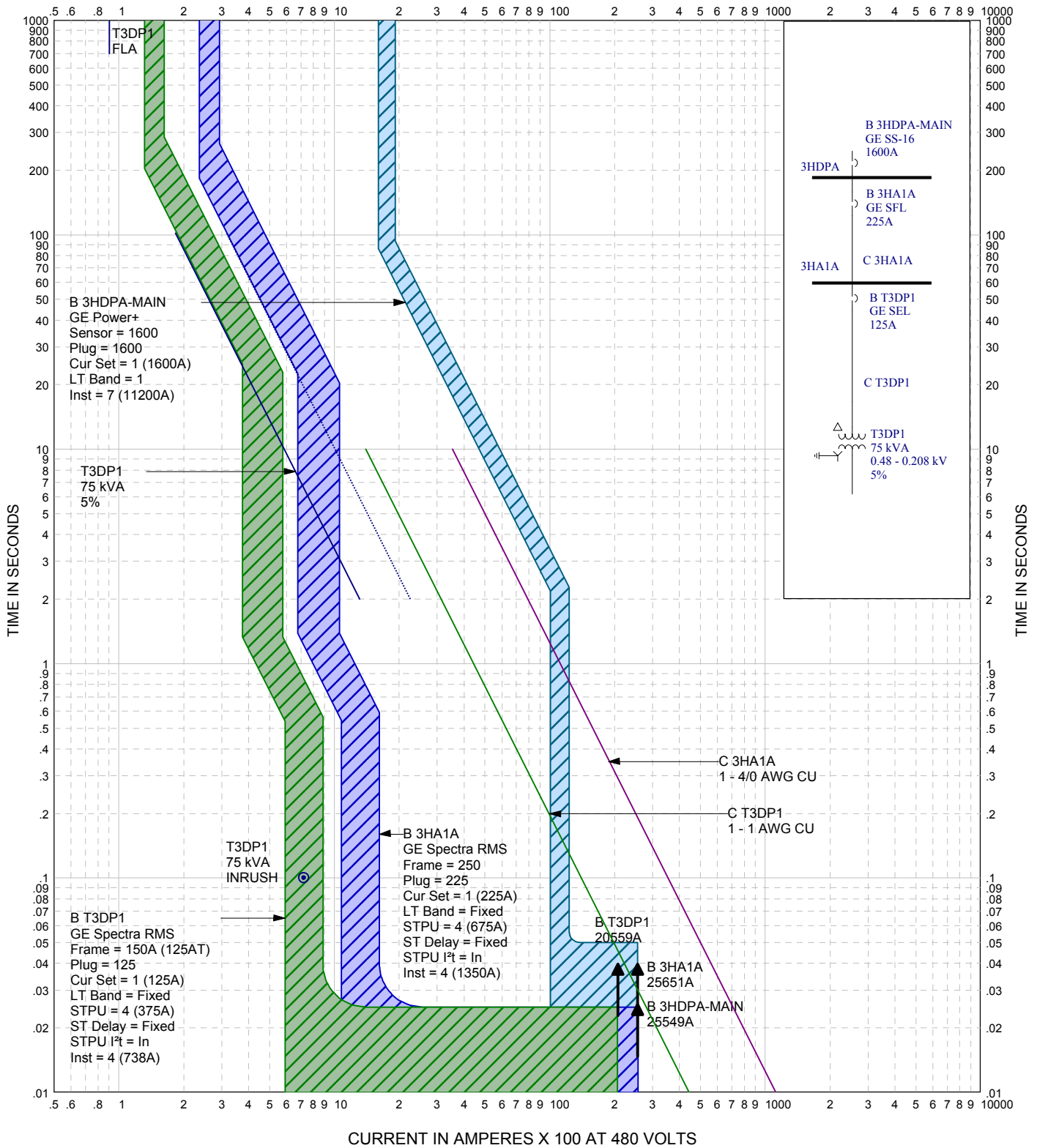
PQTSi	EasyPower[®] TIME-CURRENT CURVES	T4LDPA
East Career and Technical Academy - E5.01 Breaker Settings: 4HDPAs-Main, Feeder T4LDPA, 4LDPA-Main		FAULT: Phase DATE: Oct 02, 2007 BY: J Dietrich REVISION: 0

CURRENT IN AMPERES X 100 AT 480 VOLTS



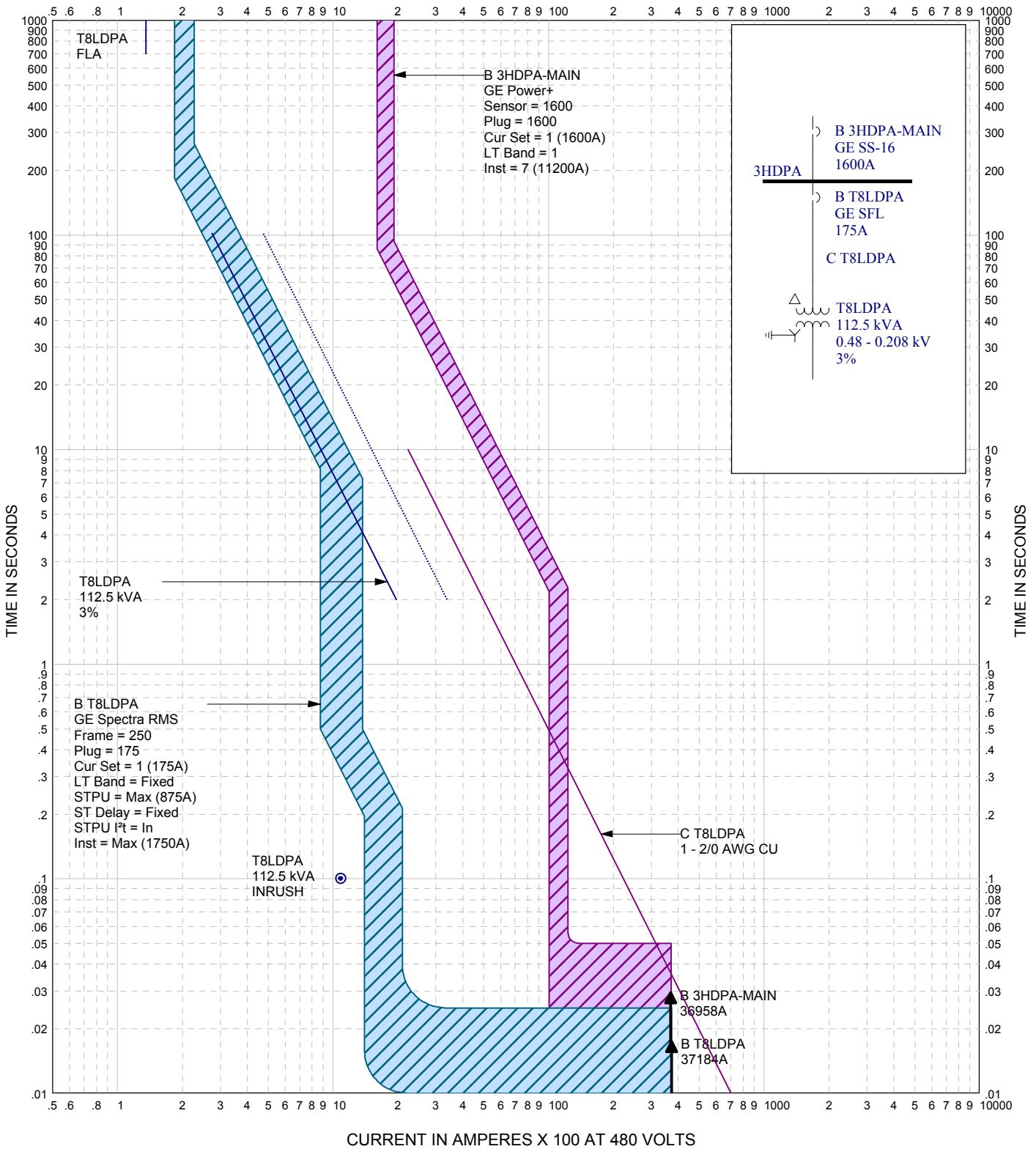
PQTSi	EasyPower® TIME-CURRENT CURVES	T3LDPB
East Career and Technical Academy - E5.01 Breaker Settings: 3HDDPA-Main, Feeder T3LDPB, 3LDPB-Main		FAULT: Phase DATE: Oct 02, 2007 BY: J Dietrich REVISION: 0

CURRENT IN AMPERES X 100 AT 480 VOLTS



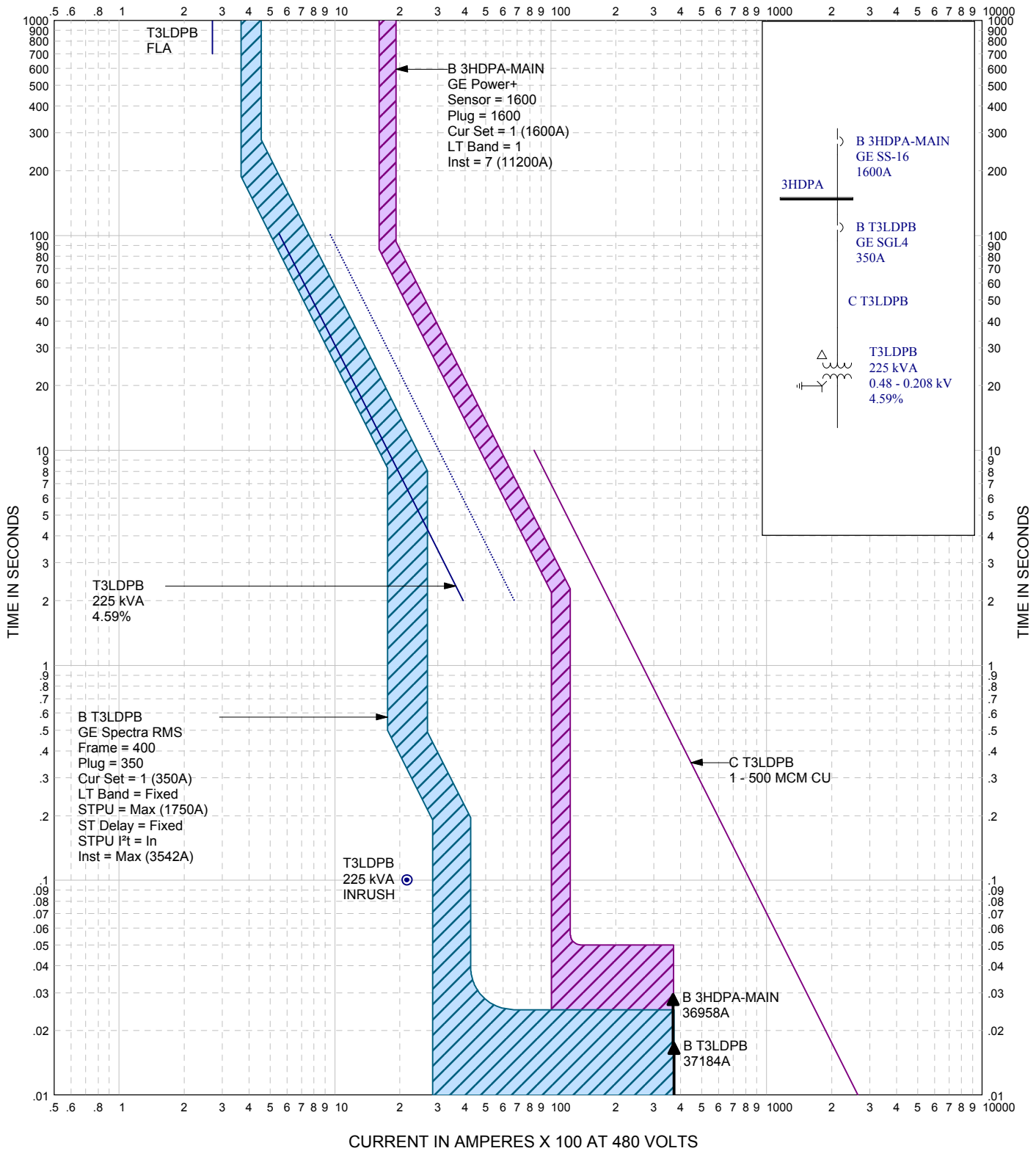
PQTSi	EasyPower® TIME-CURRENT CURVES	T3DP1
East Career and Technical Academy E5.01 Breaker Settings: 3HDDPA-Main, Feeder 3HA1A, Feeder T3DP1, Transformer T3DP1		FAULT: Phase DATE: October 02, 2007 BY: Joe Dietrich REVISION: 0

CURRENT IN AMPERES X 100 AT 480 VOLTS



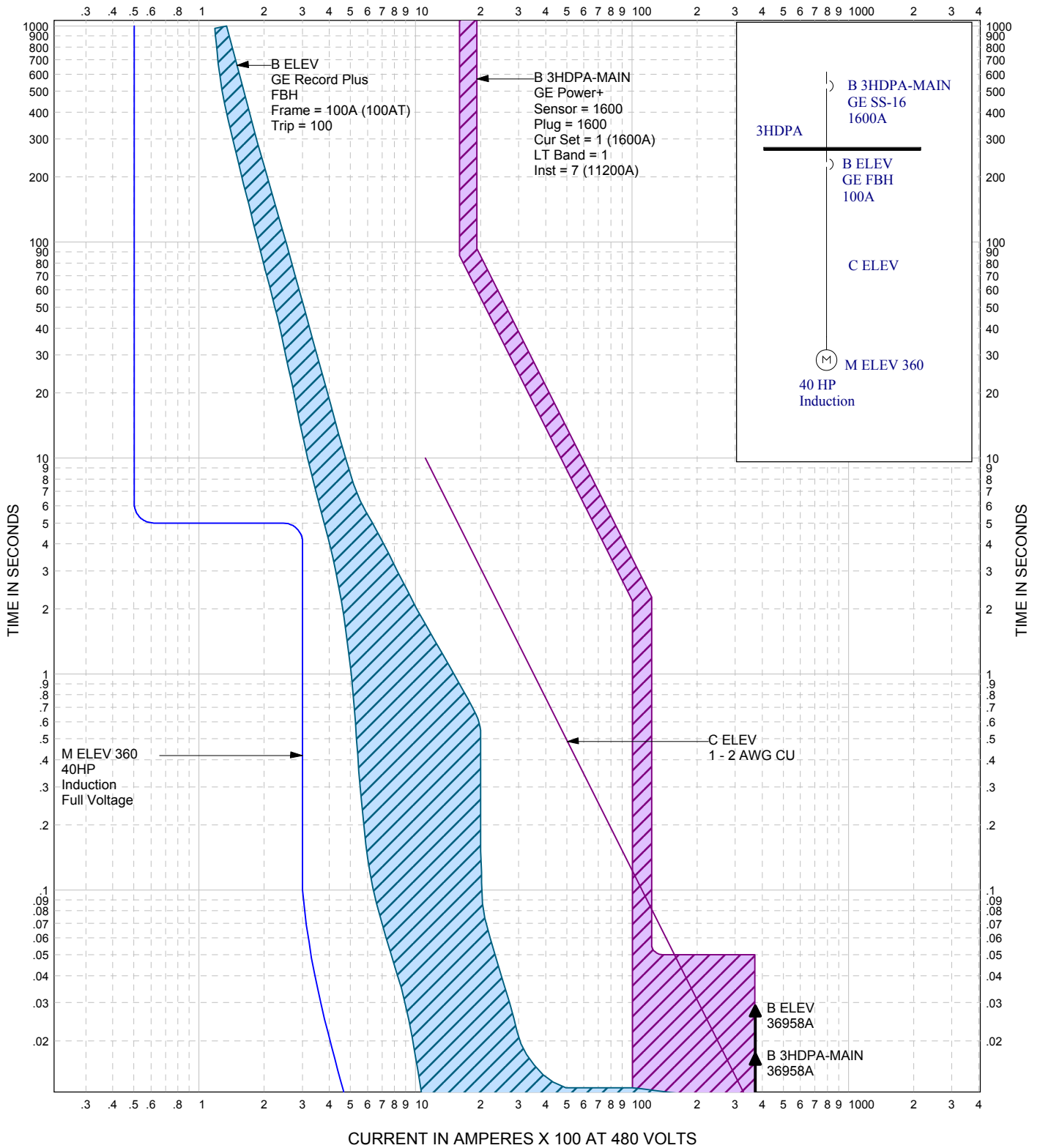
PQTSi	EasyPower® TIME-CURRENT CURVES	T8LDPA
East Career and Technical Academy E5.01 Breaker Settings: 3HDDPA-Main, Feeder T8LDPA (T8LDPB & T3LDPA Typical)	FAULT: Phase DATE: Oct. 02, 2007 BY: Joe Dietrich REVISION: 0	

CURRENT IN AMPERES X 100 AT 480 VOLTS



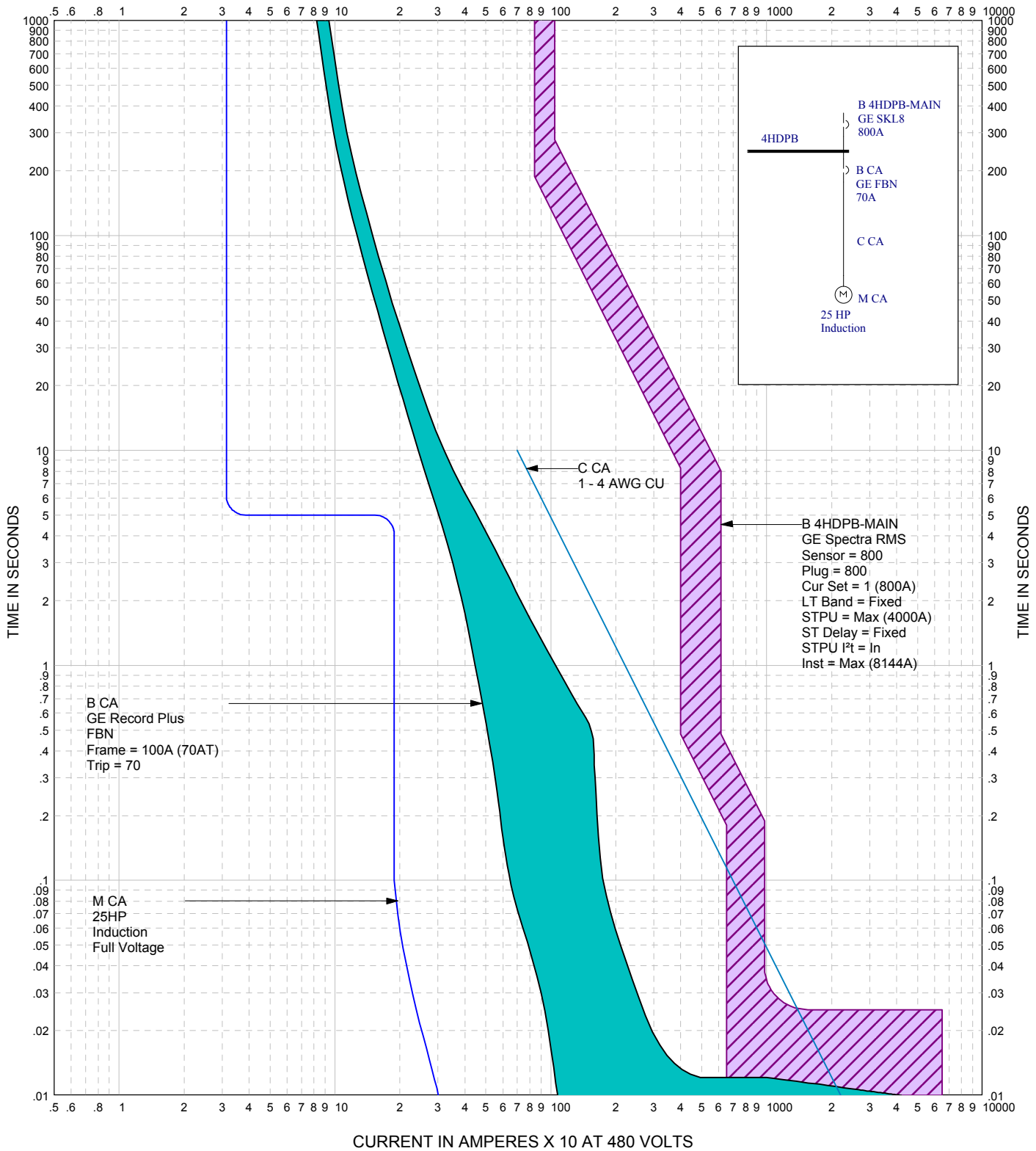
PQTSI	EasyPower[®] TIME-CURRENT CURVES	T3LDPB
East Career and Technical Academy E5.01		FAULT: Phase
Breaker Settings: 3HDDPA-Main, Feeder T3LDPB (typical T4LDPB)		DATE: Oct. 02, 2007
		BY: Joe Dietrich
		REVISION: 0

CURRENT IN AMPERES X 100 AT 480 VOLTS



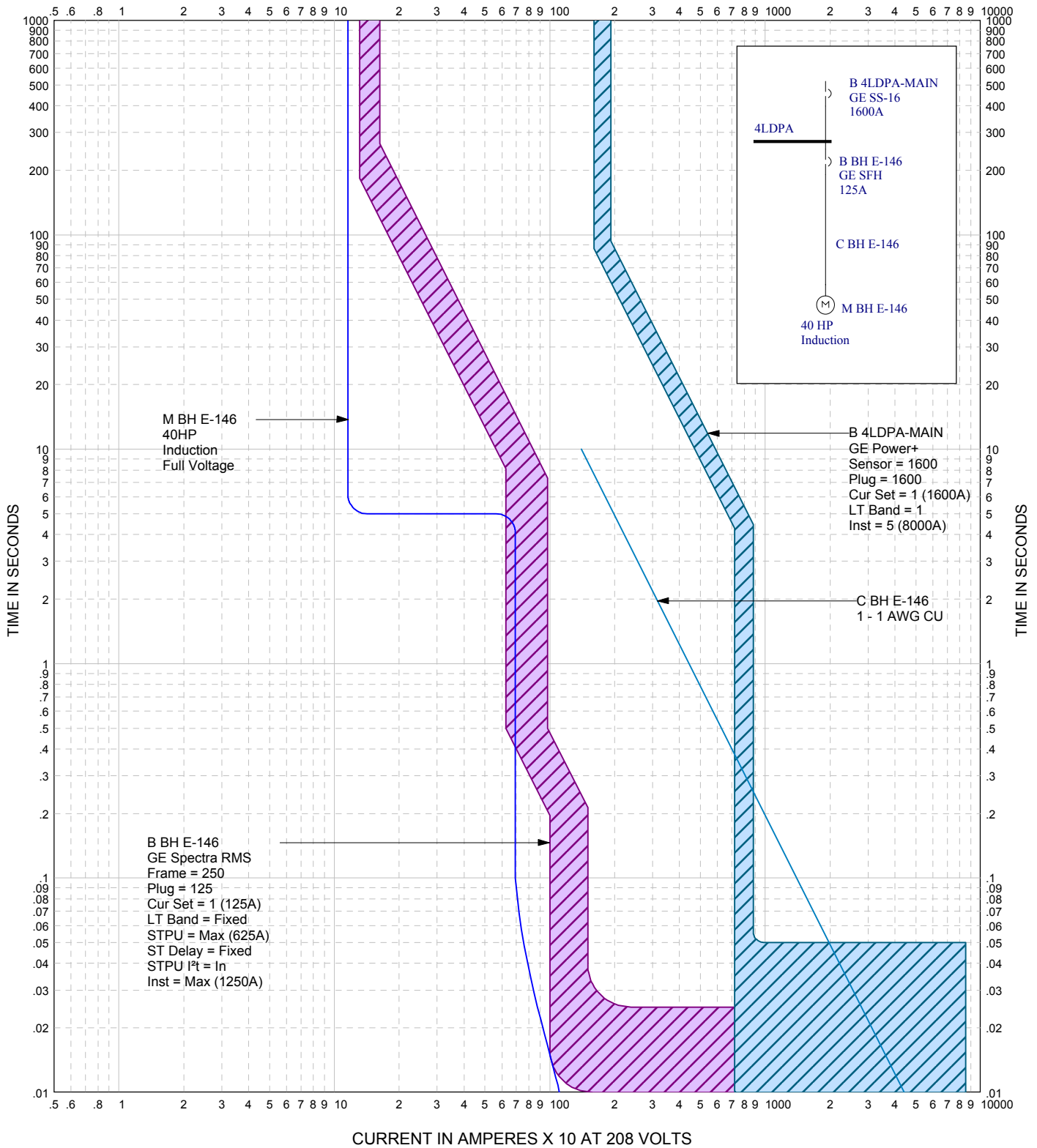
PQTSI	EasyPower[®] TIME-CURRENT CURVES	ELEV 360
East Career and Technical Academy E5.01		FAULT: Phase
Breaker Settings: 3HDDPA-Main, Feeder ELEV 360		DATE: Oct 02, 2007
		BY: Joe Dietrich
		REVISION: 0

CURRENT IN AMPERES X 10 AT 480 VOLTS



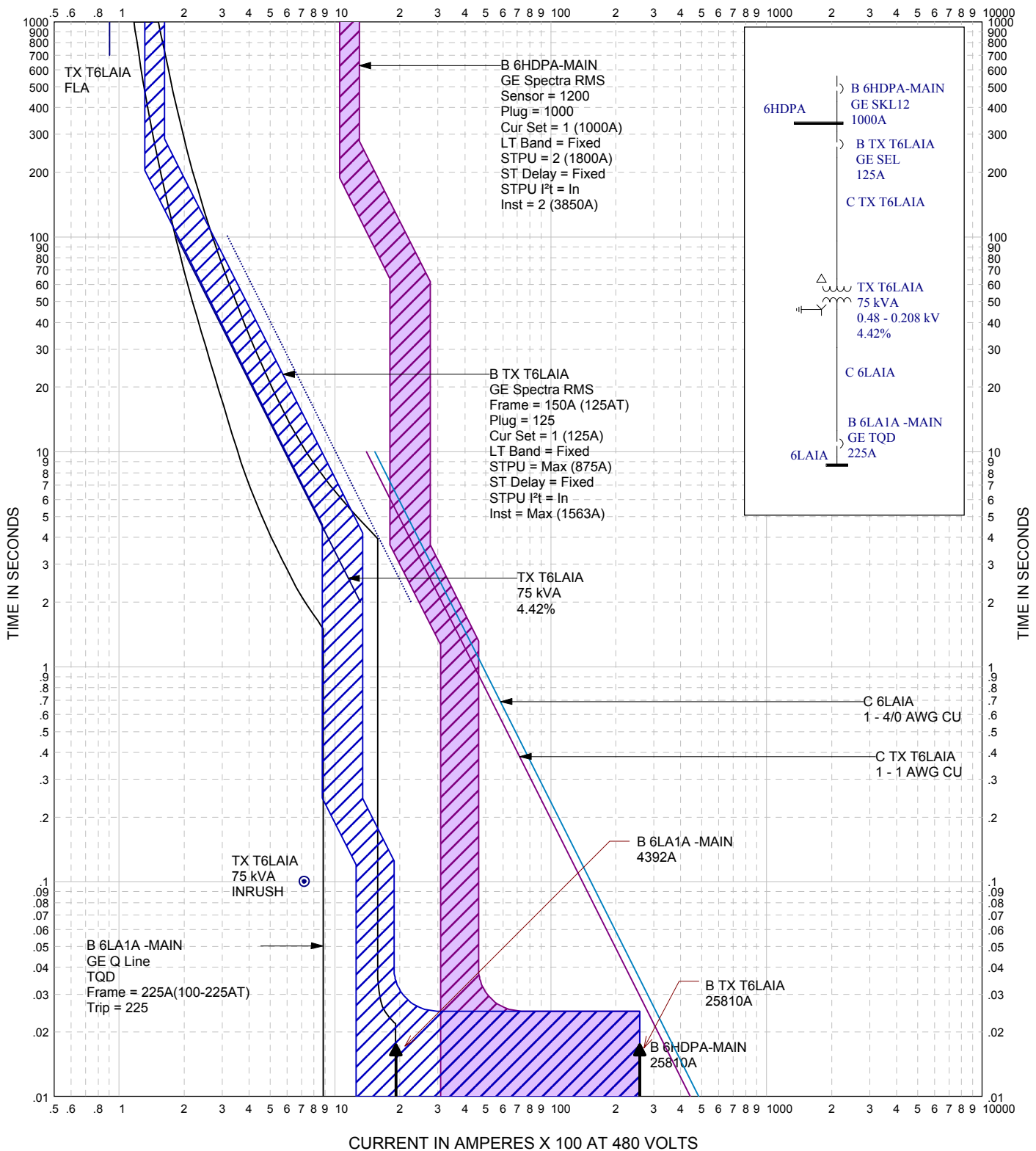
PQTSi	EasyPower[®] TIME-CURRENT CURVES	Motor CA
East Career and Technical Academy - E5.01		FAULT: Phase
Breaker Settings: 4HDPB-Main, Feeder Motor CA		DATE: Oct 02, 2007
		BY: J Dietrich
		REVISION: 0

CURRENT IN AMPERES X 10 AT 208 VOLTS



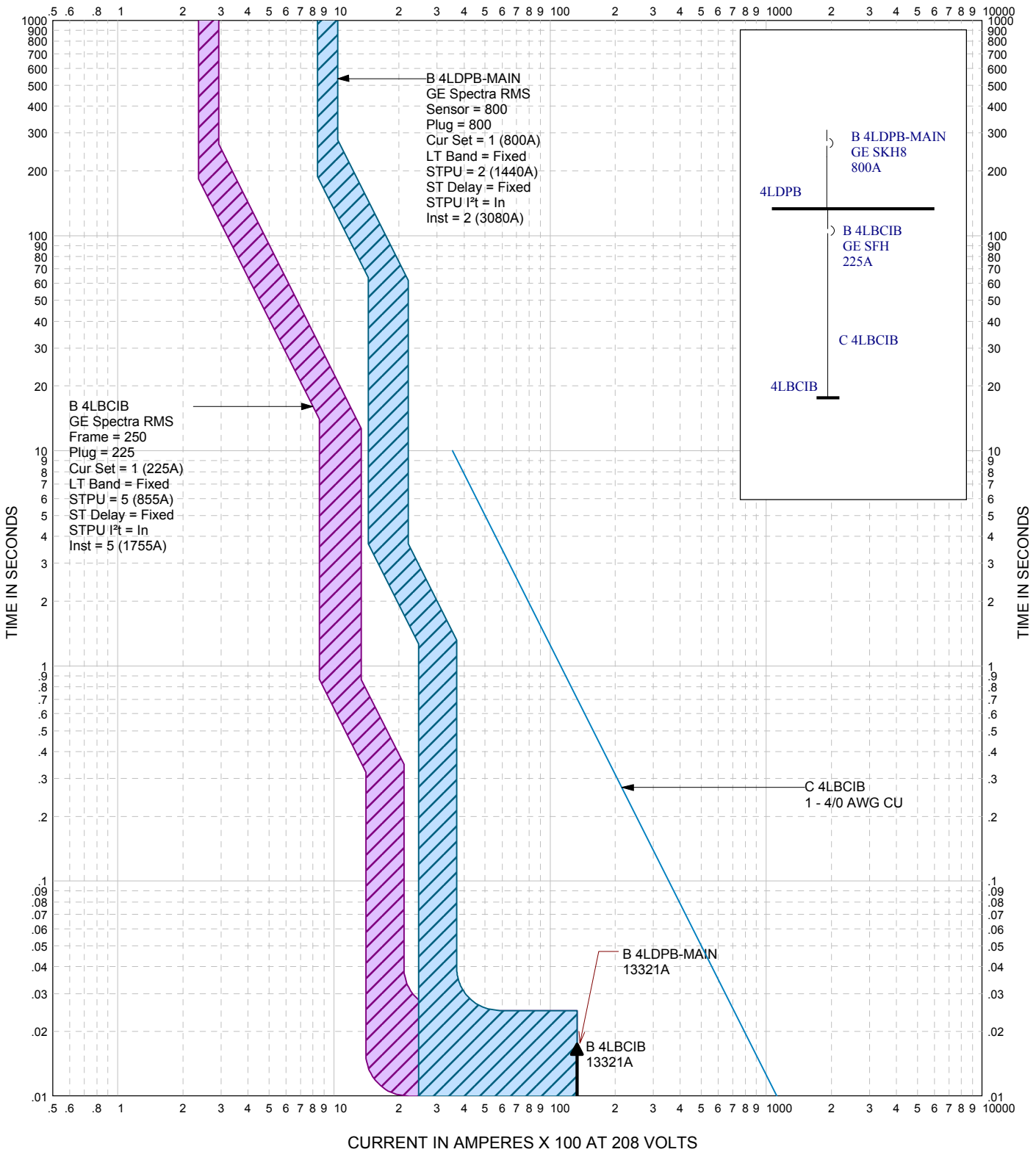
PQTSi	EasyPower[®] TIME-CURRENT CURVES	Motor BH E-146
East Career and Technical Academy - E5.01		FAULT: Phase
Breaker Settings: 4LDPA-Main, Feeder Motor BH E-146		DATE: Oct 02, 2007
		BY: J Dietrich
		REVISION: 0

CURRENT IN AMPERES X 100 AT 480 VOLTS



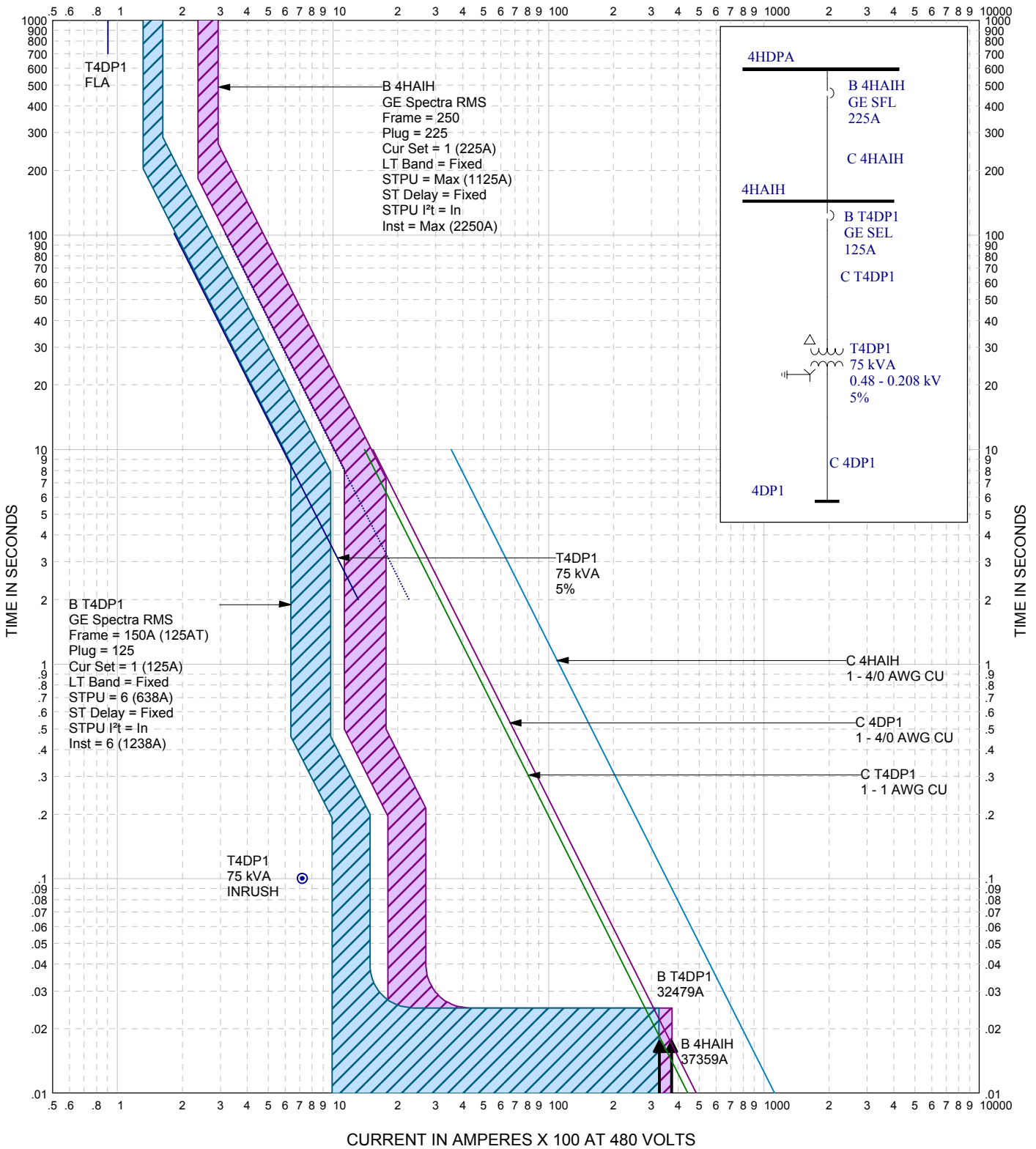
PQTSi	EasyPower[®] TIME-CURRENT CURVES	T6LAIA
East Career and Technical Academy - E5.01		FAULT: Phase
Breaker Settings: 6HDP-A-Main, Feeder Tx T6LAIA, 6LAIA-Main (Typical Tx T6LACIA)		DATE: Oct 02, 2007
		BY: J Dietrich
		REVISION: 0

CURRENT IN AMPERES X 100 AT 208 VOLTS



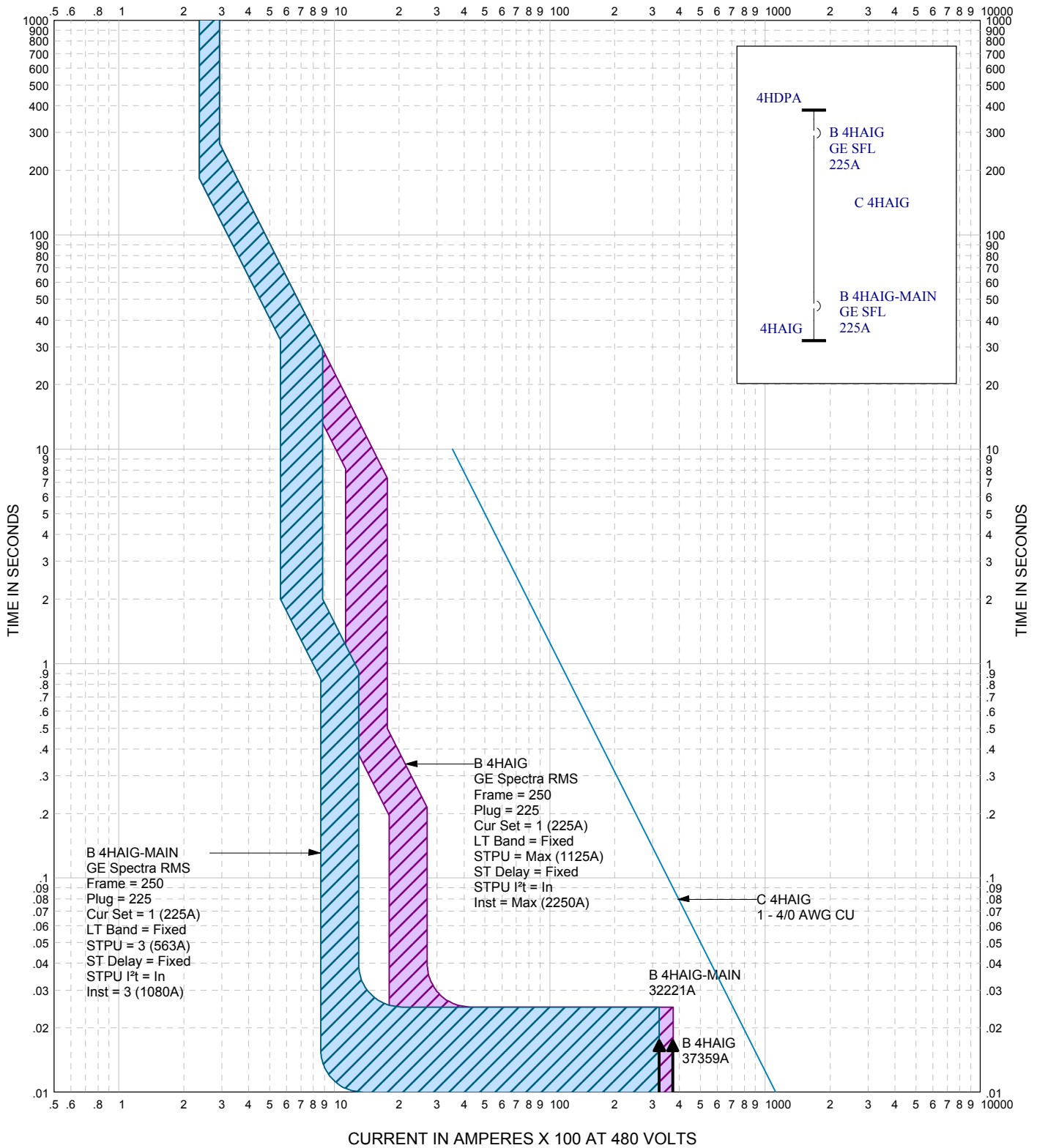
PQTSi	EasyPower[®] TIME-CURRENT CURVES	4LBC1B
East Career and Technical Academy - E5.01		FAULT: Phase
Breaker Settings: 4LDPB-Main, Feeder 4LBC1B (Typical for 225A feeders in this panel)		DATE: Oct 02, 2007
		BY: J Dietrich
		REVISION: 0

CURRENT IN AMPERES X 100 AT 480 VOLTS



PQTSi	EasyPower® TIME-CURRENT CURVES	T4DP1
East Career and Technical Academy - E5.01		FAULT: Phase
Breaker Settings: Feeder 4HAIH, Feeder T4DP1		DATE: Oct 02, 2007
		BY: J Dietrich
		REVISION: 0

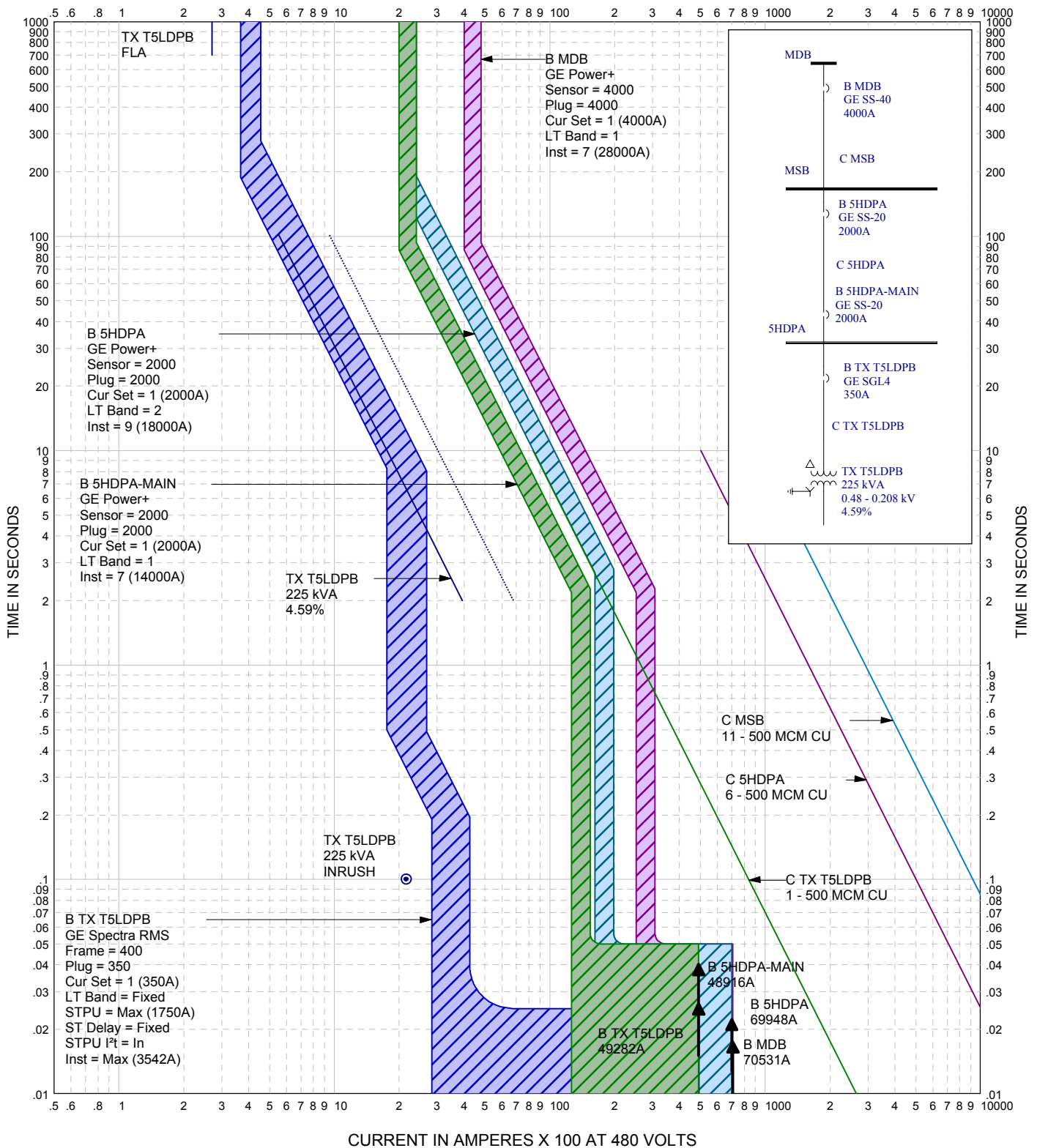
CURRENT IN AMPERES X 100 AT 480 VOLTS



PQTSi	EasyPower® TIME-CURRENT CURVES	4HAIG
East Career and Technical Academy - E5.01		FAULT: Phase
Breaker Settings: Feeder 4HAIG, 4HAIG-Main		DATE: Oct 02, 2007
		BY: J Dietrich
		REVISION: 0

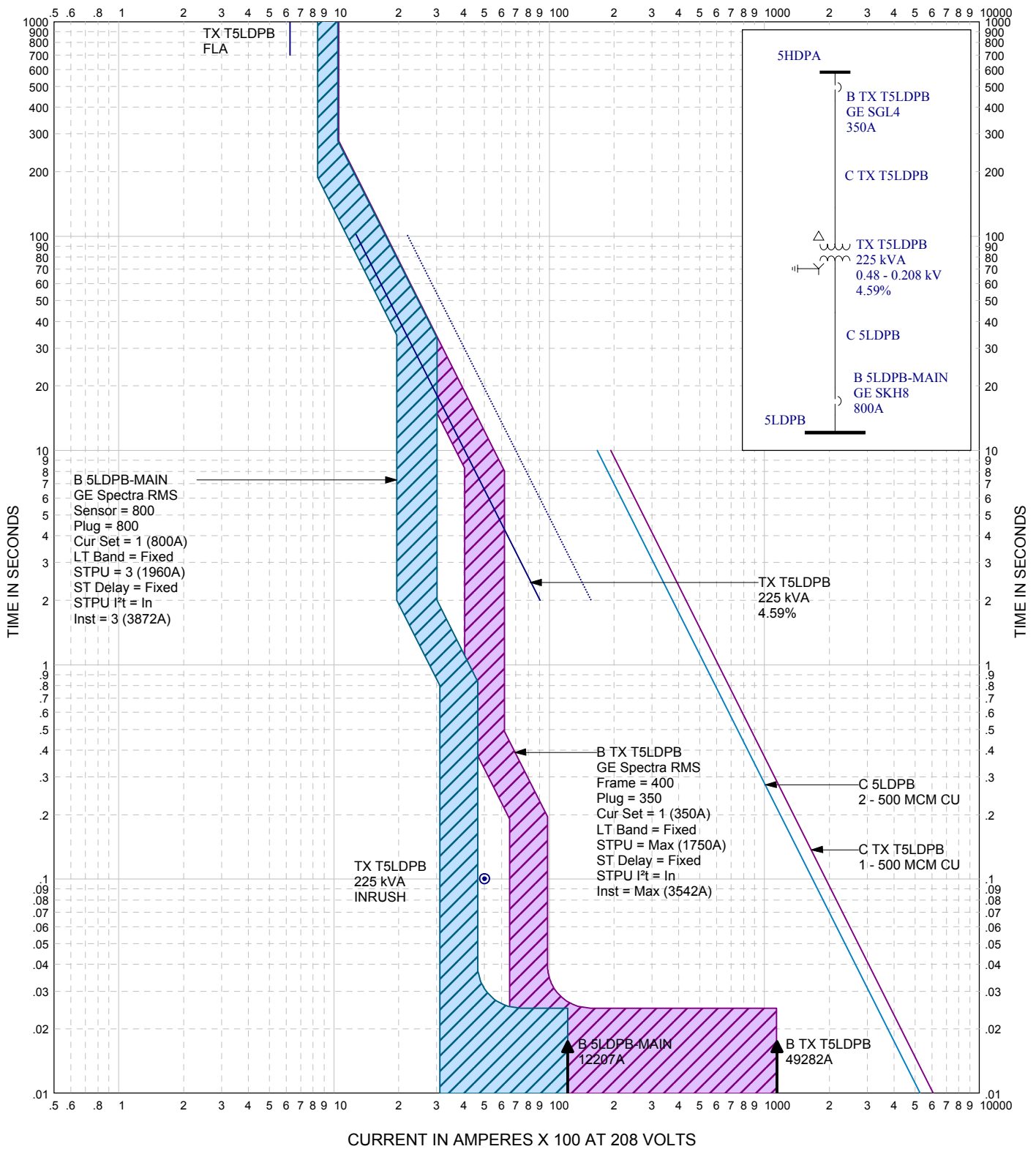
E Sheet 5.02 TCCs

CURRENT IN AMPERES X 100 AT 480 VOLTS



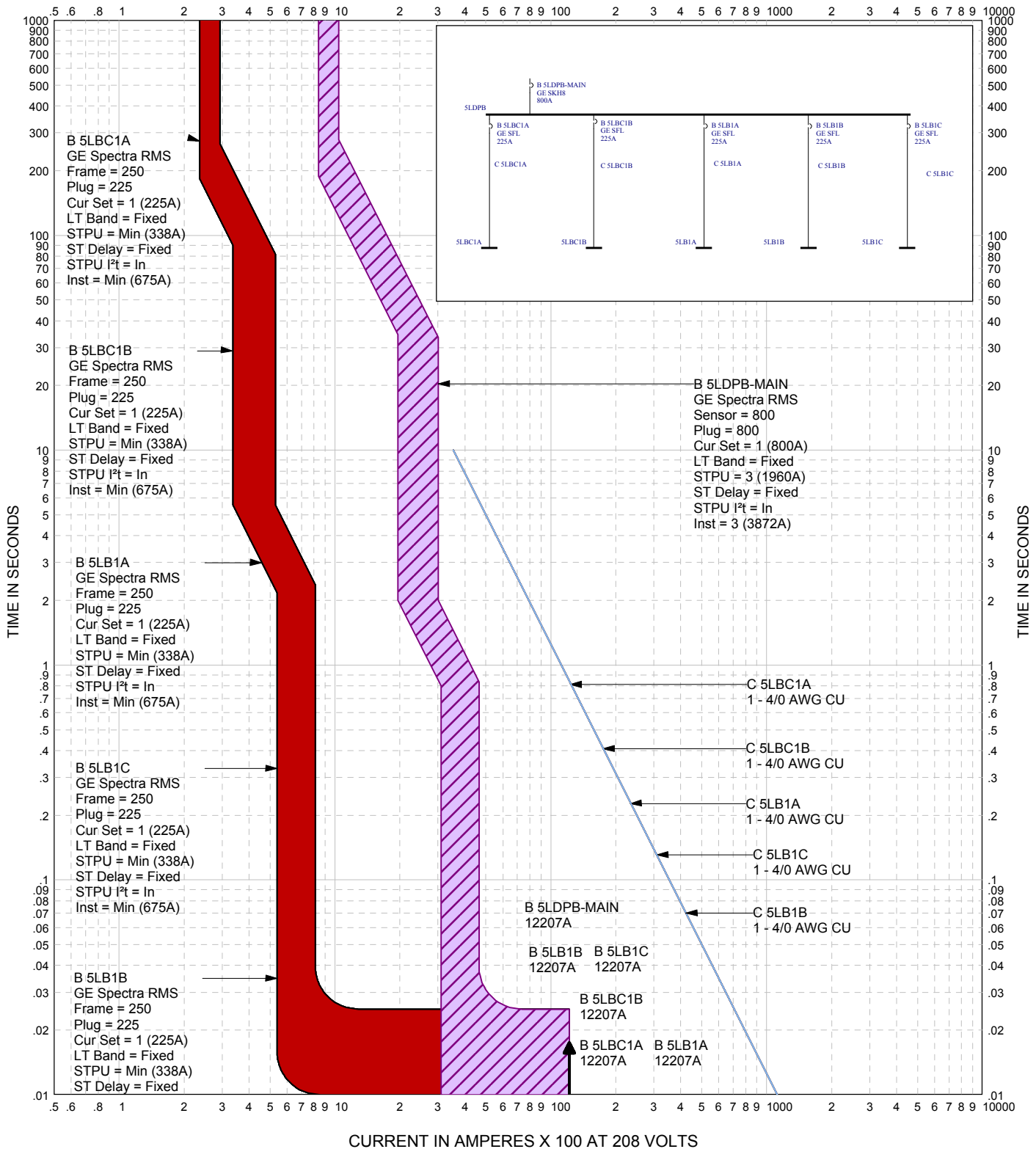
PQTSI	EasyPower® TIME-CURRENT CURVES	MDB to Tx T5LDPB
Clark County School District - East Career and Technical Academy E502 Breaker Settings: Service Main MDB, Feeder 5HDDPA, 5HDDPA-Main, Feeder Tx T5LDPB		FAULT: Phase DATE: Jan 21, 2007 BY: Joe Dietrich REVISION: 0

CURRENT IN AMPERES X 100 AT 208 VOLTS



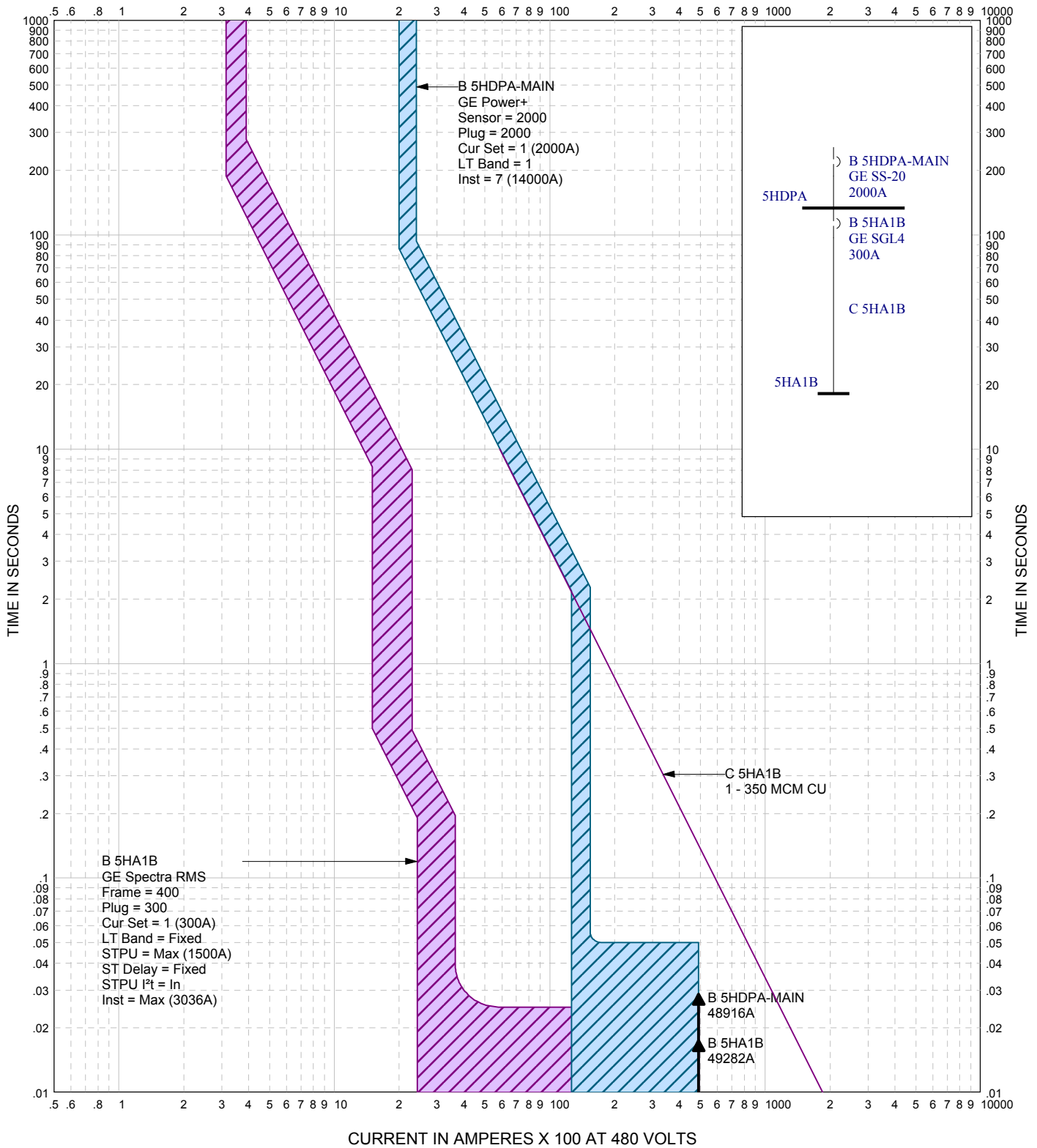
PQTSI	EasyPower[®] TIME-CURRENT CURVES	Tx T5LDPB
Clark County School District - East Career and Technical Academy E502		FAULT: Phase
Breaker Settings: Feeder Tx T5LDPB / 5LDPB-Main		DATE: Jan 21, 2007
		BY: Joe Dietrich
		REVISION: 0

CURRENT IN AMPERES X 100 AT 208 VOLTS



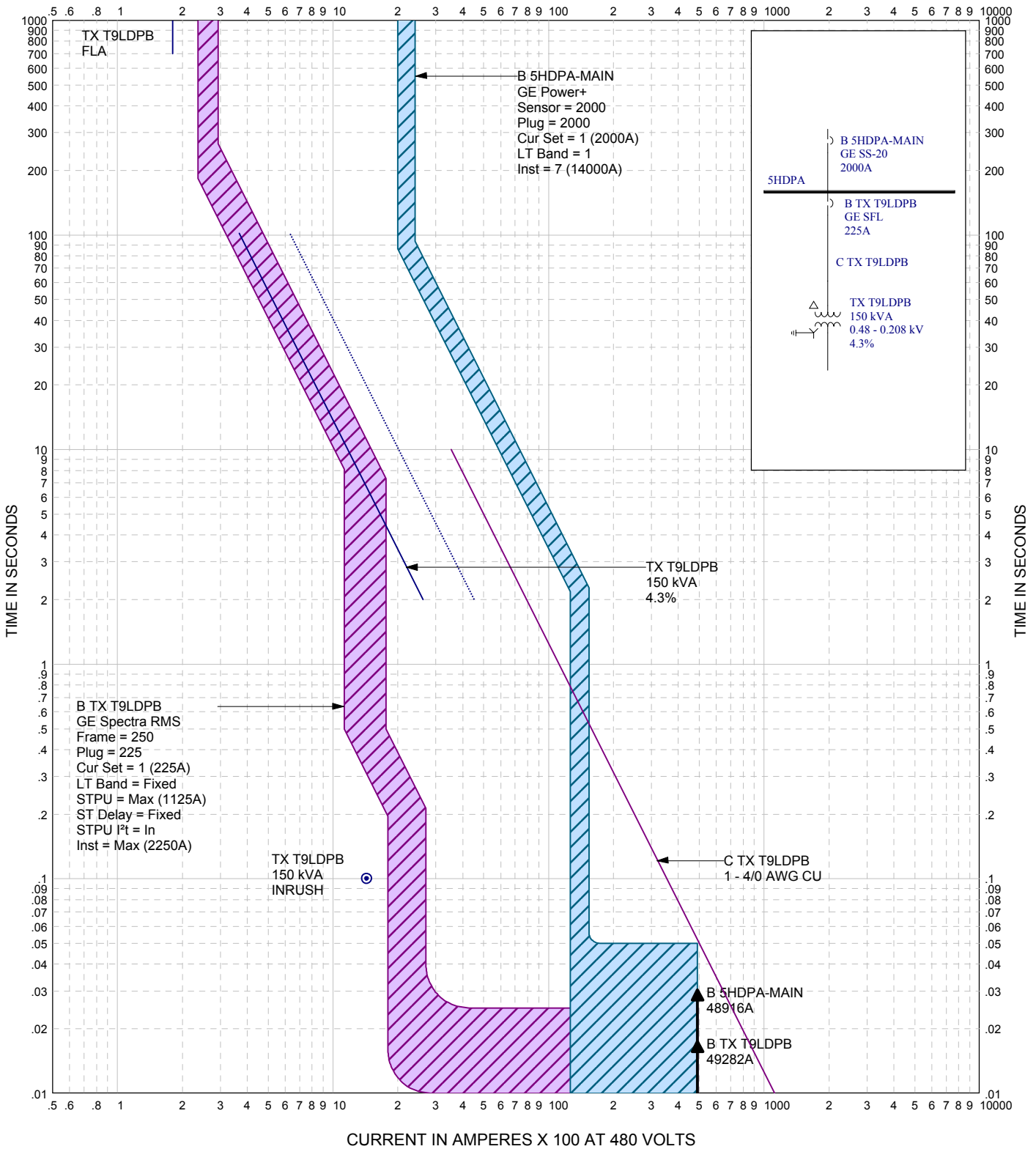
PQTSI	EasyPower® TIME-CURRENT CURVES	5LDPB Feeders
Clark County School District - East Career and Technical Academy E502		FAULT: Phase
Breaker Settings: 5LDPB Breakers		DATE: Jan 21, 2007
		BY: Joe Dietrich
		REVISION: 0

CURRENT IN AMPERES X 100 AT 480 VOLTS



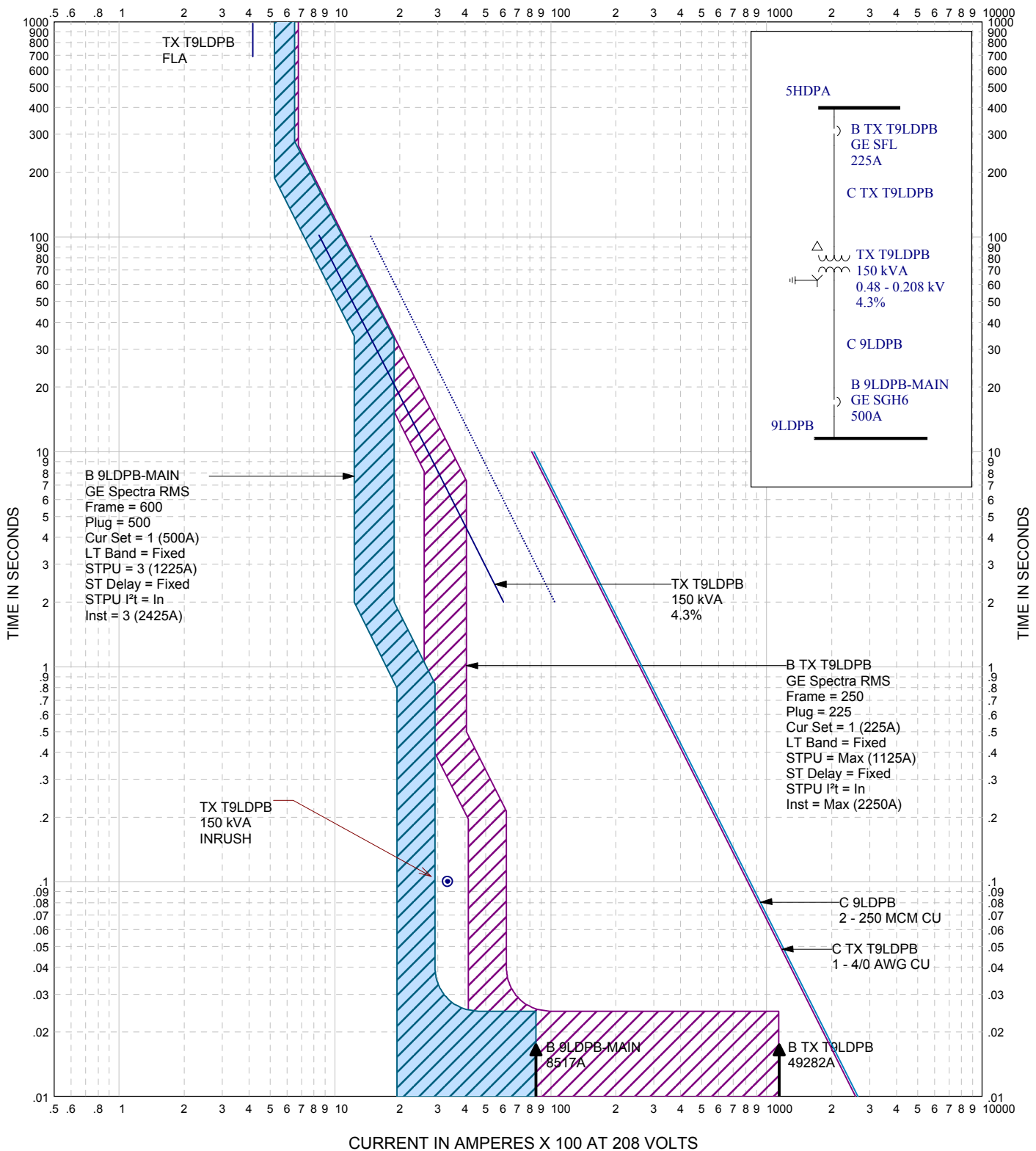
PQTSI	EasyPower® TIME-CURRENT CURVES	5HA1B
Clark County School District - East Career and Technical Academy E5.02		FAULT: Phase
Breaker Settings: 5HDPA-Main, Feeder 5HA1B (9HA2A and 5HA1C Typical)		DATE: Oct. 04, 2007
		BY: Joe Dietrich
		REVISION: 1

CURRENT IN AMPERES X 100 AT 480 VOLTS



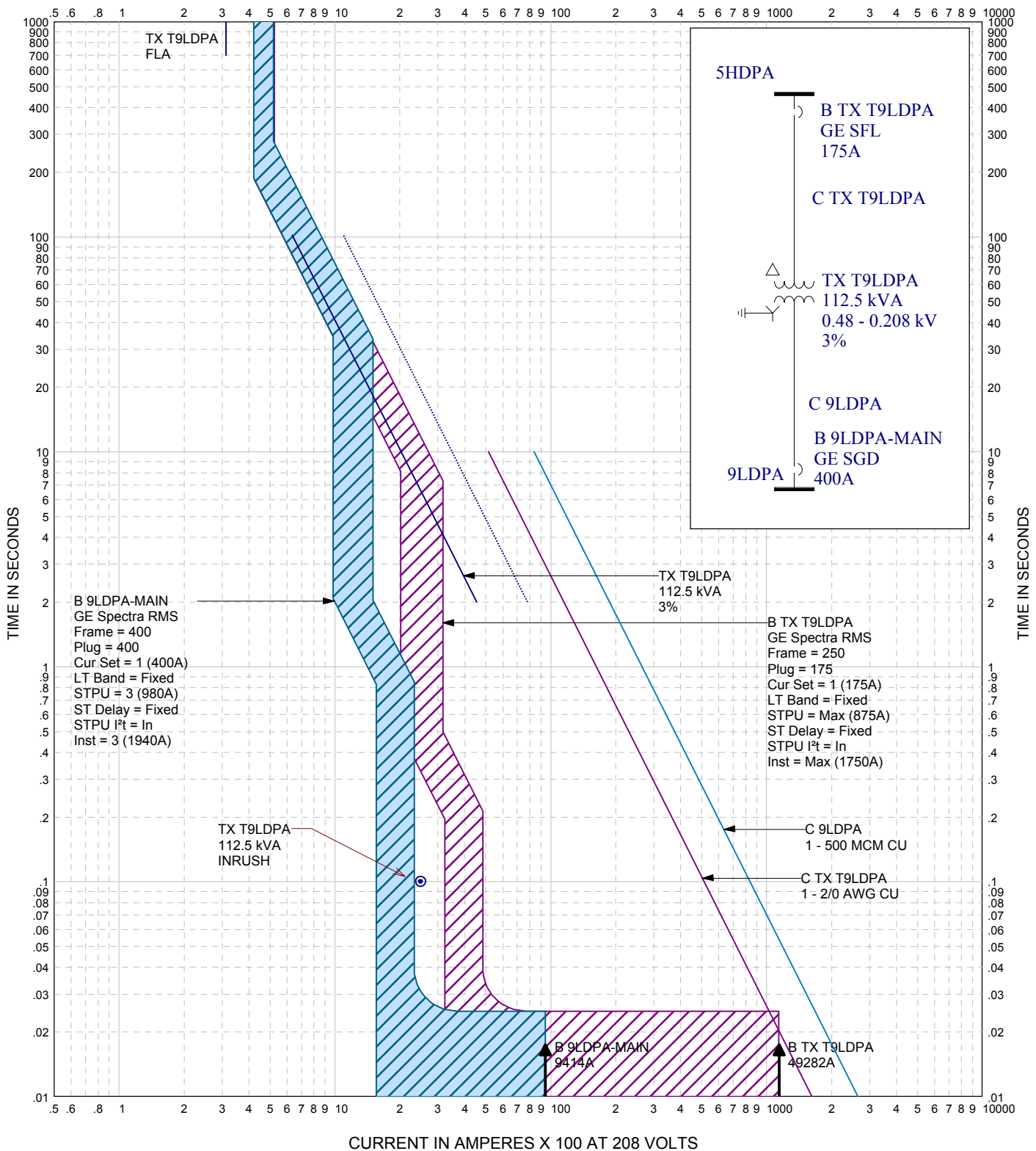
<p>PQTSI</p>	<p>EasyPower® TIME-CURRENT CURVES</p>	<p>5HDDPA to Tx T9LDPB</p>
<p>Clark County School District - East Career and Technical Academy E5.02</p> <p>Breaker Settings: 5HDDPA-Main, Feeder Tx T9LDPB (Typical for 225A breakers in this SWBD)</p>		<p>FAULT: Phase DATE: Oct 04, 2007 BY: Joe Dietrich REVISION: 1</p>

CURRENT IN AMPERES X 100 AT 208 VOLTS



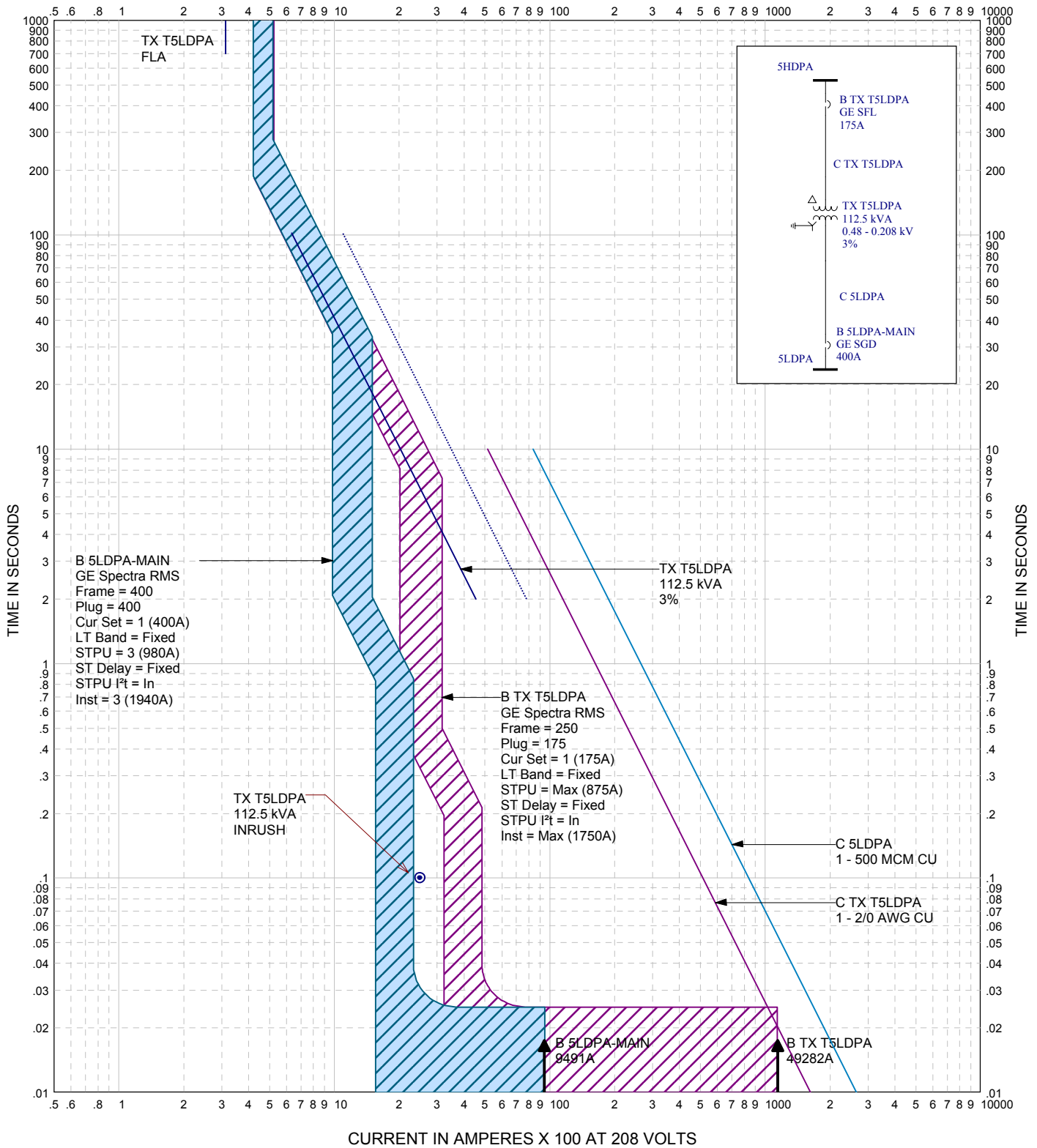
PQTSI	EasyPower® TIME-CURRENT CURVES	5HDDPA to Tx T9LDPB
Clark County School District - East Career and Technical Academy E5.02 Breaker Settings: Feeder Tx T9LDPB / 9LDPB-Main		FAULT: Phase DATE: Oct 10, 2007 BY: Joe Dietrich REVISION: 1

CURRENT IN AMPERES X 100 AT 208 VOLTS



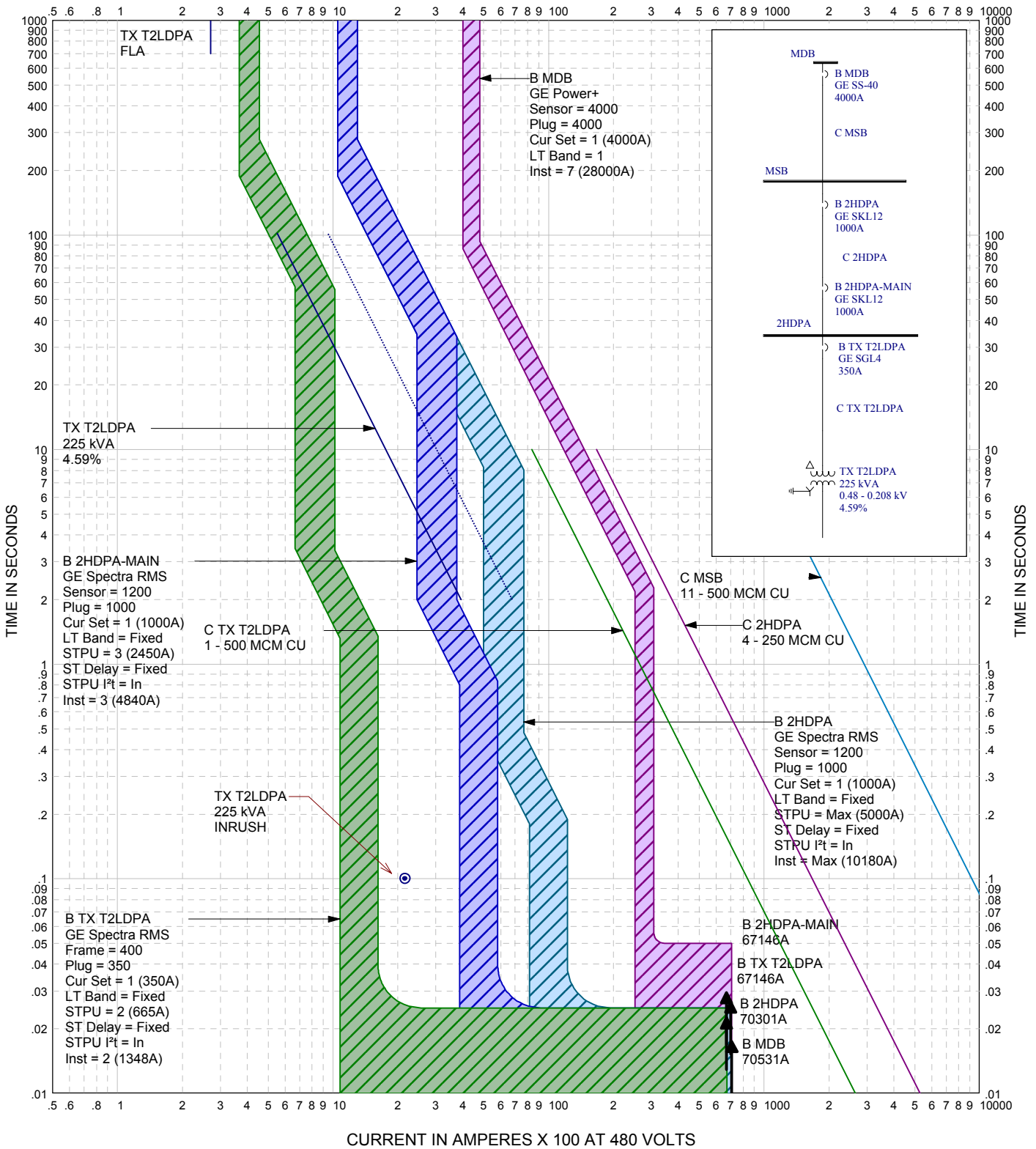
PQTSI	EasyPower[®] TIME-CURRENT CURVES	Tx T9LDPA
Clark County School District - East Career and Technical Academy E502		FAULT: Phase
Breaker Settings: Feeder Tx T9LDPA / 9LDPA-Main		DATE: Jan 21, 2007
		BY: Joe Dietrich
		REVISION: 0

CURRENT IN AMPERES X 100 AT 208 VOLTS



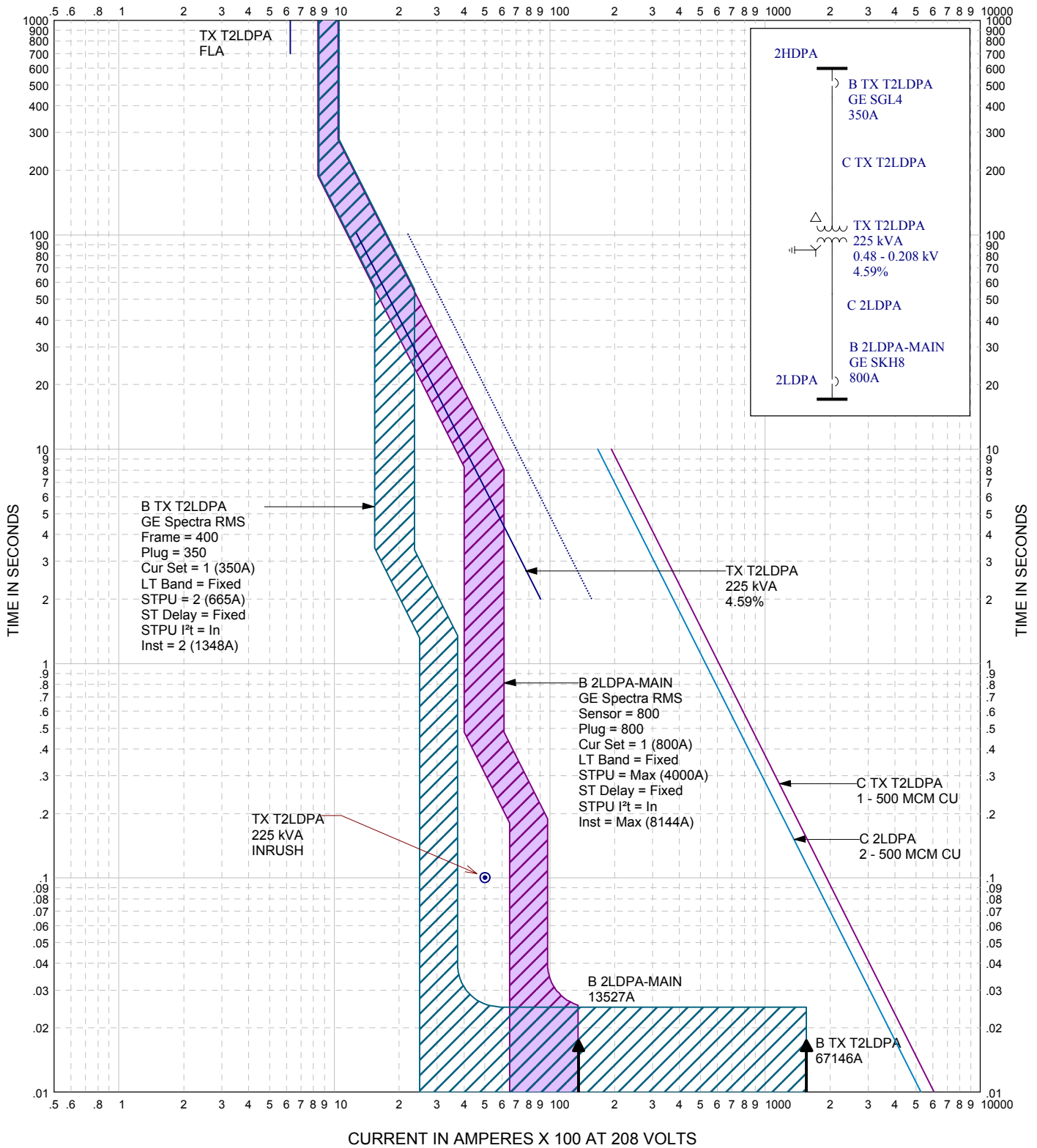
PQTSI	EasyPower[®] TIME-CURRENT CURVES	Tx T5LDPA
Clark County School District - East Career and Technical Academy E5.02		FAULT: Phase
Breaker Settings: Feeder Tx T5LDPA / 5LDPA-Main		DATE: Oct 04, 2007
		BY: Joe Dietrich
		REVISION: 1

CURRENT IN AMPERES X 100 AT 480 VOLTS



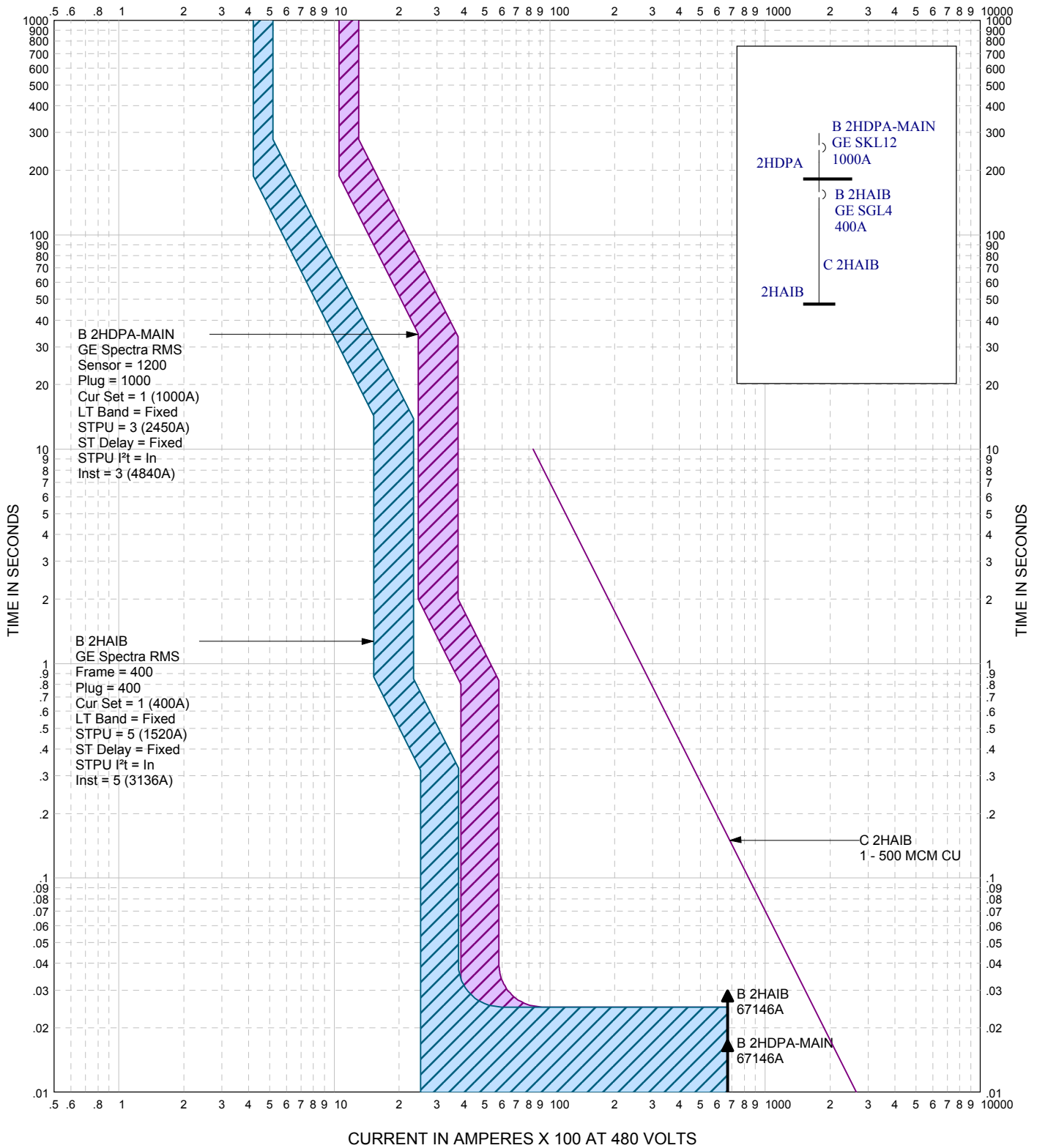
PQTSI	EasyPower[®] TIME-CURRENT CURVES	MDB to Tx T2LDPA
Clark County School District - East Career and Technical Academy E5.02 Breaker Settings: Service Main MDB, Feeder 2HDPA, 2HDPA-Main, Feeder Tx T2LDPA		FAULT: Phase DATE: Oct 04, 2007 BY: Joe Dietrich REVISION: 1

CURRENT IN AMPERES X 100 AT 208 VOLTS



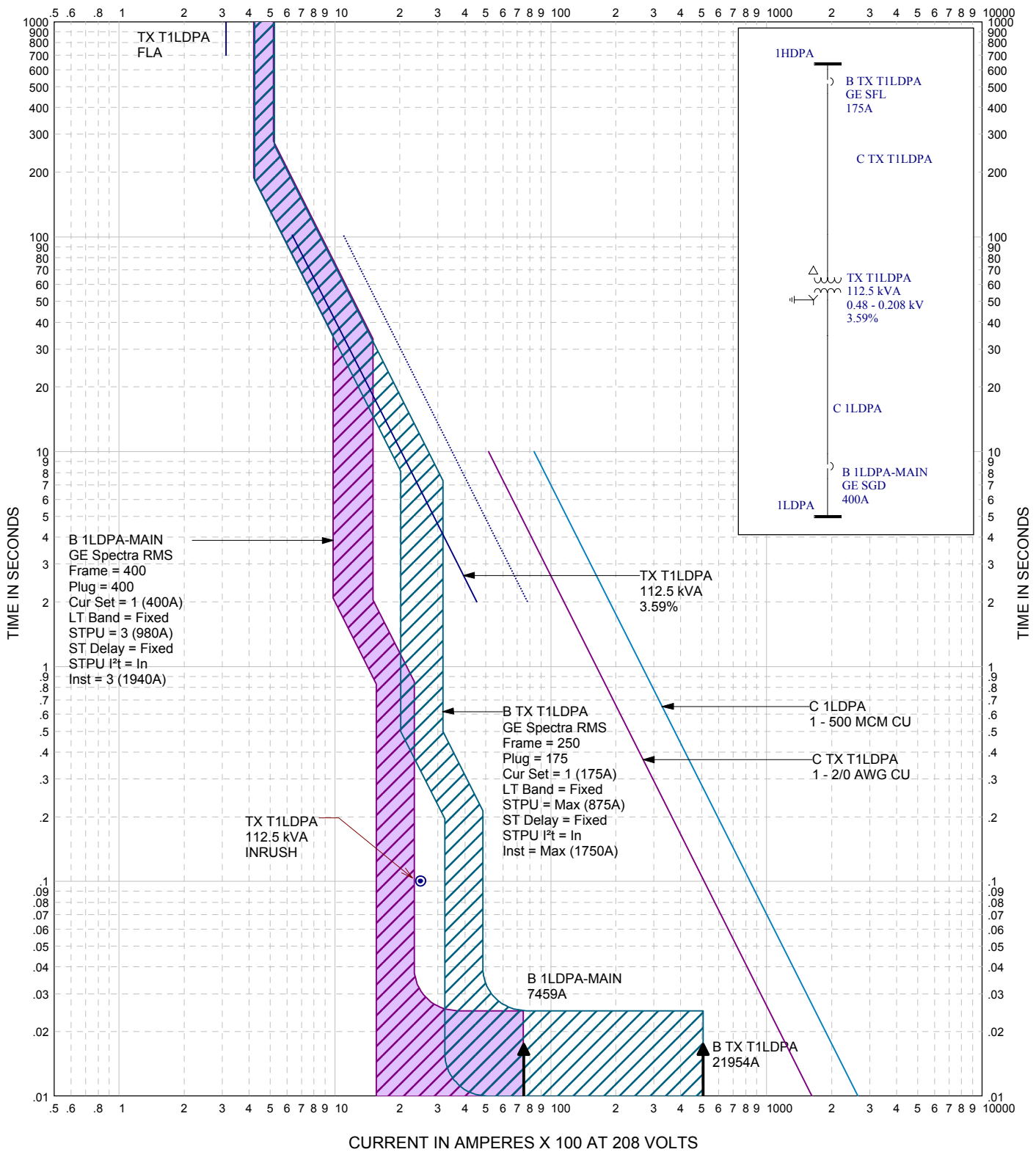
PQTSI	EasyPower[®] TIME-CURRENT CURVES	Tx T2LDPA
Clark County School District - East Career and Technical Academy E5.02		FAULT: Phase
Breaker Settings: Feeder Tx T2LDPA / 2LDPA-Main		DATE: Oct 04, 2007
		BY: Joe Dietrich
		REVISION: 1

CURRENT IN AMPERES X 100 AT 480 VOLTS



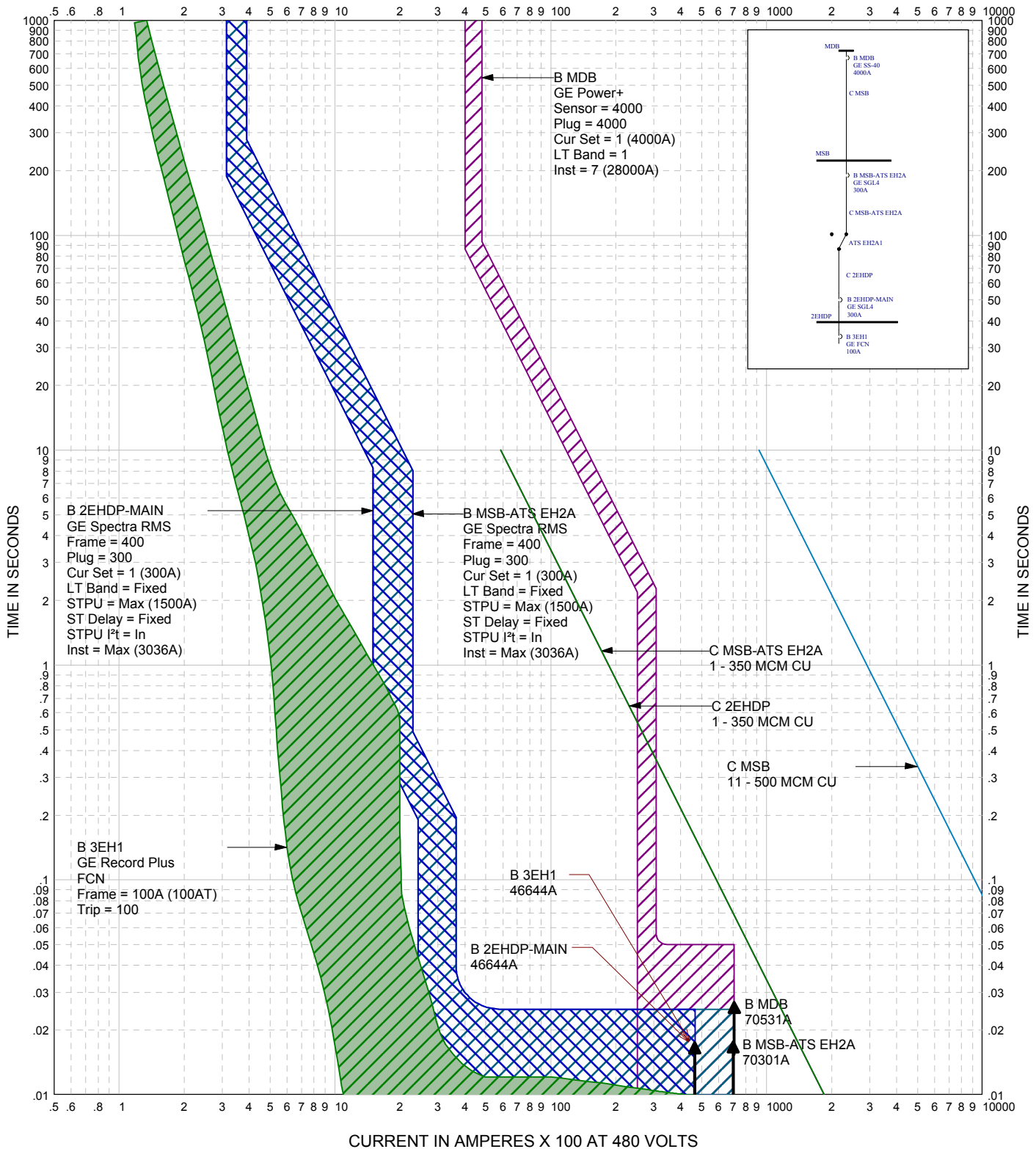
PQTSI	EasyPower[®] TIME-CURRENT CURVES	2HDPA to 2HAIB
Clark County School District - East Career and Technical Academy E5.02		FAULT: Phase
Breaker Settings: 2HDPA-Main, Feeder 2HAIB		DATE: Oct 04, 2007
		BY: Joe Dietrich
		REVISION: 1

CURRENT IN AMPERES X 100 AT 208 VOLTS



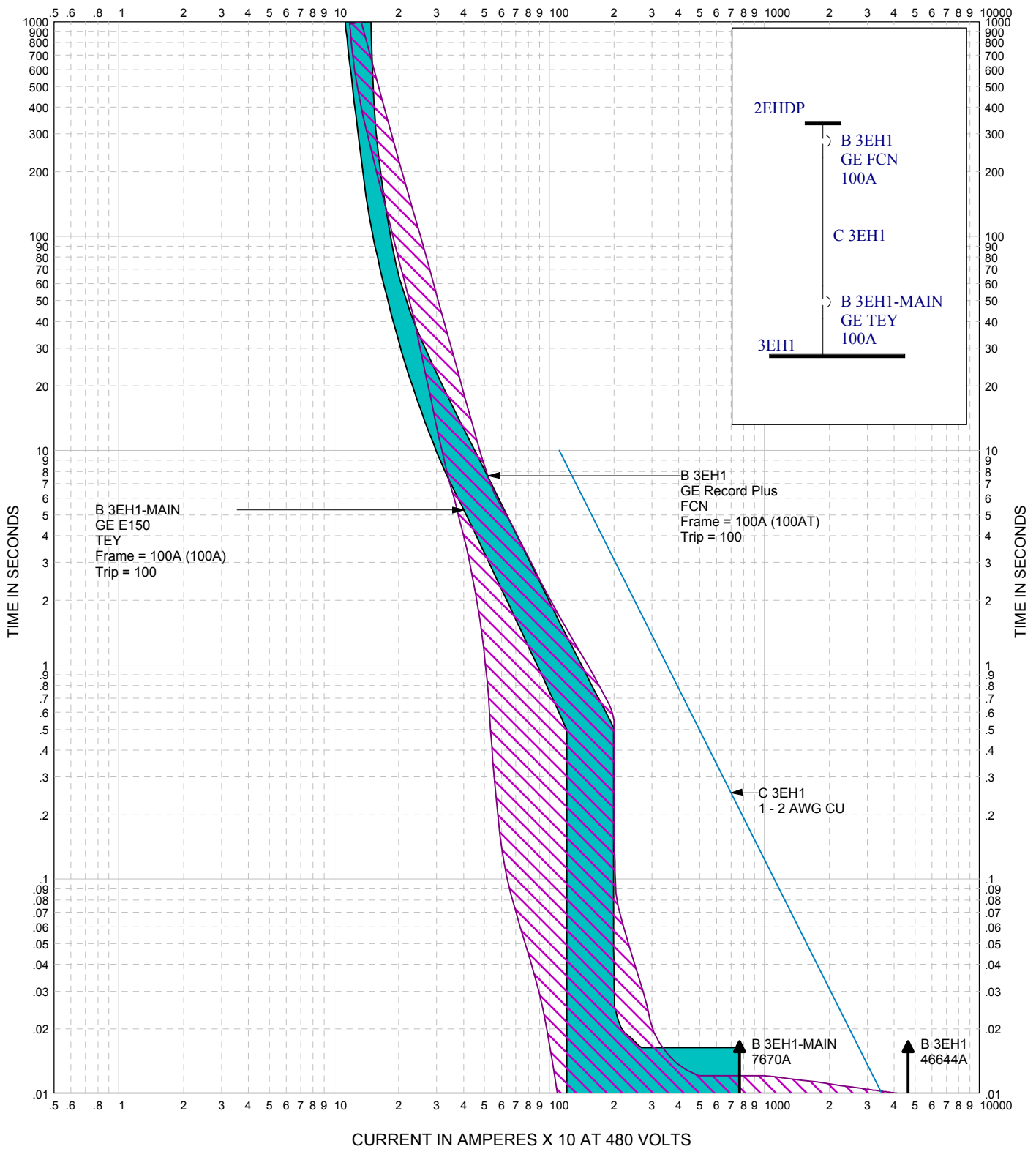
PQTSI	EasyPower® TIME-CURRENT CURVES	Tx T1LDPA
Clark County School District - East Career and Technical Academy E5.02		FAULT: Phase
Breaker Settings: Feeder Tx T1LDPA / 1LDPAs-Main		DATE: Oct 04, 2007
		BY: Joe Dietrich
		REVISION: 1

CURRENT IN AMPERES X 100 AT 480 VOLTS



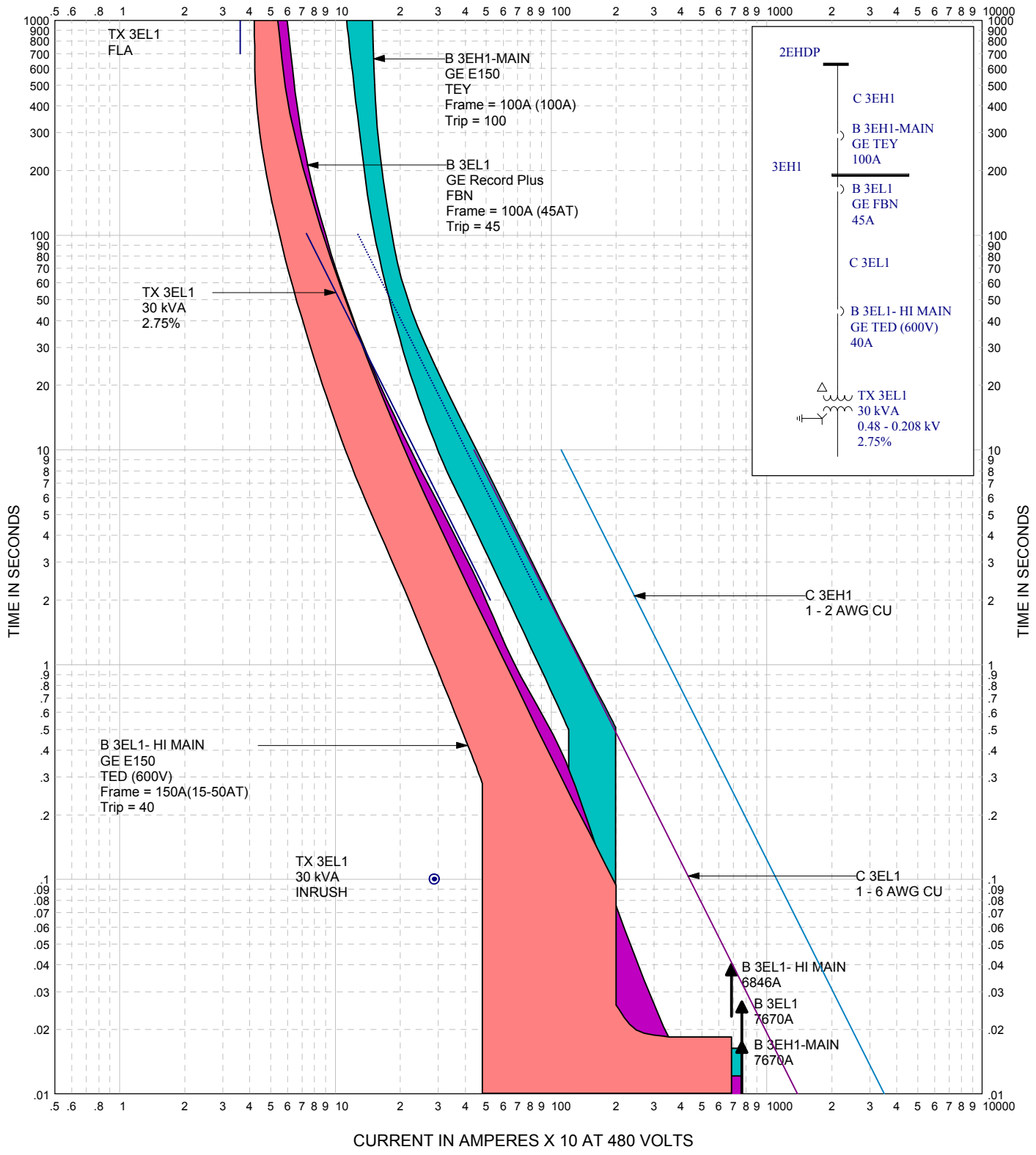
PQTSI	EasyPower® TIME-CURRENT CURVES	MDB to 2EHDP
Clark County School District - East Career and Technical Academy E5.02 Breaker Settings: Service Main MDB, Feeder MSB-ATS EH2A, 2EHDP-Main, Feeder 3EH1		FAULT: Phase DATE: Oct 04, 2007 BY: Joe Dietrich REVISION: 1

CURRENT IN AMPERES X 10 AT 480 VOLTS



PQTSI	EasyPower[®] TIME-CURRENT CURVES	2EHDP to 3EH1
Clark County School District - East Career and Technical Academy E5.02 Breaker Settings: Feeder 3EH1, 3EH1-Main		FAULT: Phase DATE: Oct 04, 2007 BY: Joe Dietrich REVISION: 0

CURRENT IN AMPERES X 10 AT 480 VOLTS



PQTSI	EasyPower[®] TIME-CURRENT CURVES	Tx 3EL1
Clark County School District - East Career and Technical Academy E5.02		FAULT: Phase
Breaker Settings: 3EH1-Main, Feeder 3EL1, 3EL1-HI Main		DATE: Oct 04, 2007
		BY: Joe Dietrich
		REVISION: 0

Single Line Diagrams