Invitation to Bid
Swithgear Replacement, Warrington Campus
12-2015/2016

Due: October 6, 2015, @ 2:00 PM, Local Time

Deliver Sealed Bid and Two Copies to:
Cassie Boatwright, Director of Purchasing and Auxiliary Services
Building 7, Room 737
1000 College Blvd.
Pensacola, FL 32504

Public bid opening: Pensacola State College will conduct a Public bid opening and evaluations on the date and time listed within the timeline which are held at Pensacola State College Board Room, 1000 College Blvd. Pensacola, FL 32504 Room 736. The College may choose to only open the individual bids and publicly announce who a bid was received from. The actual bid prices submitted will not be a public record until the date of posting or the number of days as defined in FS 119.071. Immediately following the bid opening, the Bid Evaluation Committee will evaluate the bids. This may require additional review by the committee or representative.

Timeline
The following timeline is a general guideline for issuance, evaluation, ranking and recommendation for award of this Invitation to Bid. The College reserves the right to change the dates of any events listed.

DATE	**EVENT**
November 13, 2015	RFP issue date
December 1, 2015, 8am	Site Visit on location
December 2, 2015, 2pm	Deadline for questions and requests for clarifications
December 14, 2015	Proposals due

The timeline above is a proposed schedule. The College may amend the dates as required. All dates and locations of evaluation committee meetings will be posted to Purchasing's website: http://www.pensacolastate.edu/business-psc/.

Pensacola State College is a political subdivision of the State of Florida and as such is exempt from all Federal and State taxes. Pensacola State College reserves the right to reject any portion or all bids, to resolicit bids or not and to waive informalities as deemed in the best interest of Pensacola State College. The bid shall remain in force for ninety (90) days after the time of opening.

ANTI-COLLUSION STATEMENT: The Bidder by signing and submitting a bid has "not" divulged to, discussed or compared his/her bid with any other Bidders and has not colluded with any other Bidders or parties to a bid whatsoever. (NOTE: Including there have been No premiums, rebates or gratuities paid or permitted either with, prior to, or after any delivery or personal contact. Any such violation will result in the cancellation of award of any resulting contract from this bid and the Bidder being debarred for not less than three (3) years of doing business with Pensacola State College.)

1.0 OVERVIEW

Pensacola State College is soliciting qualified bids from qualified firms to provide equipment and installation as identified within the attachment.

1.01 In order to maintain a fair and impartial competitive process, Pensacola State College shall avoid any oral communication with prospective bidders other than through the purchasing office during the bid process. However, all solicited bidders will be provided a copy of all written questions submitted and Pensacola State College's responses to them, unless the written inquiry pertained to an administrative or procedural matter. Send all inquiries to the attention of: Cassie Boatwright, Director of Purchasing and Auxiliary Services, Email: cboatwright@pensacolastate.edu

From the date of issuance of this RFP, until a proposal is made, Respondent must not make available or discuss its proposal, or any part thereof, with any employee or agent of the College, unless permitted by the Director of Purchasing and Auxiliary services, in writing. Contacting the College's personnel or members of the College's District Board of Trustees, either directly or indirectly, regarding this RFP, the selection process or any attempt to further a proposer's interest in being selected, may result in proposer being disqualified and shall render the award to said proposer voidable by the College.

Questions concerning this RFP shall be directed to Cassie Boatwright at Purchasing@PensacolaState.edu and to no other person or department at the College. Questions and requests must be in writing and must be received not later than the date and time indicated in the timeline.

1.02 Any addenda issued prior to the opening of the ITB for the purpose of changing the specifications of this request for proposal or related documents, or clarifying the meaning of the same, shall be binding in the same way as if originally written in the ITB specifications and related documents. Since all addenda are available to proposers at the office of the Pensacola State College Director of Purchasing and Auxiliary Services, it is each bidder's responsibility to check with the issuing office and immediately secure all addenda before submitting your bid. The Pensacola State College Director of Purchasing and Auxiliary Services emails addenda to all known prospective bidders, but no guarantee can be made that addenda will be received.

1.03 The bidder is assumed to be familiar with all Federal, State of Florida and local laws, ordinances, rules and regulations that in any manner affect the work. Ignorance on the part of the proposer will in no way relieve you from your contractual responsibility. Any resultant award shall include requirements that the resultant contract shall be governed by the laws of the State of Florida.

1.04 As deemed in the College's best interest, the College reserves the right to:

1. Reject any or all bids submitted.
2. To resolicit bids or not.
3. To award any portion(s) of this ITB.
4. To waive informalities.
5. To issue to all responsive bidders request for information (RFI's).
6. To issue requests to negotiate with finalist and solicit best and final offers.
7. To evaluate to determine technical equivalents.
8. To award this ITB on a Lot by Lot basis to the responsive low bidder meeting specifications.
9. To award on an outright purchase or lease basis.

1.05 A bid bond or deposit, in the amount of five percent (5%) of the base bid will be required to accompany each bid, as guarantee that the successful bidder, will enter into a contract with the Owner, if desired by same. Any deposit must be in the form of a Certified Check, or a Cashier's Check. The bid bond or deposit will be held as liquidated damages, in the event that the successful bidder refuses to enter into a contract with the Owner. In

addition, the successful bidder shall provide a one hundred percent (100%) Performance Bond and one hundred percent (100%) Labor and Material Payment Bond(s), with a surety insurer authorized to do business in the State of Florida as surety, satisfactory to the Owner.

1.06 SCHEDULE: All items shall be completed between 3/19/2015 and 3/25/2015.

1.07 QUALIFICATIONS: Bidders shall furnish documentation of the following:

a. He or She is currently registered with or hold an unexpired License issued by the Florida Construction Industry Licensing Board in accordance with current applicable regulations, Licensing of Construction Industry, Florida Statutes.
b. He or She presently maintains a permanent bona fide place of business practicing this type of work and has had the appropriate experience.
c. He or She has available, or can obtain, adequate equipment and financial resources to undertake and execute the Contract properly and expeditiously, in accordance with present day practices.
d. All subcontractors shall be fully licensed in the State of Florida and shall be bondable. Submit copies of current license and documentation from bonding company showing compliance.
e. He or She shall submit with the Bid the enclosed document entitled "Sworn Statement under Section 287.133(3) (a), Florida Statutes. On Public Crimes".

The apparent successful bidder shall also, at the request of the College, submit a fully executed "Contractor's Qualification Statement" AIA Document A305.

1.08 LICENSE: In accordance with Chapter 489.113, Florida Statutes, all individuals or entities engaging in and providing construction services shall be licensed in the State of Florida for that activity. This license requirement includes general and sub-contractors.

The successful low bidder shall be required to submit a list of all contractors to be involved in said project with applicable license numbers (see form included in these documents), including a photographic copy of current license certificates. Submittal of proof of license shall be made with, and as a part of signed contract.

Prime Contractor shall submit proof of licensure with the Bid Form. Failure to submit required proof of license shall be cause for Owner to reject bid as non-responsive, and award bid to second lowest qualified bidder.

1.09 DISQUALIFICATION OF BIDDER: More than one Bid from an individual, firm, partnership, corporation or association under the same or different names will not be considered. Reasonable grounds for believing that a Bidder is interested in more than one Bid for the same will cause the rejection of all Bids which such Bidder is believed to be interested. Bids will be rejected if there is reason to believe that collusion exists between Bidders. Bids in which the prices are obviously unbalanced may be rejected.

1.10 MODIFICATION OF BID: Bid modifications will be accepted from Bidders if addressed to the Owner at the place where Bids are to be received and if received prior to the opening of the Bids. Modifications may be in written or telegraphic form. Modifications will be acknowledged by the Owner before opening of formal Bids.

1.11 WITHDRAWAL OF BIDS: Bids may be withdrawn by written or telegraphic request received from Bidders prior to the time fixed for opening. Negligence on the part of the Bidder in preparing the Bid confers no right for the withdrawal of the Bid after it has been opened.

1.12 BUILDING PERMIT: A permit may be issued to the Contractor by the Facilities Planning and Construction Department of Pensacola State College.

1.13 SECURITY: The Contractor shall be responsible for maintaining security, and the contractor shall be responsible

for replacement or repair of items and/or equipment stolen, lost or damaged while the building security is under the care of the Contractor. The Contractor shall be responsible for having a job superintendent present whenever work is in progress. The Contractor shall not change superintendent without the Owners approval.

2.00 GENERAL
Must meet or exceed the specifications listed in Attachment A.

2.01 BASIC DEFINITIONS: Unless otherwise expressly stated, wherever in the Contract Documents the word 'provide' is used, it shall mean furnished and installed in place, complete and tested. The terms Architect and Engineer are used interchangeably.

2.02 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS: If a discrepancy occurs on drawings, in specifications, or between drawings and specifications, the greater quantity or value takes precedence.

2.03 WARRANTY: The warranty herein guarantees the proper operation of all structures, components and systems constructed or installed by the contractor for a period of one year after the date of substantial completion.

If within the guarantee period, repairs or changes are required in connection with the guarantee work, which in the opinion of the Architect is rendered necessary as the result of the use of materials, equipment, or workmanship, which are defective, or inferior, or not in accordance with the terms of the Contract, the Contractor shall, promptly upon receipt of notice from the Owner, and without expense to the Owner, proceed to:
Place in satisfactory condition in every particular all of such guaranteed work, correct all defects therein; and
Make good all damages to the structure or site, or equipment or contents thereof which, in the opinion of the Architect are the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the Contract, or the equipment and contents or structures or site disturbed in fulfilling any such guarantee.

2.04 INDEMNIFICATION: The Contractor shall, for the sum of one hundred dollars ($100.00) and other good and valuable consideration paid by the Owner and Architect, individually, receipt of which is hereby acknowledged by the Contractor, indemnify and hold harmless the Owner and Architect and their agents and employees from and against all claims, damages, losses and expenses, including attorney's fees, out of or resulting from the performance of the work provided that such claims, damage, loss or expense: (1) is attributable to bodily injury, sickness, disease or death, or injury to or destruction of tangible property other than the work itself, including the loss of use resulting there-from, and (2) is caused in whole or in part by a negligent act or omission of the Contractor, subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any one of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. This obligation shall not be construed to reduce or negate any other right or obligation of indemnity which would otherwise exist as to any party or person described in this invitation to bid.

2.05 SUBCONTRACTORS: The Contractor shall not contract with any person or entity declared ineligible under Federal laws or regulations from participating in federally assisted construction projects or to whom the Owner or the Architect has made reasonable objection.

2.06 CHANGES IN WORK: Maximum percentages of overhead and profit which may be added by the Contractor to actual costs of such changes in the work are specifically set forth as follows:

For all work done by his organization, or subsidiaries of his organizations, including work traditionally considered as subcontractor work, the Contractor may add 15% of his actual costs for combined overhead and profit.

For any work performed by a subcontractor or forces under the respective subcontractor including any sub-subcontractors or persons not in the direct employ of the subcontractor, a total of 15% of the cost of the change, with 10% to be assigned to the subcontractor and any forces under him and the General Contractor may add 5% of the cost above subcontractor's cost for his overhead and profit.

The above percentages shall be considered reasonable allowance for overhead and profit due to the contractor.

The Contractor shall submit receipts or other evidence showing his costs and his right to the payment claims. All changes in work shall be provided with a detailed cost breakdown indicating material and labor units for all work to be performed. In addition, the cost breakdown shall contain all current tax and labor burden. The allowable amount for the material tax shall be 7.25% and for labor burden shall be 30%.

2.07 INSURANCE AND BONDS: The Contractor shall not commence any work in connection with this agreement until he has obtained all of the following types of insurance with the Owner as additional named insured and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractor to commence work on his subcontract has been obtained and approved.

All insurance policies shall be with insurers qualified and doing business in Florida.
THE CONTRACTOR SHALL PROCURE AND MAINTAIN FOR THE LIFE OF THIS CONTRACT:

1. Workers Compensation and Employers' Liability as follows:
    a. WC Statutory Limits per FS 440
    b. E.L. - Each Accident $500,000
    c. E.L. Disease – Each Employee $500,000
    d. E.L. Disease – Policy Limit $500,000
2. Comprehensive General Liability with minimum limits as follows:
    a. Each Occurrence - $ 1,000,000
    b. Damage to Rented Premises (Each occurrence)- $100,000
    c. Medical Expense (Any one person) $5,000
    d. Personal Advertising Injury - $1,000,000
    e. General Aggregate - $2,000,000
    f. Products-Completed Aggregate - $2,000,000
    g. General Aggregate applies to Per Project
3. Automobile Liability providing coverage on any auto to include all owned, hired and non-owned vehicle with following minimum limits:
    a. Combined Single Limit (Each Accident) - $1,000,000 OR
    b. Bodily Injury per person - $500,000, Bodily Injury per Accident - $1,000,000, Property Damage per Accident - $500,000
4. Excess/Umbrella Liability on Occurrence Form with following limit:
    a. $1,000,000 each occurrence
    b. $2,000,000 aggregate
    c. Retention /Deductible - $5,000

The Contractor liability policy shall provide "XCU" (Explosion, Collapse, Underground Damage) coverage for those classifications in which they are included.

Broad Form Property Damage shall be required on Contractor's public liability so that completed operations coverage extends to work performed by the Contractor.

Builders Risk Insurance: Contractor shall purchase and maintain in effect a completed value builder's risk policy issued by an admitted carrier in an amount equal to the full completed value of the project. Such insurance shall be issued on an all risk form. The Contractor shall be responsible for any deductible amounts.

The Contractor shall furnish a Performance Bond in an amount equal to one hundred percent (100%) of the Contract Sum as security for the faithful performance of this Contract and also a Labor and Material Payment Bond in an amount not less than one hundred percent (100%) of the Contract Sum or in a penal sum not less than that prescribed by State, Territorial or local law, as security for the payment of persons performing labor on the Project under this Contract and furnishing materials in connection with this Contract. The Performance Bond and the Labor and Material Payment Bond may be in one or in separate instruments in accordance with local law and shall be delivered to the Owner not later than the date of execution of the Contract. The premium for the required bonds shall be paid by the Contractor. "These bonds shall be executed on behalf of the Contractor in the same manner and by the same person who executed the agreement.

To be acceptable as surety on Performance and Payment Bonds, a surety company shall comply with the following provisions:

The Surety Company must be admitted to do business in the State of Florida. The surety Company shall have been in business and have a record of successful continuous operations for at least five years. The Surety Company shall have at least the following minimum ratings:

Contract Amount	Policy Holders	Required Rating
0 - 100,000	B	CLASS VII
100,000 - 500,000	A	CLASS VIII
500,000 - 750,000	A	CLASS IX
750,000 - 1,000,000	A	CLASS X
1,000,000 - 1,250,000	A	CLASS XI
1,250,000 - 1,500,000	A	CLASS XI
1,500,000 - 2,000,000	A	CLASS XII
2,000,000 - 2,500,000	A	CLASS XII

*From Best's key rating guide.

Best's Policy Holder's Rating of "A" and "B" (which signifies A--Excellent, and B-Good, based upon good underwriting, economic management, adequate reserves for undisclosed liabilities, net resources for unusual stock and sound investment) or an equivalent rating from the Insurance Commissioner, if not rated by Best's. Neither the Surety Company nor any reinsurer shall expose itself to any loss on any one risk in an amount exceeding ten (10%) percent of its surplus to policyholders.

In the case of a surety insurance company, there shall be deducted in addition to the deduction for reinsurance, the amount assumed by any co-surety, the value of any security deposited, pledged or held subject to the content of the Surety and for the protection of the Surety."

Furnish in triplicate a Performance Bond and a Payment Bond, each in the amount of 100% of the Contract Sum, written by a surety licensed to do business in the state where the Project is located. The prescribed form of the Performance Bond and Payment Bond is AIA Document A313.

2.08 LIQUIDATED DAMAGES: If the Contractor fails to complete the working within the time specified, the Contractor shall pay liquidated damages to the College in the amount of $XXXX for each calendar day until the work is completed or accepted.

3.00 SPECIAL CONDITIONS

3.01 Florida sales tax exemption no: 85-8012557294C-2. This project is funded utilizing Federal Funds. As such all applicable Federal Laws must be followed. This includes but it not limited to the Davis Bacon Act.

3.02 Pensacola state college reserves the right to reject any or all RFPs/proposals received, to resolicit or not and to waive informalities as deemed in the best interests of the College.

3.03 As a bidder/proposer our company attests we have not been convicted of a public entity crime of the State of Florida or any federal agency and are not listed in the excluded parties list system (EPLS) maintained by the General Services Administration(GSA).

Pursuant to OMB Circular a-110,subpart b, section 13 a person or affiliate who has been placed on either the federal excluded parties list system or the state of Florida convicted vendor list following a conviction for a public entity crime may not submit a bid or enter into a contract to provide any goods or services to a public entity, may not submit a bid or enter into a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in section 287.017, for category two (i.e. $25,000)while on the convicted vendor list. The excluded parties' list system can be found at http://epls.gov/epls/servlet/EPLSGETInputSearch

3.04 Any entity or affiliate who has been placed on the discriminatory vendor list may not submit a ITB on a contract to provide goods or services to a public entity, may not submit a ITB on a contract with a public entity for the construction or repair of a public building or public work, may not submit ITBs on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity. All invitations to ITB, as defined by 287.012(11)FS, request for proposals, as defined by 287.012(15)FS, and any written contract document of the state shall contain a statement informing entities of the discrimination provisions.

3.05 Pensacola State College reserves the right to award an individual lot or a combination of lots; reject any or all lots, whatever seems in the best interest of the College.

3.06 The specifications listed are meant to demonstrate the work parameters required, and the functional limits listed are to be considered minimal unless changed by addendum to the bid. Bid evaluation will be made strictly from the minimal specification. Each particular specification which the equivalent offered which does not meet must be identified and submitted along with the detailed specification sheet of the equivalent offered.

3.07 The successful bidder shall fully guarantee all items furnished against defect in materials and/or workmanship for a period of 365 days from date of final acceptance by Pensacola State College. Should any such defect, except for normal wear and tear, appear during the warranty period, the successful bidder shall commence repair or replace same at no cost to Pensacola State College within 72 hours after notice.

3.08 Any "notice of protest" involving the specifications, the terms and conditions or any other aspect of this invitation to bid (ITB), request for proposal (RFP) or request for qualification (RFQ) must be filed in writing within 72 hours after the receipt notice of the project plans and the solicitation specifications. Formal written protest must be filed within 10 days after the date of the notice of protest is filed. (Saturdays, Sundays and legal holidays shall be excluded in these computations.) The formal written protest shall state with particularity the facts and law upon which the protest is based. Failure to file a notice of protest or failure to file a formal written protest within the time prescribed in section 120.57(3), Florida Statutes shall constitute a waiver of proceedings under chapter 120, Florida Statutes.

3.09 Bid tabulations with recommended awards will be posted on the purchasing web page http://pensacolastate.edu/purchasing/current_solicitations.asp
Unless changed by addendum, and will remain posted for a period of 72 hours (not including Saturdays, Sundays and legal holidays). Any notice of protest of award or recommendation of award shall be filed in writing to the Director of Purchasing, within 72 hours after the posting of the ITB/RFP/RFQ bid tabulation. "Failure to file a protest within the time prescribed in section 120.57 (3), Florida statutes shall constitute a waiver of proceedings under chapter 120, Florida Statutes." A formal written protest must be filed within 10 days (excluding Saturdays, Sundays, and legal holidays) after the date the notice of protest was filed. The formal written protest shall state with particularity the facts and law upon which the protest is based upon. Failure to file a formal written protest within the time prescribed shall constitute a waiver of proceedings under chapter 120.57(3) Florida Statutes. Inspection or examination of sealed bids or proposals are available for inspection during normal working hours by appointment, upon notice of a decision or intended decision, or 10 days after invitation to bid or proposal public opening, whichever is earlier.

3.10 As this solicitation may be federally funded. The sections within this ITB are an overview of Federal Compliance Conditions and Regulations that all bidders must comply with.

3.11 SPECIAL POLICY AND PROCEDURES: Contractor and subcontractor personnel are not permitted to use the campus facilities.
Smoking is not permitted in any campus facility.
Profane language or improper behavior will result in immediate termination from the construction site.
The Contractor shall erect temporary barricades and fencing as required to keep the unauthorized out of the construction area, and provide signs that read. “This area is a designated construction site; anyone who trespasses on this property commits a felony per Florida Statute 810.09(2d).

BID FORM

Total Lump Sum Cost as specified $ _____

Payment Terms: Net 30 days or prompt payment discount of ____%, _____ Days offered by Proposer.

Corporate Name	DBA Name (if applicable)	
Purchasing Address	Street/PO Box	City
	State	Zip
	Email Address	
Remit to Address	Street/PO Box	City
	State	Zip
	Email Address	
Contact Person	Name	Phone #
	Email Address	
Address of Parent Company (if applicable)	Street/PO Box	City
	State	Zip

Check applicable boxes for ownership of company

__ Black American __ Hispanic American __ Asian Pacific American
__Asian Indian American __ Native American __ Woman-Owned __ Disabled Veteran

Attach current MBE/WBE Certifications

_____ _____ _____
Authorized Agent Name Signature Date

Firms certify by their signature they have read and understand the conditions and specifications of this Invitation to Bid and they have the authority, capacity, and capability to perform all conditions and specifications of this Invitation to Bid.

CERTIFICATION OF DRUG-FREE WORKPLACE PROGRAM

IDENTICAL TIE BIDS - Whenever two or more bids which are equal with respect to price, quality, and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program, or if all of the tied vendors have drug-free workplace programs. In order to have a drug-free workplace program a business shall:

(1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

(2) Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

(3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

(4) In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

(5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

(6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

AS THE PERSON AUTHORIZED TO SIGN THE STATEMENT, I CERTIFY THAT THIS FIRM COMPLIES FULLY WITH THE ABOVE REQUIREMENTS.

BIDDING FIRM OR ENTITY NAME: _____

SIGNATURE OF VENDOR REPRESENTATIVE: _____

TYPED OR PRINTED NAME OF VENDOR REPRESENTATIVE: _____

DATE: _____

MINORITY BUSINESS ENTERPRISE/WOMAN BUSINESS
ENTERPRISE CERTIFICATE

I HEREBY DECLARE AND AFFIRM that I am the _____ (Title) representative of the firm of _____ (Company Name) minority business enterprise (MBE/WBE)_____ (Minority Type) as defined by Pensacola State College in the specifications for _____(ITB Name & Number) that I will provide information requested by PENSACOLA STATE COLLEGE to document this fact. The foregoing statements are true and correct and include all material necessary to identify and explain the operations of _____ (Company Name) as well as the ownership thereof. Further, the undersigned does agree to provide PENSACOLA STATE COLLEGE current, complete and accurate information regarding actual work performed on the project, the payment therefor and any proposed changes in any of the arrangements hereinabove stated and to permit and audit an examination of the books, records and files of the above named company by authorized representative of PENSACOLA STATE COLLEGE. It is recognized and acknowledged that the statements herein are being given under oath and material misrepresentation will be grounds for terminating any contract which may be awarded in reliance hereon. Termination is understood to forfeiture of payment for all work not performed at time of notification.

I DO SOLEMNLY DECLARE OR AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THE FOREGOING DOCUMENTS ARE TRUE AND CORRECT, AND THAT I AM AUTHORIZED, ON BEHALF OF THE ABOVE FIRM, TO MAKE THIS AFFIDAVIT.

_____
Signature of Company's Authorized Representative

State of _____County of _____City of _____

On this _____ day of _____, 20_____, before me, in the foregoing affidavit and acknowledged that he (she) executed the same in the capacity therein stated and for the purpose therein contained.

In witness thereof, I hereunto set my hand and official seal.

Signed: _____ (SEAL)
Notary Public

My commission Expires:

Minority Type: # M1 Black American Man; M2 Hispanic American; M3 Asian American; M4 Native American (Eskimo & Aleutian); M5 Native Hawaiian; M6 Small Business; M7 Disabled; M8 American Woman; M9 Black American Woman; and NM Not Minority. (Must have greater than 51% minority ownership). "Minority/Woman Business Enterprises that file false misrepresentation of their MBE/WBE status shall be found guilty of a felony of the second degree and be debarred from bidding no less than 36 months pursuant to 287.094 Florida Statute".

EQUAL OPPORTUNITY CERTIFICATE OF COMPLIANCE

This is to certify that the undersigned contractor on subject project does now and will during the entire length of this project comply with all applicable laws, rules and regulations relating to equal employment opportunity, and any Federal, State, or Local laws, rules, or regulations pertaining thereto; and further certifies compliance specifically with Executive Order 11246 originally issued by the President of the United States on September 24, 1965, as amended from time to time thereafter, including:

1. The Contractor does not discriminate in any manner in its employment policies as to race, color, religion, sex or national origin; and,

2. The Contractor does maintain an affirmative action plan to recruit, employ, and promote qualified members of groups that may have been formerly excluded because of race, color, religion, sex or national origin.

BIDDING FIRM OR ENTITY NAME: _____

SIGNATURE OF VENDOR REPRESENTATIVE: _____

TYPED OR PRINTED NAME OF VENDOR REPRESENTATIVE: _____

DATE: _____

LIST OF DESIGNATED SUBCONTRACTORS

TO BE RESPONSIVE THIS FORM (WITH DEFINED TRADE SUBCONTRACTOR'S NAME AND SUBCONRACT AMOUNT COMPLETED) SHALL BE SIGNED AND PLACED IN AN ENVELOPE, SEALED AND SUBMITTED WITH CONTRACTOR'S BID. (F.S. 255.0515) The College will require the apparent low bidder meeting specification to submit in writing (on this form) within 24 hours after notice all additionally required information defined below (i.e. address, minority type and subcontractor license numbers) if not provided at bid opening.

NOTE: The College reserves the right to consider a bidder/proposer non responsive if they have not submitted with their bid/proposal a comprehensive, completed, signed minority outreach statement, as deemed in the Colleges best interest.

The following names are the subcontractors for designated trades who will perform the phases of the work indicated (use additional forms as needed to specify any additional subcontractors):

Subcontractors to be used					
Required to be submitted with Proposal			Required from the apparent low bidder within 24 hours of notice		
Trade	**Name of Company (if self-performed, so indicate**	**Subcontract Value**	**Address**	**Minority Type**	**FL Trade License/ Occupational Number**

The undersigned declares that he/she has fully investigated each subcontractor listed and has received and has in his/her files evidence that each entity is currently licensed in the State of Florida and maintains a fully equipped, licensed organization capable, technically and financially, capable of performing the pertinent work, and that he has made similar installations in a satisfactory manner, and that no employees of the subcontractor are currently employees of by the College.

BIDDING FIRM OR ENTITY NAME: _____

SIGNATURE OF VENDOR REPRESENTATIVE: _____

TYPED OR PRINTED NAME OF VENDOR REPRESENTATIVE: _____

DATE: _____

PUBLIC ENTITY CRIMES

Any person submitting a Request for Proposal in response to this invitation must execute the enclosed for PUR 7068, SWORN STATEMENT UNDER PARAGRAPH 287.133(3)(A), FLORIDA STATUTES**,** ON PUBLIC ENTITY CRIMES, including proper check(s), in the space(s) provided, and enclose it with the said statement. However, if you have provided the completed form to the submittal address listed in this invitation and it was received on or after January 1, 2009, another completed form is not required for the remaining calendar year.

THIS FORM **MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC** OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

This sworn statement is submitted to:

_____

(print name of the public entity)

By_____

(Print name of entity submitting sworn statement)

Whose business address is

_____

And (if applicable) its Federal Employer Identification No. (FEIN) is:

_____

(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement:_____

I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes**,** means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any proposal or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:

A predecessor or successor of a person convicted of a public entity crime: or

An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which proposals or applies to proposal on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement **(indicate which statement applies).**

_____Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____The entity submitting this sworn statement, or one or more of the officers, directors, executive, partners, shareholders, employees, members, or agents who are active in management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list **(attach a copy of the final order).**

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT

IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

Sworn to and subscribed before me this_____day of_____20_____

Personally known_____

OR Produced identification_____Notary Public - State of_____

_____. My commission expires_____(Type of identification)

_____

(Printed, typed and/or stamped commissioned name of Notary Public)

A person or affiliate who has been placed on the convicted Firm list following a conviction for a public entity crime may not submit a proposal on a contract to provide any goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases of real property to a public entity, may not be awarded or perform work as a Firm, supplier, Sub-Firm, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted Firm list.

PENSACOLA STATE COLLEGE

WARRINGTON CAMPUS

BUILDING 3200
SWITCHBOARD REPLACEMENT

TECHNICAL SPECIFICATIONS

HUMBER GARICK consulting engineers

Humber-Garick Engineers
142 Eglin Parkway SE
Fort Walton Beach, FL 32548
P: (850)243-6723 F: (850)664-5420

November 10, 2015

PENSACOLA STATE COLLEGE – WARRINGTON CAMPUS
BUILDING 3200 SWITCHBOARD

INDEX

SECTION 26 10 00

ELECTRICAL

I. GENERAL

1. RELATED DOCUMENTS: The Drawings, General and/or Special Conditions Sections are a part of this specification and the Contractor shall consult them in detail for instructions pertaining to this work

2. SCOPE: Furnishing of all labor, material, equipment, supplies, and services necessary to construct and install the complete electrical systems as shown on the drawings and specified herein. Work shall include but is not necessarily limited to the following items:

   A. Replacement of Main Power Switchboard, Motor Control Center and required wiring revisions.

3. JOB CONDITIONS

   A. SITE INSPECTIONS: Before submitting proposals, each bidder should visit the site and fully familiarize him self with all job conditions and shall be fully informed as to the extent of his work. No consideration will be given after bid opening date for alleged misunderstanding as to the requirements of work involved in connecting to the utilities or as to requirements of materials to be furnished.

   B. EXISTING CONDITIONS: All utilities, existing system and conditions shown on the plans as existing are approximate, and the Contractor shall verify before any work is started.

   C. SCHEDULED INTERRUPTIONS: Planned interruptions of utilities service, to any facility affected by this contract, shall be carefully planned and approved by Engineer at least ten (10) days in advance of the requested interruption. The Contractor shall not interrupt services until specific approval has been granted by the Engineer. The request shall indicate services to be affected, date and time of interruption and duration of outage. Request for interruption of service will not be approved until; all equipment and material required for the completion of that particular phase of work are on the job site. The work may have to be scheduled after normal working hours.

   D. ACCIDENTAL INTERRUPTIONS: All excavation and/or remodeling work required shall be performed with care so as not to interrupt other existing services (water, gas, electrical, sewer, sprinklers, etc.). If accidental utility interruption resulting from work performed by the Contractor occurs, service shall be immediately restored to its original condition without delay, by and at the expense of the Contractor, using skilled workmen of the trade required.

   E. MAINTAINING SERVICE:

      (1) Any existing service (or operating system) which must be interrupted for any length of time shall be supplied with a temporary service if necessary for continuation of the normal operation of this facility.

      (2) Any existing system or part of an existing system currently in operation shall remain so after all additions or renovations are made and all work is completed.

4. CODES, PERMITS AND INSPECTIONS: The installation shall comply with all local, state and federal laws and ordinances applicable to electrical installation and with the regulations of the latest published edition of the National Electric Code where such regulations do not conflict with those laws and ordinances. The Contractor shall obtain permits, and after completion of the work, shall furnish the Engineer a certificate of final inspection and approval from the applicable local inspection department. Make necessary changes to plans and specifications to meet code standards at no additional cost to the Owner.

5. DRAWINGS AND SPECIFICATIONS: The drawings and these specifications are complementary each to the other. What is called for by one shall be as binding as if called for by both. Omissions from the drawings and specifications of details of work which are evidently necessary to carry out the intent of the

drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such work. In any case of discrepancy in the figures or catalog numbers, the matter shall be submitted to the Engineer, who shall promptly make a determination in writing. Any adjustment by the Contractor shall be at the Contractor's own risk and expense. Electrical drawings are diagrammatic only. Do not scale these drawings. All equipment shall be installed in accordance with manufacturer's recommendations and any conflicting data shall be verified before bidding.

6. STANDARDS OF MATERIALS AND WORKMANSHIP:

A. MATERIALS: All materials shall be new and shall be listed as approved by the Underwriters' Laboratories, Inc., in every case where a standard has been established for a particular type of material in question. All work shall be executed in a workmanlike manner and shall present a neat appearance.

B. SUBSTITUTIONS: The Contractor shall base his proposal on the materials specified herein and on the drawings. Reference to a particular product by manufacturer, trade name, or catalog number establishes the quality standards of material and equipment required for this installation and is not intended to exclude products equal in quality and similar design. The Engineer reserves the sole right to decide the equality of materials proposed for use in lieu of these specified. It shall be the Contractor's responsibility to furnish the information and data sufficient to establish the quality and utility of the items in question, including furnishing of samples if required. If other manufacturer’s of equipment determine that their equipment will fit the space with recommended clearances, suit all job conditions, equal or exceed the quality of the specified items, a request may be made in writing to the Engineer at least ten (10) days prior to bid date for permission to be included in the approved equipment list. All data required for evaluation shall accompany the above letter.

7. SUBMITTALS:

A. SHOP DRAWINGS: The Contractor shall submit a list of items proposed for use. He shall also submit catalog data and shop drawings on proposed systems and their components. Where substitutions alter the design or space requirements, the Contractor shall defray all items of cost for the revised design and construction including costs to all allied trades involved. Data shall be submitted within thirty (30) days after the contract is awarded. Provide six (6) copies of shop drawings as a minimum unless a greater number of copies is required by the General Conditions. Each submittal data section shall be covered with an index sheet listing Contractor, supplier, etc., and an index to the enclosed submittals. Where alternate methods or specification deviations are presented, attention shall be called to these items in submittals.

B. AS-BUILT DRAWINGS: Upon completion of the project, the Contractor shall furnish a complete set of the drawings which formed a part of the contract and include all revisions, sketches, etc. which may have been required during the construction.

C. OPERATING AND MAINTENANCE MANUALS: At completion of the work, furnish three (3) copies of written operation instructions which shall include manufacturer's descriptive bulletins, operating and maintenance manuals and parts lists of all equipment installed. Also include in such instructions, the specified size and capacity ratings of all equipment installed. Each set of instructions shall be assembled into a suitable looseleaf type binder and presented to the Engineer for delivery to the Owner.

D. Each major section of submittals such as power, equipment, lighting equipment, etc. shall be secured in a booklet or stapled with a covering index which lists the following information:

(1) General contractor w/phone number and project manager.

(2) Sub-contractor w/phone number and project manager.

(3) Supplier of equipment w/phone number and person responsible for this project.

(4) Index of each item covered in submittal and model number. Fixture index shall include type lamps recommended by manufacturer and size specified in contract documents.

(5) Any deviation from contract documents shall be specifically noted on submittal cover index and boldly on specific submittal sheet.

8. PRODUCT DELIVERY, STORAGE AND HANDLING:

A. PROTECTION: Take necessary precautions to protect all material, equipment, apparatus and work from damage. Failure to do so to the satisfaction of the Engineer will be sufficient cause for the rejection of the material, equipment or work in question. Contractor is responsible for the safety and good condition of the materials installed until final acceptance by the Owner.

B. CLEANING: Conduit openings shall be capped or plugged during installation. Fixtures and equipment shall be tightly covered and protected against dirt, moisture, chemical and mechanical injury. At the completion of the work the fixtures, material and equipment shall be thoroughly cleaned and delivered in condition satisfactory to the Engineer.

9. CLEANING UP: The Contractor shall remove all debris, packing material, oil, grease or other stains resulting from his work performed in the building or the exterior thereof.

10. GUARANTEE AND SERVICE: Upon completion of all tests and acceptance, the Contractor shall furnish the Owner a written guarantee covering the electrical work done for a period of one (1) year from date of acceptance. Guarantee includes equipment capacity and performance ratings specified without excessive noise levels. Upon notice from the Engineer or the Owner, the Contractor shall, during the guarantee period, rectify and replace any defective material or workmanship and repair any damage caused thereby without additional cost.

II. EQUIPMENT AND MATERIALS

1. GENERAL: All equipment and materials shall have ratings established by a recognized independent agency or laboratory. The Contractor shall apply the items used on this project within the ratings and subject to any stipulations or exceptions established by the independent agency or laboratory. Use of equipment or materials in applications beyond that certified by the agency or beyond that recommended by the manufacturer shall be cause for removal and replacement of such mis-applied items.

2. WIRING MATERIALS:

A. CONDUIT SYSTEMS: In exposed areas conduit shall be aluminum or IMC. Rigid galvanized conduits shall be Pittsburgh Standard galvanized rigid conduit, National Electric Products, Shearduct, Youngstown Buckeye hot galvanized rigid conduit or approved equal.

B. CONDUCTORS: Conductors for building wiring shall have THHN, THHW, or THWN, 600 volt insulation unless specified on drawings. Conductors shall be soft-drawn copper of standard American Wire Gauge (AWG) size. Minimum size shall be No. 12. All wire No. 8 and larger shall be stranded except as permitted or required by the NEC. All power feeders and branch circuits No. 8 and smaller shall be wired with color-coded wire with the same color used for a system throughout the building. Ungrounded conductors larger than No. 8 and grounded conductors larger than No. 6 shall either be fully color coded, or shall have black insulation and be similarly color coded with tape or paint in all junction boxes and panels. Tape or paint shall completely cover the full visible length of conductor insulation within the box or panel. Color coding of all conductors shall be as follows:

Grounding . . . . . Green (each power and lighting conduit run shall have an insulated ground conductor.)
277/480 V. Phase Conductors . . . . . Orange, Yellow, Brown (use only one color for each phase throughout.)
Neutral . . . . . .Gray

C. OUTLET BOXES: Exposed boxes where permitted or shown shall be of the finished square corner heavy die cast aluminum type as manufactured by Bell or equal.

III. EXECUTION

1. WIRING MATERIALS:

A. CONDUIT SYSTEMS:

(1) Metal conduit shall be supported according to the following chart and within 3' of each outlet box.

RIGID CONDUIT	MAX. SUPPORT SPACING
1/2" - 3/4"	10'
1"	12'
1-1/4" - 1-1/2"	14'
2" - 2-1/2"	16'
3" and larger	20'

(3) Steel and aluminum conduits shall have inside edges of ends reamed smooth. At couplings, conduit ends shall be threaded so that they meet in the coupling, but right and left couplings shall not be used. Rigid steel conduits shall be given two coats of bitumastic or aluminized asphaltum prior to use in earth.

B. CONDUCTORS:

(1) All wiring shall be continuous from outlet to outlet; no splices shall be made, except in outlets or junction boxes. Wires shall not be pulled in until the entire conduit run has been roughed-in.

(2) Special Note: In cases where it is necessary to splice wires and cables in normally dry locations, such as extending existing branch circuits/feeders to reach new breaker locations, matching similar conductors shall be used with compression but splices and heat shrink insulation.

2. GROUNDING: A separate green insulated grounding conductor shall be installed in each conduit run. The grounding conductor shall be sized as required by the N.E.C.

END OF SECTION 26 10 00

SECTION 26 24 13

SWITCHBOARDS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

ASHRAE 90.1 - IP	(2010; ERTA 2011-2014; Thru INT 24 2015) Energy Standard for Buildings Except Low-Rise Residential Buildings

ASTM INTERNATIONAL (ASTM)

ASTM A123/A123M	(2013) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A153/A153M	(2009) Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A240/A240M	(2015a) Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
ASTM A653/A653M	(2013) Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A780/A780M	(2009) Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
ASTM D149	(2009; R 2013) Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies
ASTM D709	(2013) Laminated Thermosetting Materials

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE 100	(2000; Archived) The Authoritative Dictionary of IEEE Standards Terms
IEEE 81	(2012) Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System
IEEE C2	(2012; Errata 2012; INT 1-4 2012; INT 5-7 2013; INT 8 2014) National Electrical Safety Code
IEEE C37.13	(2008; INT 1 2009; AMD 1 2012) Standard for Low-Voltage AC Power Circuit Breakers Used in Enclosures
IEEE C37.90.1	(2012) Standard for Surge Withstand Capability (SWC) Tests for Relays and Relay Systems Associated with Electric Power

Apparatus

IEEE C57.12.28	(2014) Standard for Pad-Mounted Equipment – Enclosure Integrity
IEEE C57.13	(2008; INT 2009) Standard Requirements for Instrument Transformers

INTERNATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)

NETA ATS	(2013) Standard for Acceptance Testing Specifications for Electrical Power Equipment and Systems

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

ANSI C12.1	(2008) Electric Meters Code for Electricity Metering
ANSI/NEMA PB 2.1	(2013) General Instructions for Proper Handling, Installation, Operation and Maintenance of Deadfront Distribution Switchboards Rated 600 V or Less
NEMA ICS 6	(1993; R 2011) Enclosures
NEMA PB 2	(2011) Deadfront Distribution Switchboards

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2014; AMD 1 2013; Errata 1 2013; AMD 2 2013; Errata 2 2013; AMD 3 2014; Errata 3-4 2014; AMD 4-6 2014) National Electrical Code UNDERWRITERS

LABORATORIES (UL)

UL 467	(2007) Grounding and Bonding Equipment
UL 489	(2013; Reprint Mar 2014) Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures
UL 891	(2005; Reprint Oct 2012) Switchboards

1.2 DEFINITIONS

Unless otherwise specified or indicated, electrical and electronics terms used in these specifications, and on the drawings, are as defined in IEEE 100.

1.3 SUBMITTALS

A. SHOP DRAWINGS: The Contractor shall submit a list of items proposed for use. He shall also submit catalog data and shop drawings on proposed systems and their components. Where substitutions alter the design or space requirements, the Contractor shall defray all items of cost for the revised design and construction including costs to all allied trades involved. Data shall be submitted within thirty (30) days after the contract is awarded. Provide six (6) copies of shop drawings as a minimum unless a greater number of copies is required by the General Conditions. Each submittal data section shall be covered with an index sheet listing Contractor, supplier, etc., and an index to the enclosed submittals. Where alternate methods or specification deviations are presented, attention shall be called to these items in submittals.

B. AS-BUILT DRAWINGS: Upon completion of the project, the Contractor shall furnish a complete set of the drawings which formed a part of the contract and include all revisions, sketches, etc. which

may have been required during the construction.

C. OPERATING AND MAINTENANCE MANUALS: At completion of the work, furnish three (3) copies of written operation instructions which shall include manufacturer's descriptive bulletins, operating and maintenance manuals and parts lists of all equipment installed. Also include in such instructions, the specified size and capacity ratings of all equipment installed. Each set of instructions shall be assembled into a suitable loose leaf type binder and presented to the Engineer for delivery to the Owner.

1.5 QUALITY ASSURANCE

1.5.1 Product Data

Include manufacturer's information on each submittal for each component, device and accessory provided with the switchboard including:

a. Circuit breaker type, interrupting rating, and trip devices, including available settings.

1.5.2 Manufacturer's instruction manuals and published time-current curves (in electronic format) of the main secondary breaker and largest secondary feeder device.

1.5.3 Switchboard Drawings

Include wiring diagrams and installation details of equipment indicating proposed location, layout and arrangement, control panels, accessories, piping, ductwork, and other items that must be shown to ensure a coordinated installation. Identify circuit terminals on wiring diagrams and indicate the internal wiring for each item of equipment and the interconnection between each item of equipment. Indicate on the drawings adequate clearance for operation, maintenance, and replacement of operating equipment devices. Include the nameplate data, size, and capacity on submittal. Also include applicable federal, military, industry, and technical society publication references on submittals. Include the following:

a. One-line diagram including breakers, fuses, current transformers, and meters.
b. Outline drawings including front elevation, section views, footprint, and overall dimensions.
c. Bus configuration including dimensions and ampere ratings of bus bars.
d. Markings and NEMA nameplate data.
e. Circuit breaker type, interrupting rating, and trip devices, including available settings.
f. Wiring diagrams and elementary diagrams with terminals identified, and indicating prewired interconnections between items of equipment and the interconnection between the items.
g. Manufacturer's instruction manuals and published time-current curves (in electronic format) of the main secondary breaker and largest secondary feeder device.Use this information (designer of record) to provide breaker settings that ensures protection and coordination are achieved.

1.5.3 Regulatory Requirements

In each of the publications referred to herein, consider the advisory provisions to be mandatory, as though the word, "shall" or "must" had been substituted for "should" wherever it appears. Interpret references in these publications to the "authority having jurisdiction," or words of similar meaning, to mean the Contracting Officer. Provide equipment, materials, installation, and workmanship in accordance with the mandatory and advisory provisions of NFPA 70 unless more stringent requirements are specified or indicated.

1.5.4 Standard Products

Provide materials and equipment that are products of manufacturers regularly engaged in the production of such products which are of equal material, design and workmanship, and:

a. Have been in satisfactory commercial or industrial use for 2 years prior to bid opening including applications of equipment and materials under similar circumstances and of similar size.
b. Have been on sale on the commercial market through advertisements, manufacturers' catalogs,

or brochures during the 2-year period.

c. Where two or more items of the same class of equipment are required, provide products of a single manufacturer; however, the component parts of the item need not be the products of the same manufacturer unless stated in this section.

1.5.4.1 Alternative Qualifications

Products having less than a 2-year field service record will be acceptable if a certified record of satisfactory field operation for not less than 6000 hours, exclusive of the manufacturers' factory or laboratory tests, is furnished.

1.5.4.2 Material and Equipment Manufacturing Date

Products manufactured more than 1 year prior to date of delivery to site are not acceptable.

1.6 MAINTENANCE

1.6.1 Switchboard Operation and Maintenance Data

Submit Operation and Maintenance Manuals.

1.6.2 Assembled Operation and Maintenance Manuals

Assemble and securely bind manuals in durable, hard covered, water resistant binders. Assemble and index the manuals in the following order with a table of contents:

a. Manufacturer's O&M information
b. Catalog data
c. Drawings
d. Prices for spare parts and supply list.
e. Information on metering.
f. Design test reports.
g. Production test reports.

1.7 WARRANTY

Provide equipment items that are supported by service organizations reasonably convenient to the equipment installation in order to render satisfactory service to the equipment on a regular and emergency basis during the warranty period of the contract.

PART 2 PRODUCTS

2.1 SWITCHBOARD

NEMA PB 2 and UL 891.

2.1.1 Ratings

Provide equipment with the following ratings:

a. Voltage rating: **480Y/277volts AC, three-phase, 4-wire**.
b. Continuous current rating of the main bus: **2000** amperes
c. Short-circuit current rating: **65,000 amperes rms symmetrical**
d. UL listed and labeled as service entrance equipment.

2.1.2 Construction

Provide the following:

a. Switchboard: consisting of one or more vertical sections bolted together to form a rigid assembly as indicated.
b. All circuit breakers: front accessible.
c. Where indicated, "space for future" or "space" means to include a vertical bus provided behind a blank front cover. Where indicated, "provision for future" means full hardware provided to mount a breaker suitable for the location.
d. Completely factory engineered and assembled, including protective devices and equipment indicated with necessary interconnections, instrumentation, and control wiring.

2.2.2.1 Enclosure

Provide the following:

a. Enclosure: NEMA ICS 6 Type 1.
b. Enclosure: bolted together with removable bolt-on side
c. Base: includes any part of enclosure that is within 75 mm 3 inches of concrete pad.
d. Paint color: ASTM D1535 light gray No. 61 or No. 49 over rust inhibitor.

2.2.2.2 Bus Bars

Provide the following:

a. Bus bars: copper with silver-plated contact surfaces main bus/aluminum with tin-plated contact surfaces.
   (1) Phase bus bars: uninsulated
   (2) Neutral bus: rated 100 percent of the main bus continuous current rating.
b. Make bus connections and joints with hardened steel bolts.
c. Main-bus (through bus): rated at the full ampacity of the main throughout the switchboard.
d. Minimum 1/4” by 1-1/2” aluminum ground bus secured to each vertical section along the entire length of the switchboard.

2.2.2.3 Main Sections

Provide the main sections consisting of fixed mounted molded-case circuit breakers for the main devices. Both Mains shall be mechanically interlocked to prevent simultaneous operation.

2.2.2.4 Distribution Sections

Provide the distribution section[s] consisting of molded-case circuit breakers as indicated.

2.2.2.5 Auxiliary Sections

Provide auxiliary sections consisting of indicated instruments, metering equipment, control equipment, and current transformer compartments as required.

2.2.3 Protective Device

Provide main and branch protective devices as indicated.

2.2.3.3 Molded-Case Circuit Breaker

Provide the following:

a. UL 489. UL listed and labeled, 100 percent rated main breaker, standard rated branch breakers,

manually operated, low voltage molded-case circuit breaker, with a short-circuit current rating of 65,000 rms symmetrical amperes at 480 volts.

b. Breaker frame size: as indicated.
c. Series rated circuit breakers are unacceptable.

2.2.5 Electronic Trip Units

Equip main and distribution breakers as indicated with a solid-state tripping system consisting of three current sensors and a microprocessor-based trip unit that provides true rms sensing adjustable time-current circuit protection.

Include the following:

a. Current sensors ampere rating: the same as the breaker frame rating.
b. Trip unit ampere rating: as indicated.
c. Ground fault protection: as indicated.
d. Electronic trip units: provide additional features:
   (1) Indicated Breakers: include long delay pick-up and time settings, and LED indication of cause of circuit breaker trip.
   (2) Main breakers: include short delay pick-up and time settings and instantaneous settings and ground fault settings.
   (3) Distribution breakers: as indicated.
   (4) Main Breakers: include a digital display for phase and ground current.
   (5) Main Breakers: include a digital display for watts, vars, VA, kWh, kvarh, and kVAh.
   (6) Main Breakers: include a digital display for phase voltage, and percent THD voltage and current.
   (7) Main Breakers: include provisions for communication via a network twisted pair cable for remote monitoring and control. Provide the following communications protocol: **Modbus**

2.2.6 Metering

2.2.6.1 Digital Meters

IEEE C37.90.1 for surge withstand. Provide true rms, plus/minus one percent accuracy, programmable, microprocessor-based meter enclosed in a sealed case with the following features.

a. Display capability:

   (1) Multi-Function Meter: Display a selected phase to neutral voltage, phase to phase voltage, percent phase to neutral voltage THD, percent phase to phase voltage THD; a selected phase current, neutral current, percent phase current THD, percent neutral current; selected total PF, kW, KVA, kVAR, FREQ, kVAh, kWh. Detected alarm conditions include over/under current, over/under voltage, over/under KVA, over/under frequency, over/under selected PF/kVAR, voltage phase reversal, voltage imbalance, reverse power, over percent THD. Include a Form C KYZ pulse output relay on the meter.

   (2) Power Meter: Display Watts, VARs, and selected KVA/PF. Detected alarm conditions include over/under KVA, over/under PF, over/under VARs, over/under reverse power.

   (3) Volt Meter: Provide capability to be selectable between display of the three phases of phase to neutral voltages and display of the three phases of the phase to phase voltages. Detected alarm conditions include over/under voltage, over/under voltage imbalance, over percent THD.

   (4) Ammeter: Display phase A, B, and C currents. Detected alarm conditions include over/under current, over percent THD.

   (5) Digital Watthour Meter: Provide a single selectable display for watts, total kilowatt hours (kWh) and watt demand (Wd). Include a Form C KYZ pulse output relay on the meter.

b. Design meters to accept input from standard 5A secondary instrument transformers and direct voltage monitoring range to 600 volts, phase to phase.

c. Provide programming via a front panel display and a communication interface accessible by a computer.
d. Provide password secured programming stored in non-volatile EEPROM memory.
e. Provide digital communications in a Modbus RTU protocol via a RS232C serial port and an independently addressable RS485 serial port.
f. Provide meter that calculates and stores average max/min demand values with time and date for all readings based on a user selectable sliding window averaging period.
g. Provide meter with programmable hi/low set limits with two Form C dry contact relays when exceeding alarm conditions.
h. Provide meter with a display of Total Harmonic Distortion (THD) measurement to a minimum of the thirty-first order.

2.3 MANUFACTURER'S NAMEPLATE

Provide a nameplate on each item of equipment bearing the manufacturer's name, address, model number, and serial number securely affixed in a conspicuous place; the nameplate of the distributing agent is not acceptable. This nameplate and method of attachment may be the manufacturer's standard if it contains the required information.

2.4 FIELD FABRICATED NAMEPLATES

ASTM D709. Provide laminated plastic nameplates for each switchboard, equipment enclosure, relay, switch, and device; as specified in this section or as indicated on the drawings. Identify on each nameplate inscription the function and, when applicable, the position. Provide nameplates of melamine plastic, 3 mm 0.125 inch thick, white with black center core. Provide matte finish surface. Provide square corners. Accurately align lettering and engrave into the core. Provide nameplates with minimum size of 25 by 65 mm one by 2.5 inches. Provide lettering that is a minimum of 6.35 mm 0.25 inch high normal block style.

2.5 SOURCE QUALITY CONTROL

2.5.1 Switchboard Design Tests NEMA

PB 2 and UL 891.

2.5.2.1 Design Tests

Furnish documentation showing the results of design tests on a product of the same series and rating as that provided by this specification.

a. Short-circuit current test.
b. Enclosure tests.
c. Dielectric test.

2.5.3 Switchboard Production Tests

NEMA PB 2 and UL 891. Furnish reports which include results of production tests performed on the actual equipment for this project. These tests include:

a. 60-hertz dielectric tests.
b. Mechanical operation tests.
c. Electrical operation and control wiring tests.
d. Ground fault sensing equipment test.

2.6 ARC FLASH WARNING LABEL

Provide warning label for switchboards. Locate this self-adhesive warning label on the outside of the enclosure warning of potential electrical arc flash hazards and appropriate PPE required. Provide label format as indicated.

2.7 SERVICE ENTRANCE AVAILABLE FAULT CURRENT LABEL

Provide label on exterior of switchboards used as service equipment listing the maximum available fault current at that location. Include on the label the date that the fault calculation was performed and the contact information for the organization that completed the calculation. Locate this self-adhesive warning label on the outside of the switchboard. Provide label format as indicated.

PART 3 EXECUTION

3.1 INSTALLATION

Conform to IEEE C2, NFPA 70, and to the requirements specified herein. Provide new equipment and materials unless indicated or specified otherwise.

3.2 GROUNDING

NFPA 70 and IEEE C2, except that grounds and grounding systems with a resistance to solid earth ground not exceeding 25 ohms. Test the existing grounding system and notify Engineer immediately if the reading is above 25 ohms.

3.2.1 Grounding Electrodes

Connect ground conductors to the upper end of the ground rods by exothermic weld or compression connector. Provide compression connectors at equipment end of ground conductors.

3.2.2 Equipment Grounding

Provide bare copper cable not smaller than No. 4/0 AWG not less than 610 mm 24 inches below grade connecting to the indicated ground rods. When work in addition to that indicated or specified is directed to obtain the specified ground resistance, the provision of the contract covering "Changes" applies.

3.2.3 Connections

Make joints in grounding conductors and loops by exothermic weld or compression connector.

3.2.4 Grounding and Bonding Equipment

UL 467, except as indicated or specified otherwise.

3.3 INSTALLATION OF EQUIPMENT AND ASSEMBLIES

Install and connect equipment furnished under this section as indicated on project drawings, the approved shop drawings, and as specified herein.

3.3.1 Switchboard

ANSI/NEMA PB 2.1.

3.3.2 Meters and Instrument Transformers

ANSI C12.1.

3.3.3 Field Applied Painting

Where field painting of enclosures is required to correct damage to the manufacturer's factory applied coatings, provide manufacturer's recommended coatings and apply in accordance with manufacturer's instructions.

3.3.4 Field Fabricated Nameplate Mounting

Provide number, location, and letter designation of nameplates as indicated. Fasten nameplates to the device with a minimum of two sheet-metal screws or two rivets.

3.4 FOUNDATION FOR EQUIPMENT AND ASSEMBLIES

3.4.1 Interior Location

Mount switchboard on existing concrete slab as follows:

a. Extend concrete slab as needed to extend a minimum of 2” from new switchgear base.
b. Extend or reroute conduit as required by the equipment to be mounted.
c. Seal voids around conduit openings in slab with water- and oil-resistant caulking or sealant.
d. Extend existing branch/feeder wiring as needed with insulated in-line splicers, 600V, size as required per existing cables. Torque mechanical connections per manufacturer requirements.

3.5 FIELD QUALITY CONTROL

3.5.1 Performance of Acceptance Checks and Tests

Perform in accordance with the manufacturer's recommendations and include the following visual and mechanical inspections and electrical tests, performed in accordance with NETA ATS.

3.5.1.1 Switchboard Assemblies

a. Visual and Mechanical Inspection
   (1) Compare equipment nameplate data with specifications and approved shop drawings.
   (2) Inspect physical, electrical, and mechanical condition.
   (3) Verify appropriate anchorage, required area clearances, and correct alignment.
   (4) Clean switchboard and verify shipping bracing, loose parts, and documentation shipped inside cubicles have been removed.
   (5) Inspect all doors, panels, and sections for paint, dents, scratches, fit, and missing hardware.
   (6) Verify that circuit breaker sizes and types correspond to approved shop drawings as well as to the circuit breaker’s address for microprocessor-communication packages.
   (7) Verify that current transformer ratios correspond to approved shop drawings.
   (8) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method.
   (9) Confirm correct operation and sequencing of electrical and mechanical interlock systems.
   (10) Confirm correct application of manufacturer's recommended lubricants.
   (11) Inspect insulators for evidence of physical damage or contaminated surfaces.
   (12) Verify correct barrier installation.
   (13) Exercise all active components.
   (14) Inspect all mechanical indicating devices for correct operation.
   (15) Verify that filters are in place and vents are clear.
   (16) Test operation, alignment, and penetration of instrument transformer withdrawal disconnects.
   (17) Inspect control power transformers.

b. Electrical Tests
   (1) Perform insulation-resistance tests on each bus section.

(2) Perform dielectric withstand voltage tests.

3.5.1.3 Circuit Breakers

Low Voltage Molded Case with Solid State Trips

a. Visual and Mechanical Inspection
   (1) Compare nameplate data with specifications and approved shop drawings.
   (2) Inspect circuit breaker for correct mounting.
   (3) Operate circuit breaker to ensure smooth operation.
   (4) Inspect case for cracks or other defects.

b. Electrical Tests
   (1) Perform Breaker adjustments for final settings in accordance with Engineer provided settings.

3.5.1.5 Metering and Instrumentation

a. Visual and Mechanical Inspection
   (1) Compare equipment nameplate data with specifications and approved shop drawings.
   (2) Inspect physical and mechanical condition.
   (3) Verify tightness of electrical connections.

b. Electrical Tests
   (1) Determine accuracy of meters at 25, 50, 75, and 100 percent of full scale.
   (2) Calibrate watthour meters according to manufacturer's published data.
   (3) Verify all instrument multipliers.
   (4) Electrically confirm that current transformer and voltage transformer secondary circuits are intact.

3.5.1.6 Grounding System

a. Visual and Mechanical Inspection
   (1) Inspect ground system for compliance with contract plans and specifications.

b. Electrical Tests
   (1) IEEE 81. Perform ground-impedance measurements utilizing the fall-of-potential method. On systems consisting of interconnected ground rods, perform tests after interconnections are complete. On systems consisting of a single ground rod perform tests before any wire is connected. Take measurements in normally dry weather, not less than 48 hours after rainfall. Use a portable ground resistance tester in accordance with manufacturer's instructions to test each ground or group of grounds. Use an instrument equipped with a meter reading directly in ohms or fractions thereof to indicate the ground value of the ground rod or grounding systems under test.

   (2) Submit the measured ground resistance of each ground rod and grounding system, indicating the location of the rod and grounding system. Include the test method and test setup (i.e., pin location) used to determine ground resistance and soil conditions at the time the measurements were made.

3.5.2 Follow-Up Verification

Upon completion of acceptance checks, settings, and tests, show by demonstration in service that circuits and devices are in good operating condition and properly performing the intended function. Trip circuit breakers by operation of each protective device. Test each item to perform its function not less than three times. As an exception to requirements stated elsewhere in the contract, provide the Engineer 5 working days advance notice of the dates and times for checks, settings, and tests.

-- End of Section --

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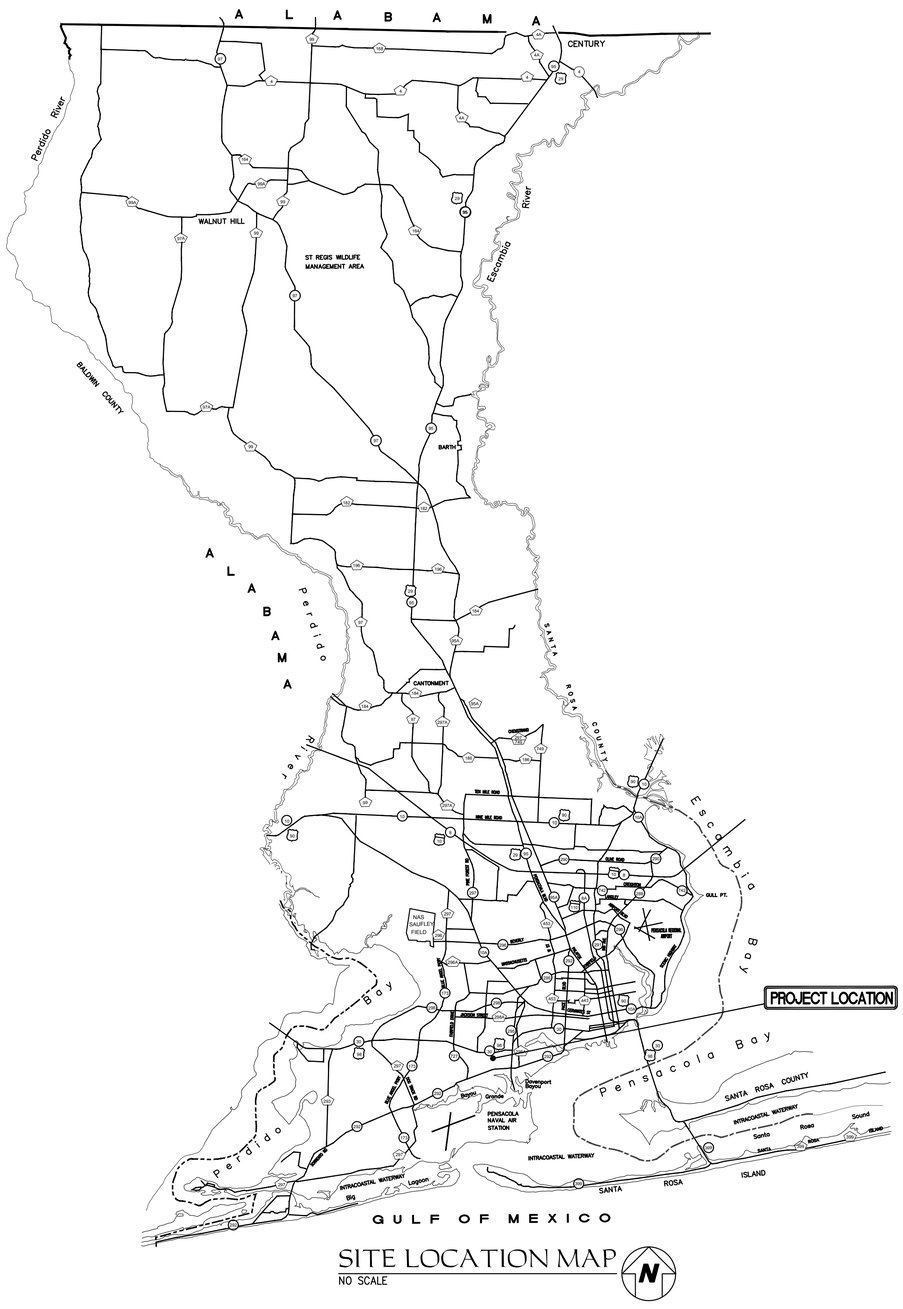

SITE LOCATION MAP
NO SCALE

PSC

PENSACOLA STATE COLLEGE
REPLACE POWER SWITCHBOARD

BUILDING 3200
WARRINGTON CAMPUS
PENSACOLA, FLORIDA

ELECTRICAL DRAWING INDEX

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PENSACOLA STATE COLLEGE
SWITCHBOARD BLDG 3200
WARRINGTON CAMPUS
PENSACOLA, FLORIDA

SEAL:

REVISION:	
DATE:	DESCRIPTION:

DRAWN BY:	SDJ
DESIGNED BY:	TAA
CHECKED BY:	TAA
DATE:	11/09/15
JOB NUMBER:	1548

ELECTRICAL SHEET INDEX AND LOCATION MAP

E100

DEMOLITION NOTES

1. PLANNED INTERRUPTIONS OF UTILITY SERVICE TO ANY FACILITY OR AREAS WITHIN ANY FACILITY AFFECTED BY THIS CONTRACT, SHALL BE CAREFULLY PLANNED AND COORDINATED WITH THE CONTRACTING OFFICER IN ADVANCE OF THE REQUESTED INTERRUPTION. THE CONTRACTOR SHALL NOT INTERRUPT SERVICES UNTIL SPECIFIED APPROVAL HAS BEEN GRANTED. THE REQUEST SHALL INDICATE SERVICES AND AREAS TO BE AFFECTED, DATE AND TIME OF INTERRUPTION AND DURATION OF OUTAGE. REQUEST FOR INTERRUPTION OF SERVICE WILL NOT BE APPROVED UNTIL ALL EQUIPMENT AND MATERIAL REQUIRED FOR THE COMPLETION OF THAT PARTICULAR PHASE OF WORK ARE ON THE JOB SITE.

2. ALL DEMOLITION WORK REQUIRED SHALL BE PERFORMED WITH CARE SO AS NOT TO INTERRUPT OTHER EXISTING SERVICES (WATER, GAS, ELECTRICAL, SEWER, SPRINKLERS, ETC.). IF ACCIDENTAL UTILITY INTERRUPTION, DAMAGE, ETC., RESULTS FROM WORK PERFORMED BY THE CONTRACTOR, THE AFFECTED UTILITY OR SERVICE SHALL BE RETURNED TO ITS ORIGINAL CONDITION WITHOUT DELAY, BY AND AT THE EXPENSE OF THE CONTRACTOR, USING SKILLED WORKMEN OF THE TRADE INVOLVED.

3. REMOVE ALL OUTLETS, PULL BOXES, JUNCTION BOXES, ETC., AS REQUIRED TO COMPLETELY REMOVE THE ELECTRICAL ITEMS SHOWN FOR DEMOLITION UNLESS NOTED TO REMAIN. DISCONNECT AND REMOVE ALL ELECTRICAL PROVISIONS TO EQUIPMENT BEING REMOVED.

4. REMOVE ALL WIRING, CONDUIT, RACEWAYS, OUTLET BOXES, SUPPORTING APPARATUS ETC., AS REQUIRED.

5. SYMBOLS SHOWN ARE TYPICAL AND LOCATIONS ARE APPROXIMATE AND ARE NOT INTENDED TO LIMIT THE AMOUNT OF DEMOLITION. COORDINATE WITH EXISTING CONDITIONS AND THESE NOTES AND REMOVE ALL APPLICABLE SYSTEMS AND COMPONENTS CONFLICTING WITH FINISHED DESIGN INTENT.

6. EXISTING BRANCH WIRING SHOWN IS DIAGRAMMATICAL ONLY AND IS BASED UPON EXISTING AS-BUILT DRAWINGS AND SURVEYS. COORDINATE WITH ACTUAL EXISTING CONDITIONS FOR NUMBER OF CONDUCTORS PER CONDUIT AND EXACT LOCATIONS OF CONDUIT RUNS AND EQUIPMENT.

7. ALL FEEDERS, SYSTEMS, CONTROL WIRING, MISCELLANEOUS AUXILIARY SYSTEMS, ETC., PASSING THROUGH THE AREA OF WORK SHALL BE MAINTAINED AT ALL TIMES, REMAIN IN SERVICE, CONTINUOUS AND UNINTERRUPTED. ANY DAMAGE, DISRUPTION OR DISCONNECTION SHALL BE IMMEDIATELY REPAIRED, REPLACED AND/OR REROUTED AS REQUIRED TO MAINTAIN CONTINUITY OF SYSTEMS. ANY EXISTING SERVICE OR OPERATING SYSTEM WHICH MUST BE INTERRUPTED SHALL BE SUPPLIED WITH A TEMPORARY SERVICE FOR CONTINUATION OF THE NORMAL OPERATIONS OF THE FACILITY.

8. CONCEALED CONDUIT THAT CANNOT BE REMOVED DUE TO INACCESSIBILITY MAY BE ABANDONED. CONDUCTORS SHALL BE REMOVED AND CONDUIT CUT FLUSH WITH SURFACE.

ABBREVIATIONS

AFF - ABOVE FINISHED FLOOR
C. - CONDUIT
C/L - CENTERLINE
EC - ELECTRICAL CONTRACTOR
EF - EXHAUST FAN
GND - GROUND CONDUCTOR
GFI - GROUND FAULT PROTECTION
LTG - LIGHTING
LTS - LIGHTS
RECEPT - RECEPTACLE
UNO - UNLESS NOTED OTHERWISE
WH - WATER HEATER
WP - WEATHERPROOF
A/C - AIR CONDITIONER
COND - CONDENSING UNIT
IHP - INDOOR HEAT PUMP
OHP - OUTDOOR HEAT PUMP
NL - NIGHT LIGHT

ELECTRICAL LEGEND

- EXISTING FUSED DISCONNECT SWITCH; AMP SIZE AS NOTED; FUSE SIZE PER EQUIPMENT NAMEPLATE DATA
- RACEWAY INSTALLED CONCEALED IN WALLS AND/OR ABOVE CEILING
- RACEWAY INSTALLED CONCEALED IN FLOOR SLAB AND/OR BELOW GRADE
- RACEWAY INSTALLED EXPOSED
- EXISTING ELECTRICAL EQUIPMENT TO BE REMOVED
- EXISTING ELECTRICAL EQUIPMENT REMAIN
- NEW ELECTRICAL EQUIPMENT
- NEW ELECTRICAL EQUIPMENT
- DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; GFI; WP; MT HORIZONTALLY 26" AFF TO C/L; NEMA GF-5-20R; HUBBELL SERIES HBLGF5362; PASS AND SEYMOUR WIUFC10S COVER/BOX.

GENERAL NOTES

A. CONTRACTOR AND FIELD SERVICE TECHNICIANS SHALL COORDINATE ALL POWER OUTAGES, DEMOLITION WORK AND NEW INSTALLATIONS WITH PENSACOLA STATE COLLEGE (PSC) MAINTENANCE. OUTAGES REQUIRE A 2 WEEK PRIOR NOTICE.

B. ALL NEW DEVICES IN THE CONTRACT SHALL HAVE A CUSTOM ENGRAVED MICARTA NAMEPLATE MECHANICALLY AFFIXED IDENTIFYING SYSTEM.

C. INTERNAL SWITCHBOARD MODIFICATIONS SHALL BE COMPLETED PER MANUFACTURERS REQUIREMENTS. PROVIDE ALL NECESSARY TERMINAL BLOCKS, FUSE BLOCKS, FUSES, COMPONENTS, WIRING, STRAPPING, LABELING, ETC. FOR A COMPLETE SYSTEM.

D. ALL NEW TERMINAL BLOCKS AND COMPONENTS SHALL HAVE A COVER OR BE LISTED AS IP20 (TOUCH/FINGER-SAFE)

WARNING (ORANGE)

Arc Flash and Shock Hazard
Appropriate PPE Required (WHITE)

22"	Flash Hazard Boundary
1.53	cal/cm2 Flash Hazard at 18 inches
#5	PPE Level
	FR shirt and FR pants or FR coverall
480V	VAC Shock Hazard when cover is removed
42"	Limited Approach
12"	Restricted Approach - Class 1 Voltage Gloves
1"	Prohibited Approach - Class 1 Voltage Gloves

Equipment Name: PANEL MDP Date: _____

VALID FOR NORMAL SYSTEM CONFIGURATION ONLY.

4"H x 6"W VINYL LABEL WITH BLACK LETTERING PER ANSI Z535 STANDARDS.

TYPICAL ARC FLASH HAZARD LABEL DETAIL
NOT TO SCALE

WARNING (ORANGE)

MAXIMUM AVAILABLE FAULT CURRENT (WHITE)

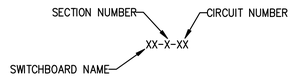
____ SYMMETRICAL RMS AMPERES
/ / DATE OF CALCULATION
____ EQUIPMENT NAME

COMPANY RESPONSIBLE FOR CALCULATION CONTACT INFORMATION; COMPANY NAME, ADDRESS, PHONE NUMBER

4"H x 6"W VINYL LABEL WITH BLACK LETTERING PER ANSI Z535 STANDARDS.

TYPICAL SERVICE EQUIPMENT FAULT CURRENT LABEL DETAIL
NOT TO SCALE

DISCONNECT SWITCH
DESCRIPTION NOMENCLATURE



HOMERUN NOMENCLATURE

SWITCHBOARD MP - SECTION 1 — Voltage: 480Y/277 Phase: 3Ø Wire: 4 Bus: 2000A AIC Rating: 65,000 NEMA Rating: 1 Mounting: SURFACE

CKT NO	SERVING	BREAKER TRIP UNIT	BREAKER TRIP	BREAKER POLE
1	PANEL PI	--	200	3
2	PANEL LS	--	200	3
3	EXISTING CIRCUIT (TRACE AND PROVIDE PROPER LABEL)	--	100	3
4	LIGHTING CONTROL DISCONNECT	--	100	3
5	SURGE PROTECTION DEVICE - 120KA	--	60	3
6	SURGE PROTECTION DEVICE - 120KA	--	60	3
7	FIRE ALARM	--	30	3
8	EMERGENCY LIGHTING	--	30	3
9	SPARE	--	30	3
10	SPARE	--	60	3
11	SPACE ONLY	--	--	3
12	SPACE ONLY	--	--	3
13	SPACE ONLY	--	--	3
14	SPACE ONLY	--	--	3
15	SPACE ONLY	--	--	3
16	SPACE ONLY	--	--	3
17	SPACE ONLY	--	--	3
18	SPACE ONLY	--	--	3
19	SPACE ONLY	--	--	3
20	SPACE ONLY	--	--	3

SWITCHBOARD MP - SECTION 2 — Voltage: 480Y/277 Phase: 3Ø Wire: 4 Bus: 2000A AIC Rating: 65,000 NEMA Rating: 1 Mounting: SURFACE

CKT NO	SERVING	BREAKER TRIP UNIT	BREAKER TRIP	BREAKER POLE
1	BLDG 3000 & 3100	LSIG	800	3
2	PANEL LH	LSIG	600	3
3	MCC	LSIG	400	3
4	BLDG 3200 NEW WING	LSIG	400	3
5	CHILLER #1	LSIG	400	3
6	CHILLER #2	LSIG	400	3
7	SPACE ONLY	--	--	3
8	SPACE ONLY	--	--	3
9	SPACE ONLY	--	--	3
10	SPACE ONLY	--	--	3

OPTIONS

ALL BREAKERS 400A AND GREATER SHALL HAVE LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND (LSIG) TRIP UNITS. COORDINATE FINAL SETTINGS WITH ENGINEER OF RECORD (EOR) PRIOR TO OUTAGE.

PROVIDE 400A AND GREATER BREAKERS WITH RS-485 MODBUS CAPABILITY OR PROVIDE METERS FOR THE 400A AND GREATER CIRCUITS WITH RS-485 MODBUS CAPABILITY. PROVIDE ALL ACCESSORIES TO MAKE A COMPLETE AND FUNCTIONING MODBUS COMMUNICATION SYSTEM WITH CONNECTIONS TO THE TRANE ENERGY MANAGEMENT SYSTEM. FINAL CONNECTION AND PROGRAMMING BY TRANE.

SWITCHBOARD MP - SECTION 3 — Voltage: 480Y/277 Phase: 3Ø Wire: 4 Bus: 2000A AIC Rating: 65,000 NEMA Rating: 1 Mounting: SURFACE

CKT NO	SERVING	BREAKER TRIP UNIT	BREAKER TRIP	BREAKER POLE
1	GENERATOR MAIN	LSIG	2000	3

OPTIONS

GENERATOR MAIN SHALL HAVE LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND (LSIG) TRIP UNITS. COORDINATE FINAL SETTINGS WITH ENGINEER OF RECORD (EOR) PRIOR TO OUTAGE.

GENERATOR MAIN SHALL BE MECHANICALLY INTERLOCKED WITH THE UTILTY MAIN TO PREVENT THE CLOSING OF BOTH MAINS. MAIN SHALL BE SERVICE ENTRANCE RATED AND SHALL HAVE A SURGE PROTECTION DEVICE.

GENERATOR MAIN SHALL HAVE RS-485 MODBUS CAPABILITY AND BE CONNECTED INTERNALLY TO THE MODBUS NETWORK.

SWITCHBOARD MP - SECTION 4 — Voltage: 480Y/277 Phase: 3Ø Wire: 4 Bus: 2000A AIC Rating: 65,000 NEMA Rating: 1 Mounting: SURFACE

CKT NO	SERVING	BREAKER TRIP UNIT	BREAKER TRIP	BREAKER POLE
1	UTILITY MAIN	LSIG	2000	3

OPTIONS

UTILITY MAIN SHALL HAVE LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND (LSIG) TRIP UNITS. COORDINATE FINAL SETTINGS WITH ENGINEER OF RECORD (EOR) PRIOR TO OUTAGE.

UTILITY MAIN SHALL BE MECHANICALLY INTERLOCKED WITH THE GENERATOR MAIN TO PREVENT THE CLOSING OF BOTH MAINS. MAIN SHALL BE SERVICE ENTRANCE RATED AND SHALL HAVE A SURGE PROTECTION DEVICE.

UTILITY MAIN SHALL HAVE RS-485 MODBUS CAPABILITY AND BE CONNECTED INTERNALLY TO THE MODBUS NETWORK.

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PENSACOLA STATE COLLEGE
SWITCHBOARD BLDG 3200
WARRINGTON CAMPUS
PENSACOLA, FLORIDA

SEAL:

REVISION:

DATE:	DESCRIPTION:

DRAWN BY:	SDJ
DESIGNED BY:	TAA
CHECKED BY:	TAA
DATE:	11/09/15
JOB NUMBER:	1548

LEGEND, NOTES AND DETAILS

E200

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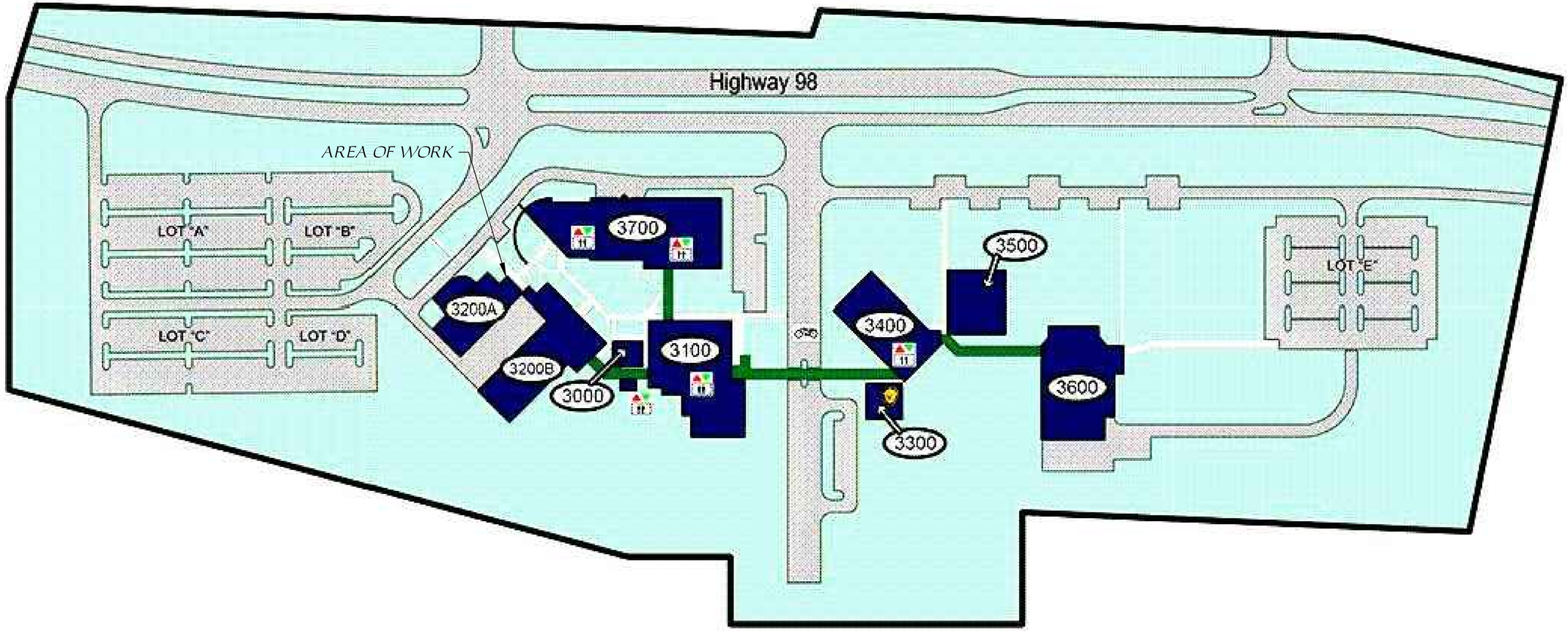

CAMPUS MAP
NOT TO SCALE

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PENSACOLA STATE COLLEGE
SWITCHBOARD BLDG 3200

WARRINGTON CAMPUS
PENSACOLA, FLORIDA

SEAL:

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DATE:	DESCRIPTION:

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CAMPUS MAP

E300

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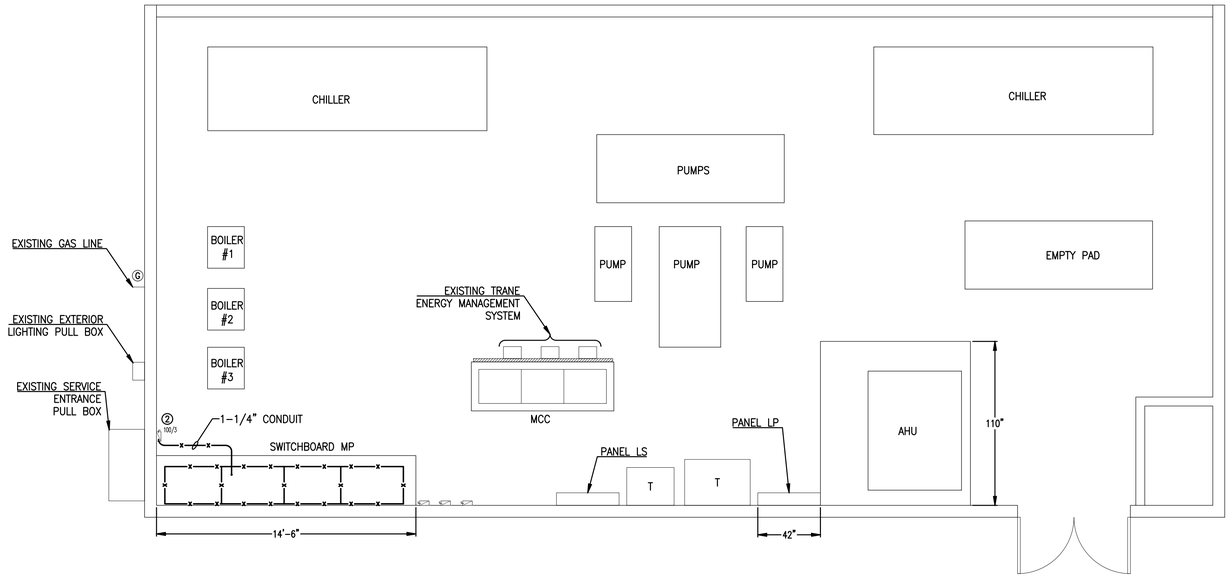
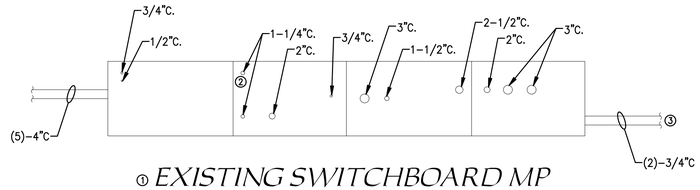


BUILDING 3200 - EXISTING ELECTRICAL ROOM

SCALE: 1/4" = 1'-0"

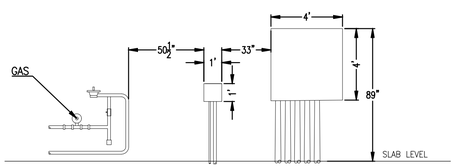
NOTES:

1. CONDUIT SIZES AND LOCATIONS ARE APPROXIMATE. VERIFY EXACT SIZE AND LOCATION PRIOR TO OUTAGE.
2. EXISTING DISCONNECT IS FED FROM BUS TAP. REMOVE CONDUIT AND WIRE FEEDING DISCONNECT. PREPARE TO RE-FEED FROM NEW 100/3 BREAKER IN NEW SWITCHBOARD.
3. EXISTING 120V CIRCUITS FOR FIRE ALARM AND EMERGENCY LIGHTING. PROVIDE A JUNCTION OR WIREWAY TO RE-ROUTE/EXTEND THE CIRCUITS AROUND THE NEW SWITCHBOARDS.



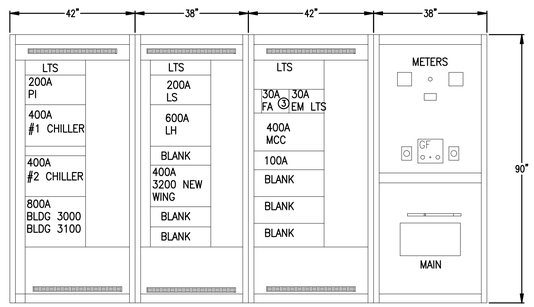
① EXISTING SWITCHBOARD MP TOP VIEW

NOT TO SCALE



BUILDING 3200 - EXISTING EXTERIOR

SCALE: 1/4" = 1'-0"



BUILDING 3200 - EXISTING SWITCHBOARD MP

SCALE: 1/2" = 1'-0"

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PENSACOLA STATE COLLEGE
SWITCHBOARD BLDG 3200
WARRINGTON CAMPUS
PENSACOLA, FLORIDA

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DATE:	DESCRIPTION:

DRAWN BY:	SDJ
DESIGNED BY:	TAA
CHECKED BY:	TAA
DATE:	11/09/15
JOB NUMBER:	1548

BUILDING 3200, EXISTING ELECTRICAL & DEMOLITION

E400

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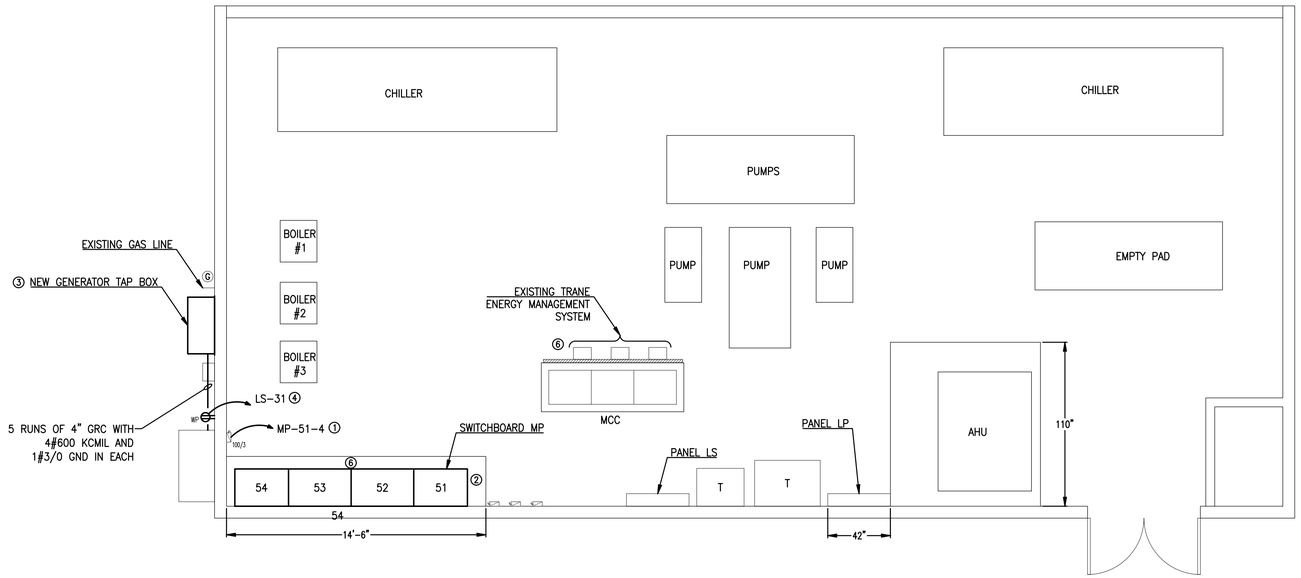


BUILDING 3200 - NEW WORK - ELECTRICAL ROOM

SCALE: 1/4" = 1'-0"

NOTES:

① 4#3 AND 1#8 GND IN 1-1/4" CONDUIT

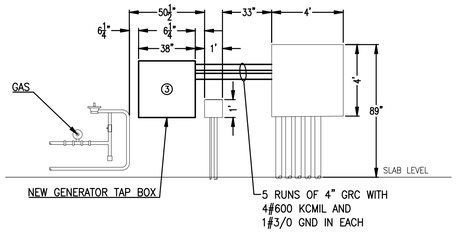
② REROUTE EXISTING 120V CIRCUITS. PROVIDE JUNCTIONS OR WIREWAYS AS NEEDED TO EXTEND CIRCUITS AND MAINTAIN CONTINUITY.

③ PROVIDE A NEMA 3R, WALL MOUNT GENERATOR TAP BOX, PHASE SEQUENCE AND FAILURE INDICATION, FEMALE CAM-LOKS; BERTHOLD ELECTRIC CAT#: W20-5C-F36 OR APPROVED EQUAL.

④ PROVIDE A 20/1 BREAKER IN EXISTING PANEL LS.

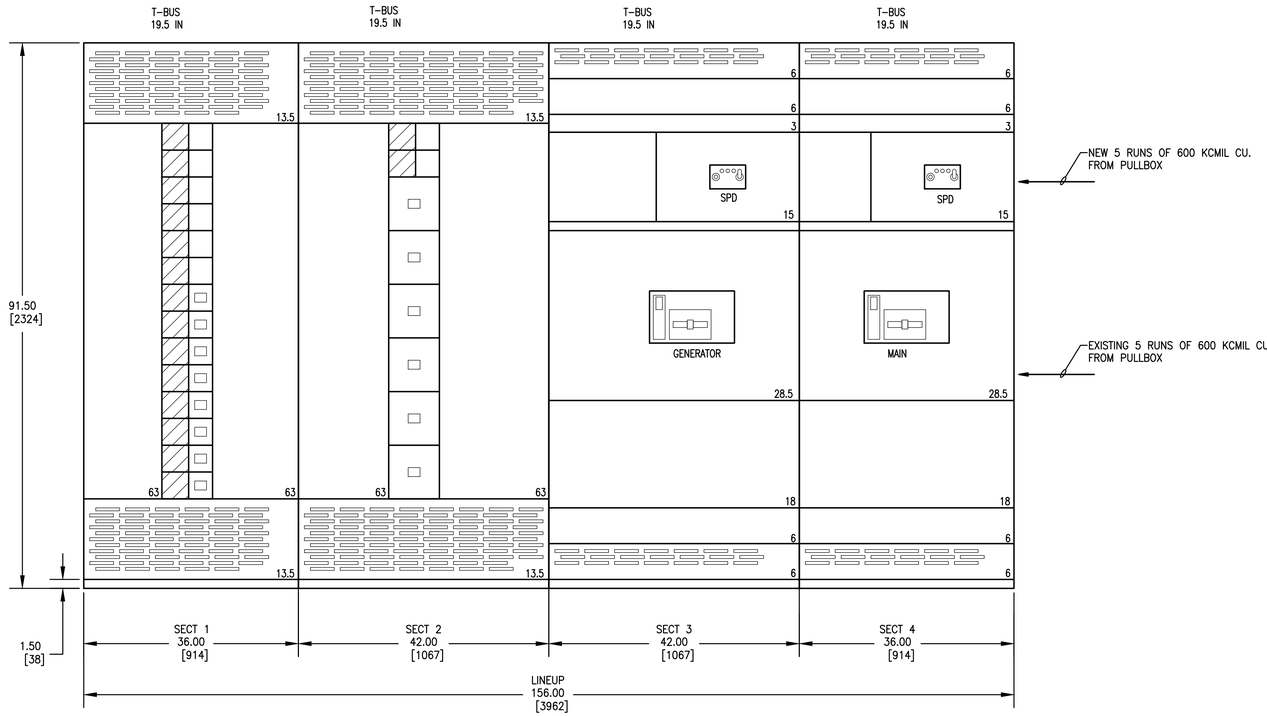
⑤ DAISY CHAIN INTERNAL RS-485 RTU NETWORK WITH BELDEN 8723 TSP.

⑥ PROVIDE BELDEN 8723 TSP IN 3/4" CONDUIT FROM NEW SWITCHBOARD TO THE TRANE ENERGY MANAGEMENT SYSTEM WIREWAY. COIL UP AND LABEL. FINAL CONNECTION AND PROGRAMMING BY TRANE.



BUILDING 3200 -NEW WORK - EXTERIOR

SCALE: 1/4" = 1'-0"



BUILDING 3200 - NEW SWITCHBOARD MP ⑤

NOT TO SCALE

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PENSACOLA STATE COLLEGE
SWITCHBOARD BLDG 3200
WARRINGTON CAMPUS
PENSACOLA, FLORIDA

SEAL:

REVISION:	
DATE:	DESCRIPTION:

DRAWN BY:	SDJ
DESIGNED BY:	TAA
CHECKED BY:	TAA
DATE:	11/09/15
JOB NUMBER:	1548

BUILDING 3200 NEW WORK & ELECTRICAL DETAILS

E500