## LACHIN Architects, apc

## Calcasieu Parish School Board Sulphur High School Building 5 HL-052-05

## July 14, 2022

## **ADDENDUM NO. 1**

This Addendum, applicable to work designated herein below shall be understood to be an Addendum and as such shall be included in the "Contract Documents" dated June 15, 2022.

Following are the changes, amendments, deletions or additions to components of the "Contract Documents" as now written or drawn. All provisions of the General Conditions of the Contract for Construction, Supplementary Conditions, and other pertinent portions of sections in Division 1 through Division 33 of the Project Manual Specification shall apply to this Addendum.

#### GENERAL

Item No. 1: ADD the attached "Notes of Pre-Bid Meeting" and "Sign-in Sheet" to the Project Manual.

Item No. 2: The contractor shall include (in his bid) an allowance of \$168,500 for Johnson Controls, Inc. (manufacturer of the Sulphur High School existing building automation system) to perform hurricane damaged HVAC control system scope of work (furnish materials and labor required to bring damaged HVAC equipment control system back to working order) associated with Building 5 Hurricane Repair Mechanical Drawings and described by Specification Section 23 09 00 – HVAC Instrumentation and Controls (released as part of this addendum). Contact Paul Harris (337-298-4021) Johnson Controls, Inc. - Lake Charles Branch Office.

#### FRONT END & ARCHITECTURAL SPECIFICATIONS

Item No. 3: **<u>REPLACE</u>** the Unit Price Form with the Unit Price Form included in this addendum.

Item No. 4: <u>ADD</u> specification section "01 10 00 Summary" included in this addendum. The specification was previously referenced in the Table of Contents but not included in the Project Manual.

Item No. 5: **<u>REPLACE</u>** the Submittal Review Cover Sheet provided at the end of specification section "01 33 00 Submittal Procedures" with the Submittal Review Cover sheet included in this addendum.

Item No. 6: In specification section "09 65 13 Resilient Base and Accessories" ADD the following:

#### Part 2.2.1 INSTALLATION ACCESSORIES:

Rubber/Transition Strips: Basis of Design: Interface standard Transition Strip. Color to be selected by architect from manufacturer's standard color selection. Transition Strips are to be provided at the intersection of differing flooring materials where new floor meets existing or new flooring meets new flooring.

#### **MECHANICAL SPECIFICATIONS**

Item No. 7: <u>**REPLACE**</u> specification section "23 09 00 HVAC Instrumentation and Controls" with the updated specification included in this addendum.

#### ARCHITECTURAL DRAWINGS

Item No. 8: **<u>REPLACE</u>** the following sheets with the revised sheets included in this addendum:

G001	COVER SHEET
A001	SITE/ROOF PLAN
A002	ROOF DETAILS
A003	ROOF & MISC DETAILS
A101	FLOOR PLANS
A201	DAMAGE PHOTOS
A202	DAMAGE PHOTOS

#### MECHANICAL DRAWINGS

Item No. 9: **<u>REPLACE</u>** the following sheets with the revised sheets included in this addendum:

- M011 MECHANICAL SITE/ROOF PLAN
- M201 ENLARGED MECH ROOF PLAN
- M202 ENLARGED MECH ROOF PLAN
- M401 EXIS MECHANICAL EQUIP SCHEDULES

#### ELECTRICAL DRAWINGS

Item No. 10: **<u>REPLACE</u>** the following sheets with the revised sheets included in this addendum:

- E001 ELECTRICAL SITE PLAN
- E002 ELECTRICAL SITE 2<sup>ND</sup> FLOOR PLAN
- E201 ENLARGED ELEC ROOF PLAN
- E302 ELECTRICAL PHOTO REFERENCE DETAILS

Item No. 11: On sheet E001, <u>ADD</u> "Suspended light fixtures in classrooms shall be Peerless 10CRML (LENGTH) Series light fixture or prior approved equal."

#### PRIOR APPROVALS

Listed below are manufacturers who are recognized as capable of producing products or equipment equal to those specified. Products or equipment will be considered acceptable, providing the equipment meets, or exceeds the specification requirements, fits the available space, and has the capacity and performance requirements. Fixtures/equipment shall also be similar in appearance, construction, and performance (as published by an independent laboratory report).

The listed (prior-approved) equipment is not given with respect to any specific model, series, catalog number, etc. Suppliers are cautioned that before their equipment is actually approved, it will be incumbent upon them to demonstrate to the architect or engineer, that the product or equipment is (in fact) equal to the requirements specified and conforms fully to all specification requirements. For light fixtures, point-to-point lighting calculations and/or fixture samples may be requested during shop drawing review to verify compliance with specification.

Manufacturer	
Signify	

Product Light Fixtures

#### **QUESTIONS/REQUESTS FOR INFORMATION**

The following questions were asked and answered during the addendum period:

*Question 1*: What is the budget for the project? *Answer 1:* The design team is releasing a range of probable cost from \$5 million to \$6 million dollars.

*Question 2:* What is the approximate age of the Building 5 buildings? *Answer 2:* The approximate age is not known by the design team but estimated to be over 40 years old.

#### END OF ADDENDUM



#### NOTES OF PRE-BID MEETING

#### Sulphur High School Building 5

07-06-2022

Notes By: David M. Lachin, Jr.

#### Attendees:

David M. Lachin, Jr. Natalie Graham *CSRS* David Pool Stacie Blevins Mark Aymond

Distribution: Attendees Sign-In Sheet Date: 07-07-2022

Location: Sulphur High Building 5

The purpose of the meeting was to review scope of work and bid requirements. The following notations were made at the time of the meeting.

Project bid date is July 19, 2022. Bids will be received and opened at <u>1:30pm</u> at the <u>Calcasieu Parish School Board</u> <u>Office.</u>

Project scope is generally as follows:

Replacement to existing roof systems including flashing, gutters and downspouts. Repairs to hurricane damaged exterior and interior finish systems Repairs/replacement of hurricane damaged Mechanical, Plumbing and Electrical systems.

It was reiterated by the design team that this is a FEMA-funded project, therefore, components replaced are to be replaced "in like kind" with systems to match existing.

Most of the major storm damaged mechanical equipment called out by the drawings to be replaced (in kind with new) is currently covered by TPO. Contractors are to perform a rooftop site visit prior to bid to review current existing conditions and based on field observations price non-verifiable mechanical equipment performance based on mechanical schedules and quantities identified in the drawings. The equipment schedule was created by the design team after reviewing available existing mechanical construction documents. The awarded contractor will be required to verify actual damaged mechanical equipment to be replaced in kind and report any discrepancies to the Architect prior to submission of replacement equipment shop drawings. Any temporary roof modifications required to verify the mechanical equipment are to be made and repaired by the contractor until the permanent roof replacement is complete.

Contractor is reminded that there is to be an allowance which is to be included in the bid for the controls scope of work. This allowance number will be released via addendum.

The construction duration for the project is 200 calendar days from the NTP.

Bids received after the time and date for receipt of bids will not be opened.

Bids shall be submitted in a sealed opaque envelope. The bid envelope shall be identified on the outside with the name of the project, and the bidder's name, address, and Louisiana Contractor's license number.







Bidders may choose to submit their bid electronically in accordance with Louisiana Revised Statute 38:2212 A(1)(f)(i). Electronic bid submission is available through Central Bidding at <u>www.centralauctionhouse.com</u>.

Bids will be opened publicly.

The Contractor is reminded to fill out the bid form completely and properly and include an authorization signature for the bid.

Contractor is reminded that the apparent low bidder shall furnish post bid information to the architect no later than 10 calendar days after the bid date. Post bid information includes Non-collusion Affidavit, Verification of Employees Affidavit, Attestation of Bidders and Byrd Anti-Lobbying Certification.

The bidder to whom the contract is awarded will be required to furnish a Payment and Performance Bond. The bond shall be equal to 100% of the contract amount.

Bid Security shall be included with the bid in the amount of 5% inclusive of the base bid and alternates (as applicable).

Bid Bond shall be in the form of a certified check, cashier's check or bid bond, as outlined in the Instructions to Bidders.

Contractors are reminded to thoroughly familiarize themselves with all plans, specifications, and addenda. Bidders shall forward any prior approval requests and questions relative to the bid documents in writing to the attention of the Architect no later than seven business days prior to the bid date. Email is an acceptable form of submitting questions. All questions and responses will be shared with bidders via addendum.

Substitution requests (prior approvals) must be submitted through and by Prime bidders only.

Substitution requests (prior approvals) must include the substitution request form located immediately after the Substitution Request Specification.

No questions or prior approval requests will be responded to beyond five business days before the bid, therefore, Friday, July 12<sup>th</sup> is the final day to submit questions.

Final addenda will be issued no later than three business days before the bid or July 14, 2022.

After award of the contract, contractor is responsible for reproduction of project documents.

Bidding contractors shall familiarize themselves thoroughly and completely with actual job site conditions, as well as the General and Supplementary Conditions of the Contract Documents.

By submitting a bid, contractor certifies that they have confirmed all material, equipment, and labor are available to complete the project in the timeframe stipulated and in the amount of the Bid Proposal.

Insurance coverage shall be as outlined in the Contract Documents.

Shop drawings and submittals shall be prepared, reviewed by the contractor, and submitted in accordance with the project documents. Submittals shall be carefully coordinated to allow for full review and processing by the consultants.

A building permit is required. The contractor shall be responsible to apply for and acquire the permit. The contractor shall be responsible for paying all inspection fees and any additional AHJ fees.

Testing and inspections will be selected and paid for by the Owner and coordinated by the Contractor.

Use of site shall be limited to areas of work indicated in the plans.

Change Order forms included in the Project Manual are required. Cost adjustments shall be fully itemized and submitted within timeframes indicated in the Contract Documents.





The Schedule of Values shall be developed in the format included in the Project Manual.

Photo documentation and daily reports are to be submitted as stipulated in the Project Manual.

Substantial Completion shall not be issued until all conditions identified in the Project Manual are satisfied and systems have been successfully tested, demonstrated, and commissioned. Additionally, all warranties must be issued with final acceptance by the State Fire Marshal's office. Final testing and balancing reports must also be delivered to the Architect.

The drawings have been submitted to the SFM.

Contractor will be required to protect existing structures, finishes, equipment, utilities and vegetation (trees). Any damages caused by the construction activities are to be repaired to the satisfaction of the Owner and Architect at Contractor's expense.

The contractor will be allowed to work during any hours allowed by the Calcasieu Parish School Board. However, the school will remain in operation during construction so there will be limitations on access to the site at certain times and noise limitations during student testing.

This project will be exempt from sales tax.

Contractor access to site during bidding should be coordinated through the Calcasieu Parish School Board Construction Department office.

These Notes of Pre-Bid Meeting and any associated questions will be made part of the contract through addendum.

Sign in sheet attached.

#### **Questions and Answers**

The following questions were asked at the time of the meeting:

- Q1: Are different roof substrates identified on the drawings?
- A1: Yes, the drawings identified two different roof substrates expected to be encountered for the project:
  - Low -slope membrane roof over tapered insulation fastened to metal deck
  - Low-slope roof over tapered insulation fastened to lightweight concrete on metal deck
- Q2: How can contractors access the site during bidding?
- A2: Contractors can contact the principal David Pool.

Q3: Is electrical to be replaced from each mechanical unit back to the panel of origin?

A3: No, refer to the documents. In general, the contractor is to reconnect the existing circuitry to the new equipment and make any/all required connections to the new equipment as required by the manufacturer. Contractor is to confirm power requirements for all new equipment.

The preceding notes were taken from the memory of the writer, any corrections or clarifications shall be brought to the attention of the Architect within 48 hours of circulation of same as the project is proceeding on the basis of the above.

receive a copy of the meeting notes. PHONE NUMBERS & E-MAIL	Office: کر کرد کارہ ہے۔ Fax: Call:	Coffice: S Coffice: S Call: (7.8.2096 (225)	Cell: XX X74-646	Email: Office: Fax: Cell:	Office:
contact information is written legibly, you will COMPANY NAME & MAILING ADDRESS	GRON	DYNAMIL GED	SAS)	Third construction	
If your name and NAME & TITLE	PINIO MERUT	BOBBIE SCHANSLUT	Nutulie Graham	Lundsay Adams	

Date: \_07-06-2022\_

Project: \_Sulphur High School Building 5\_

**MEETING SIGN IN SHEET** 

Suilding 5 Date: _07-06-2022	I receive a copy of the meeting notes.	PHONE NUMBERS & E-MAIL	Office: 337 309 3208 Fax: Cell: 337 1040 1079 Cell: 337-802-4470 Office: 337-802-4470 Fax: Cell: 337-802-4470 Fax: Email: <u>Victy Correros rooligal grast.con</u>	Office:	Office: Fax: Cell: Email:	Office:
Project: _Sulphur High School B	contact information is written legibly, you will	COMPANY NAME & MAILING ADDRESS	CRC Painting UC 2899 Sugartood Dr 2899 Sugartood Dr Lake Charles Land Janes Pre Lake charles. (A. 70604			
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Date: _07-06-2022	opy of the meeting notes. PHONE NUMBERS & E-MAIL		504-6014354 Yester and rycer Constagra	CONTACT ARCHITECT DAVID LACIFIN		504-835-8013	saride lach march com						
Project: _Sulphur High School Building 5_	ontact information is written legibly, you will receive a c COMPANY NAME & MAILING ADDRESS	Ryder & Kyder Bus office:	Cell:	ADG ENGERINCE Office: Fax: Cell:	Email:	LAUHIN MUCHS Office:	Cell: Email:	Office:	Fax:	Email:	Office:	Fax:	
MEETING SIGN IN SHEET	If your name and c NAME & TITLE	PATRICK RYDER		ENGINEER AT MOWED		Pando W. Lahn	prohiked						

## LOUISIANA UNIFORM PUBLIC WORK BID FORM UNIT PRICE FORM

TO: Calcasieu Parish School Board

3310 Broad Street

Lake Charles, LA 70615

BID FOR: Sulphur High School Building 5 100 Sycamore Street Sulphur, LA 70663

(Owner to provide name and address of owner)

(Owner to provide name of project and other identifying information)

#### UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

Treated Wd Blocking	Base Bid or $\Box$ Alt.#								
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)					
1	100	Board Foot							
Metal Roof Decking:	$\Box$ Base Bid or $\Box$ A	\lt.#							
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)					
2	100	Square Foot							
DESCRIPTION:	$\Box$ Base Bid or $\Box$ A	\lt.#							
Prep and Coating	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)					
3	100	Square Foot							
DESCRIPTION:	□ Base Bid or □ Alt.#								
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)					
DESCRIPTION:	$\Box$ Base Bid or $\Box$ A	Alt.#							
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)					
DESCRIPTION:	$\Box$ Base Bid or $\Box$ A	Alt.#							
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)					
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DESCRIPTION:	$\Box$ Base Bid or $\Box$ A	\lt.#							
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)					

Wording for "DESCRIPTION" is to be provided by the Owner.

All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner

#### SECTION 01 10 00 - SUMMARY

#### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Project information.
  - 2. Work covered by Contract Documents.
  - 3. Phased construction.
  - 4. Work by Owner.
  - 5. Work under separate contracts.
  - 6. Access to site.
  - 7. Coordination with occupants.
  - 8. Work restrictions.
  - 9. Specification and drawing conventions.
- B. Related Requirements:
  - 1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

#### 1.2 PROJECT INFORMATION

A. Project Identification: Sulphur High School Building 5

Project Location: Sulphur High School – 100 Sycamore St., Sulphur, LA 70663

- B. Owner: Calcasieu Parish School Board, 3310 Broad St., Lake Charles, La. 70615
- C. Architect: LACHIN Architects, apc, 5190 Canal Blvd. New Orleans, La. 70124
- D. Mechanical Engineer: ADG Engineers, 3004 Ryan St., Lake Charles, La. 70601
- E. Electrical Engineer: ADG Engineers, 3004 Ryan St., Lake Charles, La. 70601

#### 1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and generally consists of the following work at Sulphur High School Building 5:
  - 1. Replacement and Repairs to existing roof systems including, flashing, gutters and downspouts.
  - 2. Repairs to hurricane damaged exterior and interior finishes and systems.
  - 3. Repairs to hurricane damaged Mechanical, Plumbing and Electrical systems.
  - 4. Removal and demolition of selective construction materials to be replaced and removed from the site to an acceptable dump site.

The work is to be scheduled so there is no interference with existing adjacent building operations inclusive of utilities, vehicular traffic patterns, parking arrangements, pedestrian pathways and educational activities.

- B. Type of Contract:
  - 1. Project will be constructed under a single prime contract.

#### 1.4 WORK BY OWNER

- A. General: Cooperate fully with Owner so work may be carried out smoothly, without interfering or delaying work by the owner. Coordinate the Work of this Contract with work performed by Owner.
- B. Concurrent Work: Owner will continue to occupy portions of the building therefore disruption of operations is to be minimal. Any disruptive portions of the work are to be coordinated with the architect and owner.

#### 1.5 WORK UNDER SEPARATE CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.

#### 1.6 ACCESS TO SITE

- A. General: Contractor shall have limited use of Project site and building for construction operations as indicated on Drawings and as indicated by requirements of this Section.
- B. Use of Site: Limit use of Project site to areas of work as indicated on the Construction Documents. Do not disturb portions of the building or project site beyond areas in which the Work is indicated.
  - 1. Limits: Confine construction operations to areas of work as indicated on the Construction Documents.
  - 2. Driveways, Walkways and Entrances: Keep driveways, loading areas and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Contractor shall include temporary 6' tall chain-link fencing (orange plastic fencing not acceptable) to completely isolate Work Areas from existing adjacent school facilities where students may be present. Gates are to be avoided of possible; if not they must be capable of being padlocked from school side.
- D. If physical isolation from students of the work areas by fencing is not achievable, CPSB badges must be obtained by contractor prior to commencing work. For such projects, contractor and

subs will be required to submit list of personnel and digital photo for each CPSB to create badges.

- E. All contractor and subcontractor personnel shall wear company badges and/or uniform shirts and/ or similar apparel that identifies their employer whenever they are on site.
- F. Condition of Existing Building: Maintain portions of existing building affected by construction operations throughout construction period. Repair damage caused by construction operations with similar materials, systems, and finishes.

## 1.7 COORDINATION WITH OCCUPANTS

- A. Owner Occupancy: Owner will occupy the site during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
  - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

#### 1.8 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
  - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work at the site to normal business working hours and in accordance with the City of Sulphur Ordinances. The work shall not disrupt normal school operations, activities, or events. There shall be no work occurring during testing hours unless otherwise approved by the owner. Final working hours will be discussed in the Preconstruction Meeting.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
  - 1. Notify the Owner, Architect, and Construction Manager not less than 72 hours in advance of proposed utility interruptions.
  - 2. Obtain Owner, Architect, and Construction Manager's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
  - 1. Follow the same protocols for Noise, vibration and odors as described in C.1 and C.2 above.
- E. Controlled Substances: Use of tobacco, vaping products and other controlled substances on the Project site is not permitted.

## 1.9 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
  - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  - 2. Specified Manufacturer's: Where manufacturers are listed in the specs or on the drawings they should be interpreted as the "basis of design". Manufacturer's other than the "basis of design" are to be submitted for approval through the prime contractor.
  - 3. Abbreviations: Materials and products maybe identified by abbreviations.
  - 4. Keynoting: Materials and products may be identified by reference keynotes.

#### PART 2 - PRODUCTS (Not Used)

#### PART 3 - EXECUTION (Not Used)

#### END OF SECTION

#### SUBMITTAL REVIEW COVER SHEET

#### SPECIFICATION SECTION NUMBER AND TITLE:

PROJECT NAME: Sulphur High School Building 5

DATE:

ARCHITECT: LACHIN Architects, apc 5190 Canal Blvd, Suite 201 New Orleans, LA 70124

CONTRACTOR:

#### MANUFACTURER:

Contractor's Review Stamp

## SUBCONTRACTOR:

#### SUPPLIER:

Consultant's Review Stamp

LACHIN Architects, apc
Reviewed Rejected
Make corrections noted Revise/Resubmit
Submit Specified Item
Review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during this review do not relieve the Contractor from complience with the requirements of the plans and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The contractor is responsible for: dimensions to be confirmed and coordinated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades and performing all Work in a safe and satisfactory manner.
Ву:
Date:

#### COMMENTS:

All work shall be placed in strict conformance with the requirements of the Contract Documents, particularly the specific specification Section \_\_\_\_\_\_. Contractor to field verify all dimensions.

SECTION 23 09 00 – HVAC INSTRUMENTATION AND CONTROLS



## PART 1 – GENERAL REQUIREMENTS

#### 1.1 SCOPE OF WORK

- A. Furnish, install, program, and place into operations an extension of the Metasys® Facility Management System (FMS), including Direct Digital Temperature Controls (DDC) as specified herein and as shown on the drawings. All hardware, software, and firmware points provided with the direct digital control system provided as part of this scope of work shall be displayed and controlled from the Central Workstation. The controls system shall be an extension of the existing Johnson Controls Inc. Metasys Facility management System located throughout the school district.
- B. Although such work is not specifically indicated, provide all supplementary or miscellaneous items, software, appurtenances, and devices necessary for a sound, secure, and complete system.
- C. The contractor shall include a turnkey price of \$168,500 for the Johnson Controls, Inc. local branch office to furnish the FMS as specified in this section of work
- 1.2 QUALITY ASSURANCE
  - A. The DDC controls shall be as furnished by Johnson Controls, Inc Lake Charles branch office. Contact Paul Harris at 337-298-4021.
  - B. The system shall be installed by competent mechanics and checked out by trained, experienced technicians directly employed by the FMS equipment manufacturer.
  - C. Single source responsibility of the FMS contractor shall include installation, calibration, programming, and check-out of the stand-alone subsystems, as well as the complete operation of the integrated system.
- 1.3 REFERENCED STANDARDS, CODES AND ORDINANCES
  - A. It is the responsibility of the FMS contractor to be familiar with all codes, rules, ordinances, and regulations of the Authority Having Jurisdiction and their interpretations which are in effect at the site of the work.
  - B. The latest issue of applicable standards and recommended practices of the following agencies in effect shall form a part of the specification to the extent each agency's relative standards or recommended practices apply to the Systems and its components as specified herein.
    - 1. Federal Communications Commission (FCC)
    - 2. American National Standards Institute (ANSI)
    - 3. American Society of Mechanical Engineers (ASME)
    - 4. Electronic Industries Association (EIA)
    - 5. Institute of Electrical and Electronics Engineers (IEEE)
    - 6. National Electrical Manufacturers Association (NEMA)
    - 7. National Fire Protection Association (NFPA)
    - 8. Underwriters Laboratories (UL)
    - 9. Occupational Safety and Health Administration (OSHA)

#### HVAC INSTRUMENTATION AND CONTROLS

- C. This contractor shall be solely responsible for compliance with all health and safety regulations, performing the work in a safe and competent manner, and the use industry accepted installation procedures required for the work as outlined in these documents.
- D. All systems equipment, components, accessories, and installation hardware shall be new and free from defects and shall be UL listed where applicable. All components shall be in current production and shall be a standard product of the system or device manufacturer. Refurbished or reconditioned components are unacceptable. Each component shall bear the make, model number, device tag number (if any), and the UL label as applicable. All system components of a given type shall be the product of the same manufacturer.

## 1.4 SUBMITTALS

- A. Provide eight (8) copies of submittal data.
- B. Submittals shall consist of:
  - 1. Data sheets of all products, including software and hardware.
  - 2. Valve schedule, including sizing calculations and actuator information.
  - 3. Damper schedule, including actuator information.
  - 4. Wiring and piping interconnection diagrams including panel and device power, and sources.
  - 5. List of materials of all proposed devices and equipment.
  - 6. Software documentation:
    - a. Sequence(s) of operation, in text form.
    - b. Application programs
    - c. Statement of compatibility with existing programs
    - d. Hardware requirements
    - e. Year 2000 compliance
  - 7. Point schedules
  - 8. Controls schematics and system diagrams

#### 1.5 WORK BY OTHERS

- A. Automatic control valves: Installed under applicable Mechanical section under supervision of the FMS Contractor. All reducers and fittings necessary to install smaller than pipe size valves shall be furnished and installed under applicable piping sections
- B. .Piping penetrations; water pressure and differential taps, valve manifolds, flow switches, thermal wells: Installed by Mechanical under supervision of FMS Contractor.

#### PART 2 - PRODUCTS

#### 2.1 CONTROL AND SENSING HARDWARE

- A. ACTUATORS
  - 1. Units for modulating service shall be analog electric (4-20mA or 0-10VDC) and shall be smooth and quiet in operation. Units for two-position service shall operate on 24 VAC. All actuators shall be of sufficient size and power to operate control devices to which they are connected with 20% spare capacity. Use an individual actuator on each automatic valve ordamper.
- B. INSTRUMENT CONTROL CABINETS
  - 1. Furnish and install, for components other than room thermostats and unit controllers, cabinets to house control equipment. Cabinets shall consist of extruded frames with all corners securely riveted and supported by angle brackets. The cabinet is to have removable face and back panels and these panels are to be made of aluminum bonnet on both sides over a poly wood core. The cabinet door is to be supported by non-removable piano-type hinge which spans the entire height of the cabinet. All temperature and status indications and toggle switches are to be flush mounted on the face of the cabinet. Cabinets installed outdoors shall be rated NEMA 3R or better.
- C. FMS SENSING/CONTROL (Provide the following devices as required by the monitoring and control functions)

None

+32/+130F

Changing resistance

70 degree F (21 C)

+/- 0.7% @ 70F

Yes

- 1. TEMPERATURE SENSORS
  - a. Room temperature:
    - 1) Local setpoint adjustment
    - 2) Local RJ-11 communications
    - 3) Temperature monitoring range
    - 4) Output signal
    - 5) Factory calibration point
    - 6) Accuracy at calibration point
- 2. START/STOP AND CONTROL RELAYS
  - a. Power requirements
  - b. Relay contacts
  - c. Data
  - d. Indication
  - e. Override

24 VAC at .015 amps SPDT – 10 amps at 120 VAC UL listed, CSA approved LED – on when energized built-in H-O-A switch

## 2.2 FACILITY MANAGEMENT SYSTEM (Existing)

- A. The Facility Management System shall integrate multiple building functions including equipment supervision and control, energy management, information management, and historical data collection and archiving.
- B. The facility management system shall consist of the following:
  - 1. Network Control Modules
  - 2. Application specific controllers (HVAC etc.)
  - 3. Personal Computer Operator Workstation
  - 4. Communication Network

#### HVAC INSTRUMENTATION AND CONTROLS

C. The system shall be modular in nature, and shall permit expansion of both capacity and functionality through the addition of sensors, actuators, Network Control Modules, and operator devices. System architectural design shall eliminate dependence upon any single device for alarm reporting and control execution. Each Network Control Modules shall operate independently by performing its own specified control, alarm management, operator I/O, and historical data collection. The failure of any single component or network connection shall not interrupt the execution of control strategies at other operational devices.

#### 2.3 OPERATOR INTERFACE

- A. The new controls shall operate on the existing Johnson Controls workstation.
- B. Text-Based Displays: The operator interface shall provide consistent text-based displays, on each graphic, for all system point and application data described in this specification. Point identification, engineering units, status indication, and application naming conventions shall be the same at all operator devices.
- C. User Interface: System shall employ standard graphical user interface components (i.e. menu bar, tool bar, status bar, scroll bar, tool tips, etc.) for ease of use. The user interface shall also include the following features:
  - 1. Simplistic point and click navigation between and within application components
  - 2. Dockable alarm panel which may be temporarily hidden
  - 3. Provides a tabbed workspace environment which is fully ActiveX compliant.
  - 4. User can add additional ActiveX workspaces on line
  - 5. Enhanced terminal workspace providing pass through VT-100 interface with mouse/keyboard navigation, user selectable display preferences and screen prints.
- D. Operator Commands: The operator interface shall allow the operator to perform commands including, but not limited to, the following:
  - 1. Start-up or shutdown selected equipment
  - 2. Adjust setpoints
  - 3. Add/Modify/Delete time programming
  - 4. Enable/Disable process execution
  - 5. Lock/Unlock alarm reporting for each point
  - 6. Enable/Disable Totalization for each point
  - 7. Enable/Disable Trending
  - 8. Enter temporary override schedules
  - 9. Define Holiday Schedules
  - 10. Change time/date
  - 11. Enter/Modify analog alarm limits
  - 12. Enable/Disable demand limiting
  - 13. Enable/Disable average/high/low signal select and reset

- E. Logs and Summaries: Reports shall be generated manually, and directed to the displays. As a minimum, the system shall allow the user to easily obtain the following types of reports:
  - 1. Trend
  - 2. Change of State
  - 3. Alarm Summary
  - 4. Point Summary
  - 5. System Summary
  - 6. Schedule Summary

#### 2.4 NETWORKING

- A. Inherent in the system's design shall be the ability to expand or modify the network either via a local area network, or auto-dial telephone line modem connections, or via a combination of those two networking schemes.
- B. Access to system data shall not be restricted by the hardware configuration of the facility management system or network. The hardware configuration of the system shall be transparent to the user when accessing data or developing control programs.

#### 2.5 NETWORK CONTROL MODULES

- A. General: The new main controller shall be installed in the field in a centralized location. Network Control Modules shall be microprocessor-based, multi-tasking, multi-user, digital control processors.
- B. Each Network Control Panel shall have sufficient memory to support its own operating system and data bases including:
  - 1. Control Processes
  - 2. Energy Management Applications
  - 3. Alarm Management
  - 4. Trend Data
  - 5. Maintenance Support Applications
  - 6. Operator I/O
  - 7. Dial-Up Communications
- C. Expandability: The system shall be modular in nature, and shall permit easy expansion through the addition of field controllers, sensors, and actuators.
- D. Serial Communication Ports: Network Control Modules shall provide at least two data communication ports for simultaneous operation of multiple operator I/O devices, such as laptop computers, Personal Computers, and Video Display terminals.

#### 2.6 SYSTEM SOFTWARE FEATURES (Existing)

A. General: All necessary software to form a complete and single operating system, as described in this specification, shall be provided. The software programs specified in this section shall be provided as an integral part of the Network Control Module, and shall not be dependent upon any higher level computer for execution.

- B. Control Software Description
  - 1. Equipment Cycling Protection: Control software shall include a provision for limiting the number of times each piece of equipment may be cycled within any one-hour period.
  - 2. Heavy Equipment Delays: The system shall provide protection against excessive demand situations during start-up periods by automatically introducing time delays between successive start commands to heavy electrical loads.
  - 3. Powerfail Motor Restart: Upon the resumption of normal power, the Network Control Panels shall analyze the status of all controlled equipment, compare it with normal occupancy scheduling, and turn equipment on or off as necessary to resume normal operation.
  - 4. Network Control Modules shall perform any and all of the following energy management routines:
    - a. Time of Day Scheduling
    - b. Calendar Based Scheduling
    - c. Holiday Scheduling
    - d. Optimal Start
    - e. Optimal Stop
    - f. Demand Limiting
    - g. Load Rolling
    - h. Heating/Cooling Interlock
    - i. Average/High/Low Signal Select and Reset
  - 5. All programs shall be executed automatically without the need for operator intervention, and shall be flexible enough to allow user customization. Programs shall be applied to building equipment described in the "Sequence of Operation" portion of this specification.
- C. Programming Capability: Network Control Modules shall execute configured processes defined by the user to automatically perform calculations and control routines.
  - 1. It shall be possible to use any of the following in a configured process
    - a. :Any system-measured point data or status
    - b. Any calculated data
    - c. Any results from other processes
    - d. Boolean logic operators (and, or)
  - 2. Configured processes may be triggered based on any combination of the following:
    - a. Time of day
    - b. Calendar Date
    - c. Other process
    - d. Events (e.g., point alarms)
- D. Data Access: A single process shall be able to incorporate measured or calculated data from any and all other ASCs. In addition, a single process shall be able to issue commands to points in any and all other ASCs on the local network.
- E. Alarm Management: Alarm management shall be provided to monitor, buffer, and direct alarm reports to operator devices and memory files. Each Network Control Panel shall perform distributed, independent alarm analysis and filtering to minimize operator interruptions due to non-critical alarms, minimize network traffic, and prevent alarms from being lost. At no time shall the Digital Panel's ability to report alarms be affected by either operator activity at the local I/O device, or communications with other ASCs on the network.
  - 1. Point Change Report Description: All alarm or point change reports shall include the point's English language description, and the time and date of occurrence.
  - 2. Report Routing: Alarm reports and messages shall be directed to an operator device.

## HVAC INSTRUMENTATION AND CONTROLS

- 3. Alarm Messages: In addition to the point's descriptor and the time and date, the user shall be able to print, display or store a 60-character alarm message to more fully describe the alarm condition or direct operator response. Each Network Control Panel shall be capable of storing a library of at least 100 Alarm Messages. Each message may be assignable to any number of points in the panel.
- 4. Remote Alarm Horn: Each Network Control Panel shall be capable of triggering a binary output on an ASC when a critical or network alarm is received. The alarm horn feature shall be silenced when the critical alarm is acknowledged.
- F. Runtime Totalization: Network Control Modules shall automatically accumulate and store runtime hours for binary input and output points specified in the "Sequence of Operation" portion of this specification.
  - 1. The Totalization routine shall have a sampling resolution of one minute
  - 2. The user shall have the ability to define a warning limit for Runtime Totalization.
  - 3. Unique, user-specified messages shall be generated when the limit is reached.

#### 2.7 APPLICATION SPECIFIC CONTROLLERS

- A. Each Network Control Module shall be able to extend its performance and capacity through the use of remote Application Specific Controllers (ASCs).
- B. Each ASC shall operate as a standalone controller capable of performing its specified control responsibilities independently of other controllers in the network. Each ASC shall be a microprocessor-based, multi-tasking, real-time digital control processor.
- C. Each ASC shall have sufficient memory to support its own operating system and databases including:
  - 1. Control Processes
  - 2. Energy Management Applications
  - 3. Operator I/O
- D. The operator interface to any ASC point data or programs shall be through any Operator Workstation or portable operator's terminal connected to the Network Control Module.
- E. Powerfail Protection: All system setpoints, proportional bands, control algorithms, and any other programmable parameters shall be stored such that a power failure of any duration does not necessitate reprogramming the controller.
- F. Configuration and Download: The ASCs shall have the capability of receiving configuration and program loading by both of the following:
  - 1) locally, via a direct connect portable laptop service tool,
  - 2) over the network, from the portable laptop service tool, and;
  - 3) from the Operator Workstation, via the communication networks.
- G. Application Specific Controllers shall support, but not be limited to, the following configurations of systems to address current requirements described in the "Execution" portion of this specification, and for future expansion.
  - 1. Boiler and/or chiller plants with control logic
  - 2. Generic system interlocking through hardware or software
  - 3. Complex air handling unit configurations

- H. HVAC Application Specific Controller Configuration
  - 1. The Application Specific Controllers shall be configured using an intuitive, easy-to-use configuration tool. Standard, pre-tested, HVAC applications will be "built-in" the tool. It is the intent that a non-programmer, fluent with HVAC systems, and not necessarily with computer programming, be capable of using the configuration tool with minimal training.
  - 2. The tool will utilize a question and answer format to aid the user in configuration. The tool will automatically query the user for desired operational characteristics, along with desired fail-safe and fault condition configurations, in order to assure proper HVAC system operation and protection.
  - 3. Systems that require free-form programming will not be acceptable.

## PART 3 - EXECUTION

- 3.1 GENERAL
  - A. All work described in this section shall be mounted, terminated, circuit tested, programmed and calibrated by factory trained technicians and mechanics qualified for this work and in the regular employ of the system manufacturer.
  - B. All temperature control and interlock wiring and cable shall be installed in accordance with approved wiring diagrams. Power wiring (over 90 volts) shall be run in separate conduit from sensor and network wiring and cables.

## 3.2 INSTALLATION

- A. All wiring, conduit and tubing shall be properly supported and run in a neat and workmanlike manner.
- B. This contractor shall be responsible for all electrical installation which is necessary for a fully functional FMS and temperature control system. All wiring shall also be in accordance with applicable local and national codes.
  - 1. All wiring and cabling installed shall be installed in conduit in mechanical rooms and where exposed. Conduit installed in dry indoor locations shall be EMT. Conduit installed exposed outdoors shall be rigid steel type with weather tight fittings. Plenum rated cable is acceptable above accessible ceilings and concealed spaces.
  - 2. Electrical power for control panels and the Operator Workstation shall be provided via dedicated circuits at a power panel specifically for controls.
- C. Control wiring:
  - 1. Include all low voltage wiring (100 volts and less) required for the FMS and temperature control systems under this section.
  - 2. Conductors for low voltage control signals: No. 18 AWG copper conductors or larger as required.
    - a. Conductors may be assembled in cable with PVC insulation minimum of 0.016 IN thick.
    - b. Cable outer sheathing as standard with manufacturer.
  - 3. Line voltage (120VAC) wire for temperature control suitable for 600 volts, 168 deg. F temperature with Type THW plastic covering, minimum No. 12 AWG.
  - 4. Supporting devices:
    - a. Conduit supports
      - 1) Must conform to seismic restraint criteria established by governing authority.
      - 2) Single runs: Galvanized conduit straps or ring bolt type hangers with specialty spring clips. Do not use plumber's perforated straps.
      - 3) Multiple runs: Conduit rack with 25 percent spare capacity

## HVAC INSTRUMENTATION AND CONTROLS

- 4) .Vertical runs: Channel support with conduit fittings.
- b. Anchor methods:
  - 1) Hollow masonry: Toggle bolts or spider type expansion anchors.
  - 2) Solid masonry: Lead expansion anchors or present inserts.
  - 3) Metal surfaces: Machine screws, bolts, or welded studs.
  - 4) Wood surfaces: Wood screws.
  - 5) Concrete surfaces: Self drilling anchors or power driver studs.
- D. Equipment:
  - 1. Temperature sensing wells: provide list of well locations with shop drawing(s) to mechanical contractor.
  - 2. Mount local control panels or thermostats at convenient locations adjacent to equipment served.
    - a. Mount all relays, transformers, controllers, pressure switches, etc., internal to the temperature control panels
  - 3. Mounting of field microprocessors (ASC's) directly on air handling units shall not be allowed.

#### 3.3 COMMISSIONING

- A. Control system to be set up and checked out by Johnson Controls factory trained competent technicians skilled in the setting, programming, tuning and adjustment of FMS equipment used in this project. All technicians shall be experienced in the type of systems associated with this FMS.
- 3.4 TRAINING
  - A. Provide 2 hours of instructions to Owner's personnel in the operation and maintenance of the control system. Provide training after the system has been installed and operations verified.
- 3.5 WARRANTY
  - A. At completion of final test of installation and acceptance by Owner, provide any service incidental to proper performance for a period of one year.
  - B. Equipment shall be warranted for one year (including defects in workmanship and material) under normal use and service. During warranty period supplier shall also replace or repair, free of charge, any equipment proven to be defective in workmanship or material.

3.6 SEQUENCES OF OPERATIONS

#### CV RTU'S:

Supply fan start/stop: The supply fan will be started according to the schedule. If the supply fan status does not match the commanded value an alarm will be generated. The outside air damper will open/close upon unit startup

Space Control: The chilled water valve and hot water valve will modulate to maintain the zone temp setpoint.

Dehumidification: If the relative humidity in the space rises above setpoint, the Cooling will be staged to maintain the dehumidification setpoint and the hot water valve will open to maintain temperature setpoint.

#### Safety:

All of the safety devices are manual reset; the device that has tripped must be manually reset before restarting the air handling unit.

If a temperature low limit switch senses a temperature below setpoint the supply fan will be shutdown. If a fire alarm shutdown contact is provided, the supply fan will be shutdown when triggered.

Shutdown: When the unit is shutdown by either a stop command or system safety the unit will be set as follows: Supply fan will be off Outside air damper will close Cooling valve will close Heating valve will close

#### EXHAUST FANS:

Interlock designated fans with FMS to operate in occupied/unoccupied mode—reference mechanical schedule.

#### FMS Point List:

RTU:

Fans Start/Stop	Binary Output
Fans Status	Binary Input
Discharge Air Temp	Analog Input
Return Air Temp	Analog Input
Return Air Humidity	Analog Input
Outside Air Damper	Analog Output
Chilled Water Valve	Analog Output
Heating Hot Water Valve	Analog Output

EXHAUST FANS:

Exhaust Fan Start/Stop	Binary Output
Exhaust Fan Status	Binary Input

#### 3.7 FLOAT SWITCH:

A. Provide float switch to emergency drain pan of each AHU. Switch shall be interlocked with AHU to de-energize the unit when the water level in the pan rises above a set level.

END OF SECTION 23 09 00

CPSB	
SULPH	U

**OWNER** 

# CALCASIEU PARISH SCHOOL BOARD

Administrators

DR. SHANNON LaFARGUE Superintendent

WILFRED BOURNE **Chief Financial Officer** 

WAYNE FOSTER

**Internal Auditor** 

MARGARET GOODE **Grant Administration** 

HOLLY HOLLAND **Public Information Office** 

KIM LeBLANC **Chief Technology Officer** 

**ROBERT BARRENTI Chief Operating Officer** 

# SYMBOL LEGEND



**CONSTRUCTION DOCS** 

# **IURRICANE REPAIRS RHIGH SCHOOL BLDG. 5** 100 SYCAMORF STRFFT SUI PHUR IA

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		4. THE CONTRACTOR SHALL REPAIR, RESTORE AND REPLACE PORTIONS OF CONSTRUCTION WHERE INDICATED ON DRAWINGS OR AS REQUIRED TO INSTALL THE WORK. ANY PORTIONS OF THE CONSTRUCTION WHICH ARE CRACKED, SPALLED, BROKEN, MISSING OR OUT OF LINE OR ADJUSTMENT, MECHANICALLY OR STRUCTURALLY UNSOUND OR UNSAFE, SHALL BE REMOVED, REPLACED, RESTORED OR SATISFACTORILY REPAIRED.		FROM COLUMN TO COLUMN WITH A SIZ

GENE	RAL NOTES	INDEX OF DRAWINGS	HL - 052-05
<ul> <li>A. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLEMENTARY. SPECIFIC INFORMATION MAY BE FOUND IN EITHER OR BOTH.</li> <li>B. CONTRACTOR TO VISIT THE SITE DURING BIDDING PRIOR AND BECOME FAMILIAR WITH ALL ASPECTS OF THE WORK. FAILURE TO INSPECT THE SITE OR FULLY ACQUAINT THEMSELVES WITH THE PLANS AND SPECIFICATIONS PRIOR TO BIDDING WILL NOT RELIEVE THE CONTRACTOR OF PERFORMANCE OF ANY OF THE WORK REQUIRED BY EXISTING CONDITIONS OR THE INTENT OF THE CONTRACT DOCUMENTS. BID SUBMITTAL SHALL REFLECT ANY EXTRANEOUS CONDITIONS THAT MAY OCCUR.</li> <li>C. LAYOUT OF WORK</li> <li>1. EXERCISE PROPER PRECAUTION TO VERIFY ALL EXISTING CONDITIONS AND LAYOUT O THE WORK. CONTRACTOR TO NOTIFY THE ARCHITECT OF ANY DISCREPANCIES IMMEDIATELY.</li> <li>2. CONTRACTOR IS RESPONSIBLE FOR ANY ERROR RESULTING FROM FAILURE TO EXERCISE SUCH PRECAUTION. SUCH ERROR WILL NOT BE CONSIDERED SUBSEQUENTLY AS A BASIS FOR EXTRA COMPENSATION.</li> <li>3. G.C. TO LAYOUT WORK AND BE RESPONSIBLE FOR ALL LINES, MEASUREMENTS OF THE BUILDING AND OTHER WORK EXECUTED UNDER CONTRACT.</li> <li>4. SHOULD A CONTRACTOR FIND DISCREPANCIES IN, OR OMISSIONS FROM THE DRAWINGS OR SPECIFICATIONS OR SHOULD A LED IN OR MISSIONS FROM THE</li> </ul>	<ul> <li>G. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH APPLICABLE STANDARD SPECIFICATIONS. WORKMANSHIP AND MAINTAINING STANDARDS OF QUALITY SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL PROVIDE ALL WORK SHOWN IN THESE CONTRACT DOCUMENTS AND IS REQUIRED TO PROVIDE A COMPLETE, FINSHED, FULLY OPERABLE INSTALLATION, UNLESS OTHERWISE NOTED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND EACH OF THE SUBCONTRACTORS TO BE ACQUAINTED WITH ALL PROJECT REQUIREMENTS AND BUILDING STANDARDS REGARDLESS OF WHETHER THEY HAVE BEEN SPECIFICALLY REFERENCED IN THE DOCUMENTS OR NOT.</li> <li>I. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT THE SELECTION AND APPROVAL OF ALL SUBSTITUTED ITEMS PRIOR TO SUBMISSIONS OF THE BID. IT IS EACH CONTRACTOR'S RESPONSIBILITY TO ENSURE AND TO DEMONSTRATE THAT ALL SUBSTITUTIONS USED IN THE WORK COMPLY WITH THE CONTRACT DOCUMENTS. SHOULD A SUBSTITUTED PRODUCT FAIL TO PERFORM FOR ANY REASON, WHERE THE ORIGINALLY SPECIFIED PRODUCT WOULD HAVE PERFORMED PROPERLY, THE CONTRACT OR SHALL PERFORM ALL WORK NECESSARY TO INCORPORATE THE ORIGINALLY SPECIFIED PRODUCT AT NO ADDITIONAL COST.</li> <li>J. EACH SUBCONTRACTOR SHALL CHECK AND VERIFY PRIOR TO BID. ALL PLANS, SPECIFICATIONS, EXISTING CONDITIONS AND DIMENSIONS AT THE JOB SITE AND SHALL NOTFY THE GC, WHO SHOULD IN TURN NOTIFY THE ARCHITECT, OF ANY DISCREPANCIES IN OR BETWEEN THE CONTRACT DOCUMENTS AND THE FIELD CONDITIONS PRIOR TO COMMENCING THE WORK.</li> <li>K. DO NOT TAKE SCALED MEASUREMENTS FROM THESE DRAWINGS. CONSULT WITH THE ARCHITECT FOR MISSING DIMENSIONS.</li> </ul>	G001       COVER SHEET         ARCHITECTURAL       MECHANICAL SITE/ROOF PLAN         A001       SITE/ROOF PLAN         A002       ROOF DETAILS         A003       ROOF DETAILS         A101       FLOOR PLAN         A201       DAMAGE PHOTOS         A202       DAMAGE PHOTOS         M302       MECHANICAL PHOTO REF DETAILS         M301       MECHANICAL PHOTO REF DETAILS         M302       MCHANICAL PHOTO REF DETAILS         M304       MECHANICAL PHOTO REF DETAILS         M305       MECHANICAL PHOTO REF DETAILS         M304       MECHANICAL PHOTO REF DETAILS         M305       MECHANICAL PHOTO REF DETAILS         M304       MECHANICAL PHOTO REF DETAILS         M305       MECHANICAL PHOTO REF DETAILS         M306       MECHANICAL PHOTO REF DETAILS         M307       MECHANICAL PHOTO REF DETAILS         M308       MECHANICAL PHOTO REF DETAILS         M309       MECHANICAL PHOTO REF DETAILS         M301       EXISTING MECHANICAL EQUIPMENT         SCHEDULES       SCHEDULES	
<ul> <li>HE SHOULD NOTIFY THE ARCHITECT AT ONCE.</li> <li>D. EXAMINATION <ol> <li>ANY DISCREPANCIES, ERRORS OR OMISSIONS DISCOVERED IN THE CONTRACT DOCUMENT BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH RELATED WORK, OTHERWISE THE CORRECTION OF SUCH ITEMS IS THE RESPONSIBILITY OF THE CONTRACTOR.</li> <li>E. CODES AND STANDARDS <ol> <li>ALL WORK, MATERIALS AND INSTALLATION SHALL BE IN STRICT ACCORDANCE'S WITH ALL ORDINANCES, STATE AND LOCAL BUILDING CODES, AND STANDARDS PER FEMA CONSENSUS BASED CODES, LATEST EDITION.</li> <li>DESIGN LOADS AND CODE RESTRICTIONS FOR ALL DESIGN CONSIDERATIONS SHALL CONFORM TO THE STATE AND LOCAL CODES AND ALL GOVERNING CODES.</li> </ol> </li> <li>F. DEMOLITION <ol> <li>THIS SECTION IS INCLUDED FOR GENERAL REFERENCE OF DEMO WORK BY THE GENERAL CONTRACTOR.</li> <li>DEMOLITION INCLUDES OBJECTS IDENTIFIED BY THE CONTRACT DOCUMENTS, SPECIFICATIONS AND THE ARCHITECT.</li> <li>ARRANGE WITH THE OWNER A CONVENIENT TIME TO PERFORM DEMOLITION WORK.</li> <li>THE CONTRACTOR SHALL REPAIR, RESTORE AND REPLACE PORTIONS OF CONSTRUCTION WHEN AND CONSTRUCTION WICH ARE CRACKED, SPALLED, BROKEN, MISSING OR OUT OF LINE ON DRAWINGS OR AS REQUIRED TO INSTALL THE WORK. ANY PORTIONS OF THE CONSTRUCTION WHICH ARE CRACKED, SPALLED, BROKEN, MISSING OR OUT OF LINE OR ADJUSTMENT, MECHANICALLY OR STRUCTURALLY UNSOUND OR UNSAFE, SHALL BE REMOVED, REPLACED, RESTORED O SATISFACTORILY REPAIRED.</li> </ol> </li> </ol></li></ul>	<ul> <li>EACH CONTRACTOR SHALL ANALYZE THE CONTRACT DOCUMENTS AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO BID. EACH CONTRACTOR SHALL BE REQUIRED TO CORRECT ANY DEFECTIVE WORK CAUSED BY WORK DONE AS A RESULT OF INCONSISTENCIES OR DISCREPANCIES IN THE DRAWINGS WHEN CLARIFICATION FROM THE ARCHITECT HAS NOT BEEN SOUGHT.</li> <li>ARCHITECTURAL PLUMBING, ELECTRICAL MECHANICAL AND ALL OTHER DOCUMENTS SHALL BE REVIEWED AND COORDINATED BY THE CONTRACTOR. REPORT ANY INCONSISTENCIES WITHIN THE DOCUMENTS TO THE ARCHITECT.</li> <li>CONTRACTOR SHALL PROVIDE THE ARCHITECT WITH A SET OF REPRODUCIBLE AS-BUILT PDF DOCUMENTS AND FLASH DRIVE OR DVD AT THE PROJECT CLOSE-OUT.</li> <li>AS SCOPE AND PERFORMANCE DOCUMENTS. THE DRAWINGS AND SPECIFICATIONS INDICATE THE MINIMUM WORK REQUIRED FOR THE PERFORMANCE AND COMPLETION OF BUILDING ASSEMBLIES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE FARICATION AND INSTALLATION OF ALL IMSCELLANEOUS METAL ITEMS. NUTHIN OR REQUIRED TO SUBJILITY OF THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PARICATION AND INSTALLATION OF ALL IMSCELLANEOUS METAL ITEMS. WITHIN OR REQUIRED TO SUBJILITY OF THE GENERAL CONTRACTOR AND HS SUBCONTRACTORS WHETHET THEY ARE SHOWN OR NOT SHOWN ON THE ARCHITECTURAL, STRUCTURAL, REVEAL ALSEMBLIES AS WELL AS ALL SIMILAR ASSEMBLIES, MAY MISCELLANEOUS METAL ITEMS. INDICATED THE ARCHITECTIRAL DRAWINGS, SUCH ASSEMBLIES INCLUDE BUT ARE NOT LIMITED TO EXTERIOR AND INTERIOR WALL, CEILING, PARTITION, ROOT, MECHANICAL AND ELECTTICAL. ASSEMBLIES AS WELL AS ALL SIMILAR ASSEMBLIES, MAY MISCELLANEOUS SMETAL TEMS INDICATED ON THE ARCHITECTURAL DRAWINGS, SHO NO SHOWN ON NOT SHOUND NOT SHOUND ON STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF ASSEMBLIES ASSEMBLY, WHETHER DREAS SHOWN ON THE ARCHITECTURAL DRAWINGS, SHOL ASSEMBLIES INVOLVED SUTTAL TEMS INDICATED ON THE ACHITECTURAL DRAWINGS, MON DR SHOWN ON DREAS DOTHERWINGS BAND ARCHITECTURAL DRAWINGS, SHOWN ON SHOWN ON THE ARCHITECTURAL DRAWINGS BUT AND ON TOT SHOUND ON THE ARCHITECTURAL STRU</li></ul>	ELECTRICAL SITE PLAN E001 ELECTRICAL SITE PLAN E002 ELECTRICAL SITE 2ND FLOOR PLAN E201 ENLARGED ELECTRICAL ROOF PLAN E301 ELECTRICAL PHOTO REF DETAILS E302 ELECTRICAL PHOTO REF DETAILS	
PROJECT DATA	CODES	VICINITY MAP	
OWNER:         Calcasieu Parish School Board         3310 Broad St.         Lake Charles, La 70615         337-217-4000         ARCHITECT:         LACHIN Architects, apc         5190 Canal Blvd.         Suite 201, New Orleans, LA 70124         504-835-8013         STRUCTURAL:         N/A         MECHANICAL / ELECTRICAL:         ADG Engineering, LLC.         3909 W. Congress St.         Suite 201         Laforentia LA 70506	APPLICABLE CODES:       EDITION:         Existing Construction       LIFE SAFETY CODE: NFPA 101       2018         INTERNATIONAL BUILDING CODE       2018         LOUISIANA STATE PLUMBING CODE       2000         NATIONAL ELECTRIC CODE - NFPA 70       2020         ADA/ABA       2004         ASCE / SEI STANDARD - ASCE 7-16       2017         FEMA CONSENSUS BASED CODES       All Latest Published Codes and Standards Apply         OCCUPANCY TYPE:       EDUCATION (E)         BLC 2018 TYPE III B (NON-PROTECTED       COMBUSTIBLE UNSPRINKLERED)         NFPA 101 2018 TYPE III (200)       NFPA 101 2018 TYPE III (200)         BUILDING AREA CALCULATIONS       1 BUILDING - +/- 44,000 SQ. FT.         ASCE 7.16       144 MPH         RISK CATEGORY: 3       MINDOWS         LARGE AND SMALL MISSILE IMPACT RATED         REFERENCE STANDARD FOR HURRICANE PRONE REGIONS	Proje	
Latayette, LA 70506 337-234-5710		SULPHUR, LA	































## SECOND FLOOR REFLECTED CEILING PLAN SCALE: 1" = 20'-0"





EXTERIOR PHOTO 551: DAMAGE TO EXISTING EXPANSION JOINT



EXTERIOR PHOTO 552: DAMAGE TO EXISTING SKYLIGHT



SLOPE ROOF



EXTERIOR PHOTO 559: DAMAGE TO EXISTING ALUM WINDOWS



 $\checkmark \checkmark \checkmark \checkmark \checkmark$ 

EXTERIOR PHOTO 560: DAMAGE TO EXISTING PREFIN MTL SOFFIT PANELS







INTERIOR PHOTO: 502 DAMAGE TO EXISTING GYPSUM BOARD CEILING



INTERIOR PHOTO: 501 DAMAGE TO EXISTING ACOUSTIC

CEILING TILE

INTERIOR PHOTO: 508 DAMAGE TO EXISTING VCT FLOORING



INTERIOR PHOTO: 509 DAMAGE TO EXISTING ACOUSTIC **CEILING TILE** 



INTERIOR PHOTO: 515 DAMAGE TO EXISTING CARPET



INTERIOR PHOTO: 516 DAMAGE TO EXISTING CARPET





EXTERIOR PHOTO 554: DAMAGE TO EXISTING LOW SLOPE ROOF & EDGE TRIM

![](_page_30_Picture_26.jpeg)

EXTERIOR PHOTO 555: EXISTING ALUM WINDOW & MTL ROOF

![](_page_30_Picture_28.jpeg)

EXTERIOR PHOTO 561: DAMAGE TO EXISTING PREFIN MTL LOUVER

![](_page_30_Picture_30.jpeg)

EXTERIOR PHOTO 562: DAMAGE TO EXISTING ALUM WINDOW

CEILING TILE

![](_page_30_Picture_33.jpeg)

INTERIOR PHOTO: 504 DAMAGE TO EXISTING CARPET

![](_page_30_Picture_35.jpeg)

INTERIOR PHOTO: 505 DAMAGE TO EXISTING ACOUSTIC CEILING TILE

![](_page_30_Picture_37.jpeg)

INTERIOR PHOTO: 510 DAMAGE TO EXISTING ACOUSTIC **CEILING TILE** 

![](_page_30_Picture_39.jpeg)

INTERIOR PHOTO: 511 DAMAGE TO EXISTING CARPET

![](_page_30_Picture_41.jpeg)

INTERIOR PHOTO: 512 DAMAGE TO EXISTING GYPSUM BOARD WALL & RESILIENT BASE

![](_page_30_Picture_43.jpeg)

INTERIOR PHOTO: 517 DAMAGE TO EXISTING ACOUSTIC CEILING TILE

![](_page_30_Picture_45.jpeg)

······

![](_page_30_Picture_46.jpeg)

INTERIOR PHOTO: 518 DAMAGE TO EXISTING CARPET

![](_page_30_Picture_48.jpeg)

CMU WALL

![](_page_30_Picture_50.jpeg)

EXTERIOR PHOTO 556: DAMAGE TO EXISTING MTL ROOF & CANOPY

![](_page_30_Picture_52.jpeg)

EXTERIOR PHOTO 557: DAMAGE TO EXISTING ALUM ENTRY DOOR AND METAL SOFFIT

![](_page_30_Picture_54.jpeg)

EXTERIOR PHOTO 558: DAMAGE TO EXISTING ALUM WINDOWS

![](_page_30_Picture_56.jpeg)

INTERIOR PHOTO: 506 DAMAGE TO EXISTING VCT FLOORING

![](_page_30_Picture_58.jpeg)

INTERIOR PHOTO: 507 DAMAGE TO EXISTING ACOUSTIC **CEILING TILE** 

INTERIOR PHOTO: 513 DAMAGE TO EXISTING ACOUSTIC **CEILING TILE** 

![](_page_30_Picture_62.jpeg)

INTERIOR PHOTO: 514 DAMAGE TO EXISTING CARPET

![](_page_30_Picture_65.jpeg)

INTERIOR PHOTO: 520 DAMAGE TO EXISTING ACOUSTIC CEILING TILE

![](_page_30_Picture_67.jpeg)

INTERIOR PHOTO: 521 DAMAGE TO EXISTING CMU WALL

![](_page_30_Picture_69.jpeg)

INTERIOR PHOTO: 522 DAMAGE TO EXISTING

![](_page_30_Picture_72.jpeg)

SEALANT AT WINDOW

![](_page_30_Figure_74.jpeg)

![](_page_31_Picture_0.jpeg)

INTERIOR PHOTO: 523 DAMAGE TO EXISTING CMU WALL

![](_page_31_Picture_2.jpeg)

INTERIOR PHOTO: 531 DAMAGE TO EXISTING ACOUSTIC **CEILING TILE** 

![](_page_31_Picture_4.jpeg)

INTERIOR PHOTO: 524 DAMAGE TO EXISTING CMU WALL

![](_page_31_Picture_6.jpeg)

![](_page_31_Picture_8.jpeg)

INTERIOR PHOTO: 532 DAMAGE TO EXISTING CMU WALL

![](_page_31_Picture_10.jpeg)

![](_page_31_Picture_11.jpeg)

INTERIOR PHOTO: 526 DAMAGE TO EXISTING PAINTED FINISH

![](_page_31_Picture_13.jpeg)

INTERIOR PHOTO: 527 DAMAGE TO EXISTING CMU WALL

INTERIOR PHOTO: 525 DAMAGE TO EXISTING CMU WALL

![](_page_31_Picture_16.jpeg)

INTERIOR PHOTO: 533 DAMAGE TO EXISTING CMU WALL

![](_page_31_Picture_18.jpeg)

INTERIOR PHOTO: 540 DAMAGE TO EXISTING CMU WALL

NOTE: PHOTOS ABOVE ARE FOR REFERENCE ONLY AND ARE PROVIDED AS AN EXAMPLE OF DAMAGES TO BE ENCOUNTERED THROUGHOUT THE PROJECT. THE PHOTOS DO NOT PORTRAY THE FULL EXTENT
 OF DAMAGES FOR THE PROJECT OR FOR EACH SPECIFIC LOCATION.

![](_page_31_Picture_21.jpeg)

INTERIOR PHOTO: 534 DAMAGE TO EXISTING CMU WALL

![](_page_31_Picture_23.jpeg)

![](_page_31_Picture_25.jpeg)

![](_page_31_Picture_26.jpeg)

INTERIOR PHOTO: 529 DAMAGE TO EXISTING CMU, PAINTED FINISH AND WINDOW SEALANT

![](_page_31_Picture_28.jpeg)

INTERIOR PHOTO: 528 DAMAGE TO EXISTING ACOUSTIC CEILING TILE

INTERIOR PHOTO: 535 DAMAGE TO EXISTING SEALANT AT ALUM WINDOW

![](_page_31_Picture_31.jpeg)

INTERIOR PHOTO: 536 DAMAGE TO EXISTING ACOUSTIC CEILING TILE

![](_page_31_Picture_33.jpeg)

INTERIOR PHOTO: 537 DAMAGE TO EXISTING SEALANT AT WINDOW

![](_page_31_Figure_35.jpeg)

![](_page_32_Figure_0.jpeg)

![](_page_32_Figure_11.jpeg)

![](_page_33_Figure_1.jpeg)

![](_page_33_Picture_2.jpeg)

MECHANICAL ENLARGED ROOF PLAN SCALE: <del>1</del>/8" = 1'-0"

REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS

![](_page_33_Picture_5.jpeg)

# **GENERAL MECHANICAL NOTES:**

- A. CONTRACTOR SHALL FIELD VERIFY EXISTING EQUIPMENT TAGS (WHERE POSSIBLE), DUCT/PIPE SIZES, AND ROUTINGS IN FIELD PRIOR TO DEMOLITION. COORDINATE ALL SITE VISITS THROUGH CALCASIEU PARISH SCHOOL BOARD. CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH AND PROPERLY USE/WEAR REQUIRED PERSONAL PROTECTIVE EQUIPMENT/GEAR (PPE) FOR EACH SITE VISIT.
- B. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES IDENTIFIED IN THE FIELD PRIOR TO FABRICATING DUCTWORK OR ORDERING EQUIPMENT.
- C. CONTRACTOR SHALL PROVIDE TESTING AND BALANCING OF ALL HVAC SYSTEMS WHICH WERE REPLACED, MODIFIED AND/OR CLEANED. D. ALL WORK SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL CODES TO THE SATISFACTION OF CODE AUTHORITIES HAVING JURISDICTION, AS WELL
- AS, THE LATEST PUBLISHED EDITIONS OF CODES AND STANDARDS PER FEMA CONCENSUS BASED CODES.
- E. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 90A & 101, THE CLEAN AIR ACT AND THE AMERICANS WITH DISABILITIES ACT. F. ALL SUPPLY, RETURN, EXHAUST, AND FRESH AIR DUCTWORK SHALL BE EXTERNALLY INSULATED UNLESS NOTED OTHERWISE ON DRAWINGS. DUCT SIZES SHOWN ARE CLEAR METAL TO METAL. WRAP DUCTWORK EXTERNALLY.
- G. HARDCAST ALL DUCTWORK JOINTS FOR AIRTIGHT SYSTEM. REFER TO DETAILS FOR DUCTWORK TAP, SPLITTER, BRANCH CONFIGURATION, ETC.
- INSTALL IN ACCORDANCE WITH SMACNA RECOMMENDATIONS AND INSTALLATION GUIDELINES. H. PRIOR TO DRAINING, DISCONNECTING, AND REMOVING OF ANY SERVICES IN THE DESIGNATED AREAS SHOWN, THE CONTRACTOR MUST ENSURE
- THAT THE SERVICES REMOVED DO NOT AFFECT THE NORMAL OPERATION OF AREAS OUTSIDE THE CONSTRUCTION AREA. I. VERIFY ADEQUATE SPACE AVAILABLE PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE CLEARANCE REQUIREMENTS OF ALL MECHANICAL EQUIPMENT.
- J. CONTRACTOR SHALL CAP AND SEAL ALL DUCTWORK DURING CONSTRUCTION TO PREVENT CONTAMINATION DUE TO CONSTRUCTION DEBRIS. K. THE HVAC AND PLUMBING SCOPE OF WORK IS LIMITED TO REPLACING OR REPAIRING STORM RELATED DAMAGED HVAC AND PLUMBING SYSTEM COMPONENTS BACK TO THE ORIGINAL (PRE-STORM) CONDITIONS (LIKE FOR LIKE). THE SCOPE OF WORK OF THIS PROJECT DOES NOT INCLUDE
- BRINGING EXISTING HVAC AND PLUMBING SYSTEMS UP TO CODE OR ADDRESSING EXISTING CONDITIONS NOT DEEMED TO BE STORM RELATED DAMAGE. L. THESE DRAWINGS ARE BASED ON RECORD SET INFORMATION WITH NOTES ADDED TO DESCRIBE THE SCOPE OF WORK FOR THE
- PRIOR TO ORDERING EQUIPMENT OR INSTALLATION. M. THE SCOPE OF THIS PROJECT IS TO REPAIR HURRICANE DAMAGED ITEMS FROM HURRICANES LAURA AND DELTA. ALL STORM DAMAGED EQUIPMENT, FIXTURES, DUCTWORK, DEVICES SHALL BE REPLACED IN KIND WITH NEW. PRIOR TO REPLACING/ORDERING ANY

# MECHANICAL KEYNOTES:

PLACING ORDER FOR NEW EQUIPMENT.

(1) REPLACE EXISTING DAMAGED ROOF DRAIN AND ASSOCIATED DAMAGED/MISSING ROOF DRAIN COVER COVER IN KIND WITH NEW. CONTRACTOR SHALL VERIFY EXISTING ROOF DRAIN AND ASSOCIATED ROOF DRAIN COVER SIZE AND NAME PLATE DATA IN FIELD PRIOR TO ORDER OF ANY NEW EQUIPMENT OR MATERIAL.

- 2 REPLACE DAMAGED EXISTING PLUMBING VENTS IN KIND WITH NEW. CONTRACTOR SHALL VERIFY QUANTITY AND SIZE OF VENT PIPING MATERIALS IN FIELD PRIOR TO ORDER OF ANY NEW EQUIPMENT OR MATERIAL.
- 3 REPLACE DAMAGED/MISSING EXISTING ROOFTOP UNIT (INCLUDING HVAC EQUIPMENT CONTROLS AND ALL ASSOCIATED ACCESSORIES) IN KIND WITH NEW. PROVIDE AND INSTALL NEW HUMIDISTAT (TO REPLACE EXISTING) & CONNECT TO RESPECTIVE ROOFTOP UNIT TO MODULATE CHILLED WATER VALVE OPEN WHEN HUMIDITY EXCEEDS SPACE SET POINT. CONTRACTOR SHALL PROVIDE AND INSTALL NEW BALL VALVES & TWO WAY (HEATING & COOLING) CONTROL VALVES FOR NEW ROOF TOP UNIT. RECONNECT ROOF TOP UNIT TO ENERGY MANAGEMENT SYSTEM FOR SEAMLESS CONTROL AND COMMUNICATION. COORDINATE EXACT LOCATION OF NEW ROOFTOP UNIT AND ASSOCIATED EQUIPMENT ROOF CURB WITH ARCHITECT PRIOR TO INSTALLATION. CONTRACTOR SHALL VERIFY SIZES OF ASSOCIATED EXISTING SUPPLY AND RETURN DUCTS, PIPING, ETC. IN FIELD PRIOR TO ORDER. CONTRACTOR SHALL COORDINATE PIPING AND DUCTWORK CONNECTION ORIENTATION SUITABLE TO BOTH EXISTING CONDITIONS AND NEW ROOFTOP UNIT SELECTION . REMOVE EXISTING ROOFTOP EQUIPMENT ROOF CURB AND SUPPORTS ASSOCIATED WITH DAMAGED ROOFTOP EQUIPMENT. PROVIDE AND INSTALL NEW MANUFACTURER'S ROOF CURB. CONTRACTOR SHALL VERIFY EXISTING ROOF MOUNTED HVAC EQUIPMENT NAMEPLATE DATA IN FIELD PRIOR TO ORDER OF ANY NEW EQUIPMENT OR MATERIAL. CONTRACTOR SHALL FIELD VERIFY EXACT MODEL NUMBER, CAPACITIES, POWER REQUIREMENTS OF EQUIPMENT
- TO BE REPLACED IN KIND. COORDINATE ALL POWER REQUIREMENTS WITH ELECTRICAL AND EQUIPMENT CONTROL REQUIREMENTS WITH CONTROLS CONTRACTOR PRIOR TO ORDER. PROVIDE EQUIPMENT SUBMITTALS FOR REVIEW DURING SHOP DRAWING PHASE AND PRIOR TO PLACING ORDER FOR NEW EQUIPMENT. 4 REPLACE DAMAGED EXISTING HOOD/EXHAUST FAN (INCLUDING FAN EQUIPMENT CONTROLS) IN KIND WITH NEW. CONTRACTOR
- SHALL VERIFY EXISTING ROOF MOUNTED HVAC EQUIPMENT NAMEPLATE DATA IN FIELD PRIOR TO ORDER OF ANY NEW EQUIPMENT OR MATERIAL. REMOVE EXISTING EQUIPMENT ROOF CURB AND EQUIPMENT ROOF SUPPORTS AND REPLACE IN KIND WITH NEW. PROVIDE AND INSTALL NEW EQUIPMENT ROOF CURB. CONTRACTOR SHALL FIELD VERIFY EXACT MODEL NUMBER, CAPACITIES, POWER REQUIREMENTS, DIMENSIONS, DUCT CONNECTIONS, ETC. OF EXISTING EQUIPMENT TO BE REPLACED IN KIND WITH NEW. COORDINATE ALL POWER REQUIREMENTS WITH ELECTRICAL AND EQUIPMENT CONTROL REQUIREMENTS WITH CONTROLS CONTRACTOR PRIOR TO ORDER. PROVIDE EQUIPMENT SUBMITTALS FOR REVIEW DURING SHOP DRAWING PHASE AND PRIOR TO PLACING ORDER FOR NEW EQUIPMENT.
- $\langle 5 \rangle$  REPLACE DAMAGED EXISTING OUTDOOR CONDENSING UNIT (INCLUDING EQUIPMENT HVAC CONTROLS) IN KIND WITH NEW. CONTRACTOR SHALL VERIFY EXISTING CONDENSING UNIT(CU) AND ASSOCIATED EXISTING AIR HANDLING UNIT(AHU) NAMEPLATE DATA IN FIELD PRIOR TO ORDER OF ANY NEW EQUIPMENT OR MATERIAL. CONTRACTOR SHALL PROVIDE VERIFICATION OF MANUFACTURER'S MATCHED AHU/CU PERFORMANCE DATA AND SUBMIT FOR REVIEW (PRIOR TO EQUIPMENT ORDER) DURING SHOP DRAWING PHASE. SHOULD CURRENT EQUIVALENT EQUIPMENT NOT BE AVAILABLE MATCHING THE EXISTING EQUIPMENT REFRIGERANT, THE ASSOCIATED INDOOR AIR HANDLER MUST BE REPLACED IN KIND AS WELL (BOTH WITH COMPLIANT REFRIGERANT), REPLACE DAMAGED EXTERIOR REFRIGERANT PIPING INSULATION AND DAMAGED EXISTING REFRIGERANT PIPING SUPPORTS IN KIND WITH NEW. CONTRACTOR SHALL VERIFY EXACT LENGTH (AND SIZES) OF NEW REFRIGERANT PIPING IN FIELD PRIOR TO ORDER OF ALL EQUIPMENT AND/OR MATERIALS.
- REPLACE DAMAGED EXISTING ROOF MOUNTED EXHAUST VENT (AND ASSOCIATED VENT CAP) IN KIND WITH NEW. CONTRACTOR SHALL VERIFY QUANTITY AND SIZE OF MATERIALS IN FIELD PRIOR TO ORDER OF ANY NEW EQUIPMENT OR MATERIAL.
- $\langle 7 \rangle$  REPLACE DAMAGED STATIONARY WALL LOUVER WITH MOTORIZED WALL SHUTTER AND PROTECTIVE HOOD (INCLUDING EQUIPMENT CONTROLS AND ALL ASSOCIATED ACCESSORIES) IN KIND WITH NEW. CONTRACTOR SHALL FIELD VERIFY EXACT MODEL NUMBER, CAPACITIES, POWER REQUIREMENTS, DIMENSIONS, CONTROL HARDWARE, ETC. OF EXISTING EQUIPMENT TO BE REPLACED IN KIND WITH NEW. COORDINATE ALL POWER REQUIREMENTS WITH ELECTRICAL AND EQUIPMENT CONTROL REQUIREMENTS WITH CONTROLS CONTRACTOR PRIOR TO ORDER. PROVIDE EQUIPMENT SUBMITTALS FOR REVIEW DURING SHOP DRAWING PHASE AND PRIOR TO PLACING ORDER FOR NEW EQUIPMENT.
- (8) REPLACE DAMAGED/MISSING EXISTING EXTERIOR HYDRONIC PIPING INSULATION AND ASSOCIATED DAMAGED EXISTING/MISSING EXTERIOR HYDRONIC PIPING INSULATION JACKETING AND DAMAGED/MISSING EXISTING PIPING SUPPORTS IN KIND WITH NEW. CONTRACTOR SHALL VERIFY EXACT LENGTH OF EXISTING EXTERIOR HYDRONIC WATER PIPING IN FIELD PRIOR TO ORDER OF ALL EQUIPMENT AND/OR MATERIALS.

![](_page_33_Picture_28.jpeg)

Phone: (337) 234-5710 Email: adginc@adginc.org

Project No. 20284-4

CONSTRUCTION DOCUMENT

![](_page_33_Figure_30.jpeg)

![](_page_33_Figure_31.jpeg)

![](_page_34_Figure_0.jpeg)

![](_page_34_Picture_13.jpeg)

CONSTRUCTION DOCUMENT

	Sector Contraction							ROOF	top	UHIT	, sc	HEDUL	_⊨ (19	79)					a star		
		F	32H					COOLIF	14							H	EATING	1			
He.	SERVICE	MIH. GFM	CEH F.A.	EXT	FAH H.P.	ELECTRIC GERVICE	HIH GEHGIE BILLI ANTI	LE MIH LATENT BIUN AUTOUR			(+) LIB	HATE	e teme	G.P.M	MIH. BTUH	EHT AIR (°F)	LEAV	HATE	2 18115	5 G.F.M	remarks
RTU-5	waddworking shop	3050	315	0.5	3	480-3-60	73,950	28,830	1775	24 5	5 53.	45	55	20.6	63,000	68.2	\$1.3	180	140	3.21	CARRIER 39MW, TRANE, JOHNSON CONTROLS, OR ENGINEER APPROVED EQUAL
₹TU-6	vacational blog	3050	315	0.5	3	480-3-60	73,950	28,830	77.5	24 5	5 53.	45	55	20.6	63,000	68.2	\$1.3	180	140	3.21	CARRIER 39MW, TRANE, JOHNSON CONTROLS, OR ENGINEER APPROVED EQUAL
TU-7	y 1 1 1 1	1230	250	0.5	3	480-3-60	53,500	19,220	77.2	02 5	5 53.8	45	55	14.5/	51,900	66.8	88.2	180	140	2.61	CARRIER 39MW, TRANE, JOHNSON CONTROLS, OR ENGINEER APPROVED EQUAL
TU-8		3580	400	0.5	3	480-3-60	\$6,000	30,150	77.2	62 5	5 53.	45	55	23.4/	15,000	48.3	08.2	180	140	3.8/	CARRIER 39MW, TRANE, JOHNSON CONTROLS, OR ENGINEER APPROVED EQUAL
U-9		1320	150	0.5	2	480-3-60	31., 700	11, 530	11.3	7 5	5 53.7	45	55	3.41	39,400	68.7	96.3	180	140	2.0,1	CARRIER 39MW, TRANE, JOHNSON CONTROLS, OR ENGINEER APPROVED EQUAL
U-10		4130	300	0.5	5	480-3-60	95,480	23,100	70.5	47 .5	5 54.0	45	55	23,7	98,350	70.3	93.1	150	140	4.91	CARRIER 39MW, TRANE, JOHNSON CONTROLS, OR ENGINEER APPROVED EQUAL
U-11	h. P. p. A	3990	400	0.5	5	480-3-60	92,580	30,800	77.0	42 5	5 53.8	45	55	24.7	92,400	69.4	90.8	180	140	4:01	CARRIER 39MW, TRANE, JOHNSON CONTROLS, OR ENGINEER APPROVED EQUAL
U-12	H. H. H. H	4640	600	0.5	5	480-3-60	123,200	46,150	177.4	62 1 5	6 53.6	45	56	33.9	125,850	07.8	92.9	180	140	6.31	CARRIER 39MW, TRANE, JOHNSON CONTROLS, OR ENGINEER APPROVED EQUAL
U-13		3880	450	0.6	Б	480-3-60	43,400	34,600	76.7	125 B	5 53.	45	55	25.00	113,700	08.0	95.7	180	140	5.71	CARRIER 39MW, TRANE, JOHNSON CONTROLS, OR ENGINEER APPROVED EQUAL

							6	u .	5			a.							1. 1. 1. 3	
			R		= T C	P	AIR H	ANDL		Gι	JNIT	SCI	HED	ULE	(1988)					
		FAN						(	200	DLI	NG	COIL			HEAT	ING	ELE	EMEN	Т	
UNIT No.	SERVICE	MIN. CFM	CFM F.A.	STATI	C PRES.	Fan HP	ELECTRIC SERVICE	TOTAL BTUH CAP.	EN DB	(*F) WB	AMB TEMP (%F)	EVAP TEMP (°F)	UNIT FLA	SEER	HEATING OUTPUT (BTUH)	AIR TI ENT.	EMP. (*F) LEAV.	ELEC. S	STRIP MAX. K.W.	REMARKS
4-R <u>T</u> U-1	COMPUTER ROOM (2ND FLOOR)	3,000	300	.7	- 2	1-1/2	208/240-3-60	90,000	77	-	95	45	40.6	-	50,800	-		14.9	14.9	CARRIER 50TC, TRANE, OR ENGINEER APPROVED EQUAL

(1996	-2) AIR	COOLE	id c	ONE	DENS	NGL	TINC	SCHEDULE
UNIT No	SERVICE	BTUH COOLING OUTPUPT	EVAP TEMP	AMBIENT	FULL LOAD	ELECTRIC	SEER.	REMARKS
7-CU-1	NORTH	59,000	45	95	29.9	208/1/60	II	CARRIER 24ACC / FV4C, TRANE, OR ENGINEER APPROVED EQUAL
7-CU-2	SOUTH	59,000	45	95	29.9	208/1/60	II	CARRIER 24ACC / FV4C, TRANE, OR ENGINEER APPROVED EQUAL

				ł	- Hr		50	HEL		E (1988)		
1	No.	SERVICE	MIN. CFM	EXT. SP	RPM	SONES	Fan HP	TYPE	DRIVE	ELECTRIC SERVICE	CONTROL	REMARKS
4-F	AN-5	GIRLS DRESSING	6340	.25	369	-	1/2	CENT.	BELT	208-1-60	WALL SWITCH	ACME PL365 OR ENGINEER APPROVED EQUAL

No	SERVICE	MIN. CFM	EXT.	RPM	SONES	FAN POW	TYPE	DRIVE	SERVICE	CONTROL	REMARKS
8-FAN-1	GIRLS LOCKER	250	0.25	1550	5.0	III M	PROP	DIRECT	120-1-60	HAND OFF	ACME LQ10 OR ENGINEER APPROVED EQUAL
8-FAN-2	GIRLS P.E.	850	0.25	1400	8.0	1/8HP	PROP	DIRECT	120-1-60	HAND OFF AUTO SWITCH	ACME LQ14 OR ENGINEER APPROVED EQUAL
8-FAN-4	GIRLS GYM JANITOR	125	0.25	710	2.2	IOON	CENT	DIRECT	120-1-60	MALL SM.	ACME VQ150ES OR ENGINEER APPROVED EQUAL

FAN SCHEDULE (1996-2)											
No	SERVICE	MIN. CFM	EXT. SP	RPM	SONES	FAN	TYPE	DRIVE	ELECTRIC	CONTROL	REMARKS
7-FAN-1	KITCHEN RR	100	25			BOWATTS	CENT.	DIRECT	120/1/60	SWITCH W/	ACME VQ150ES OR ENGINEER APPROVED EQUAL
7-FAN-2	DW HOOD	400	.25	1.18		1/10	CENT.	DIRECT	120/1/60	S.S.S.C. ON WALL	ACME PRN100 OR ENGINEER APPROVED EQUAL

![](_page_35_Figure_9.jpeg)

![](_page_35_Picture_10.jpeg)

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CONSTRUCTION DOCUMENT

![](_page_35_Figure_13.jpeg)

![](_page_36_Figure_0.jpeg)

TE I	LIGHT	ING	FIXTURE S	CHEDULE	
	LUMENS	VOLTS	MOUNTING	MANUFACTURER	CATALOG No.
12",14")	1800	MVOLT	SURFACE	JUNO	SLIMFORM SERIES
	4200	MVOLT	RECESSED	METALUX	22FP SERIES
	6000	MVOLT	RECESSED	METALUX	24FP SERIES
	24000	MVOLT	SUSPENDED/SURFACE	METALUX	LHB SERIES
	2300	MVOLT	SURFACE	METALUX	ST2 SERIES
	24000	MVOLT	SUSPENDED/SURFACE	METALUX	UHB SERIES
	24000	MVOLT	SUSPENDED/SURFACE	SPEC GRADE	HBF SERIES

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# **GENERAL ELECTRICAL NOTES:**

- A. CONTRACTOR SHALL REFER TO ALL OTHER PORTIONS OF THE CONTRACT DOCUMENTS (PLANS, SPECIFICATIONS, ADDENDA, ARCHITECTURAL SUPPLEMENTAL INSTRUCTIONS AND ANY APPROVED CHANGE ORDERS) AND PROVIDE ALL LIGHT FIXTURES, OUTLETS, TELE/DATA OUTLETS, SPEAKERS, AND ASSOCIATED CIRCUITRY AS IF ORIGINALLY INCLUDED ON THE ELECTRICAL PLANS. IF THERE ARE ANY DISCREPANCIES, CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER IN WRITING PRIOR TO ORDERING EQUIPMENT, ROUGH-IN FOR EQUIPMENT AND/OR INSTALLATION OF EQUIPMENT. PRIOR TO ROUGH-IN OF EQUIPMENT, CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING COPIES OF APPROVED SHOP DRAWINGS OF SUCH EQUIPMENT AND REVIEWING SAID SUBMITTALS TO ENSURE COMPATIBILITY WITH THE ELECTRICAL SYSTEM. CONTRACTOR SHALL IMMEDIATELY NOTIFY ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BETWEEN THE REQUIRED ROUGH-IN REQUIREMENTS AND
- B. VERIFY EXACT MOUNTING HEIGHT OF ALL WALL MOUNTED FIXTURES W/ARCHITECT/OWNER PRIOR TO ROUGH-IN UNLESS SPECIFICALLY NOTED OTHERWISE.

THE ELECTRICAL SYSTEM.

- C. CONTRACTOR SHALL PROPERLY SEAL PENETRATIONS TO RATED ASSEMBLIES AND ALL EXTERIOR WALLS TO PROPERLY MAINTAIN RATING & ASSEMBLIES AND BUILDING ENVELOPE.
- D. ALL 20 AMP 125 VOLT DUPLEX RECEPTACLES INSTALLED OUTDOORS SHOULD HAVE GFCI PROTECTION AND SHALL RECEIVE WEATHER PROOF WHILE IN USE COVER, AS SPECIFIED.
- E. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. F. COORDINATE EXACT LOCATION OF ALL OUTLETS WITH ARCHITECT/OWNER PRIOR
- TO ROUGH IN. CONTRACTOR SHALL MAKE ALL ELECTRICAL CONNECTIONS TO ALL OWNER FURNISHED EQUIPMENT.
- G. RECEPTACLES WITHIN 6' OF A SINK OR LAVATORY SHALL HAVE GFCI PROTECTION. H. CONTRACTOR SHALL VISIT THE SITE AND FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING ANY WORK TO BE DONE.
- I. VERIFY REQUIREMENTS FOR ALL OWNER FURNISHED EQUIPMENT PRIOR TO ROUGH-IN. J. ANY VISIBLE CABLE/RACEWAYS NOT CURRENTLY SECURED SHALL BE SECURED
- PROPERLY PER NEC.
- K. CONTRACTOR SHALL PERFORM POLARITY TEST ON ALL RECEPTACLES WITHIN NOTES AREAS. REPLACE NON-OPERABLE UNITS WITH NEW - SEE SPECS.
- L. CONTRACTOR SHALL TEST ALL COMMUNICATION CABLES (END-TO-END) PER EIA FOR CATEGORY RATING OF SAID CABLES. REPLACE FAULTY CONDUCTORS AND RETEST. TESTING SHALL BE PERFORMED BY A LICENSED TELECOMMUNICATIONS SPECIALIST.
- M. ELECTRICAL CONTRACTOR SHALL DISCARD ALL REMOVED ITEMS OFF-SITE (LIGHT FIXTURES, EXIT SIGN LIGHTS, EMERGENCY LIGHTS, ETC).
- N. WHERE EXISTING WALL COVERINGS HAVE BEEN REMOVED AND DEVICE COVERPLATES AND BACKBOXES EXPOSED - ELECTRICAL CONTRACTOR SHALL RESECURE SAID BACKBOXES AND CONDUIT AND WIRING. PROVIDE AND INSTALL NEW COVERPLATES. WHERE BACKBOXES ARE LACKING, FURNISH AND INSTALL NEW BACKBOX AND PLACE ASSOCIATED DEVICE INTO NEW BACKBOX AND SECURE.
- O. ANY EXISTING "ABANDONED" EQUIPMENT AND DEVICES, WIRE, RACEWAYS OCCURRING ABOVE CEILINGS SHALL BE REMOVED.
- P. WHERE "INBOARD" AND "OUTBOARD" LAMPS WERE ORIGINALLY SWITCHED SEPARATELY, THE NEW LED INSTALLATION SHALL HAVE APPROXIMATELY ONE-HALF OF LUMINAIRES SWITCHED SEPARATELY TO OBTAIN MULTI-LEVEL LIGHTING.
- Q. REPLACE ALL EXISTING EMERGENCY LIGHTING FIXTURES, EMERGENCY LIGHTING BALLASTS AND EXIT SIGNS THROUGHOUT THE AREA OF WORK. CONNECT EQUIPMENT TO EXISTING UNSWITCHED CIRCUIT CURRENTLY FEEDING THE DEVICE. MATCH EXISTING QUANTITY AND TYPES OF FIXTURES. (FOR PRICING, ASSUME  $\frac{1}{4}$  OF FIXTURES HAVE EMERGENCY BATTERY PACK.VERIFY EXACT QUANTITIES IN THE FIELD.)

![](_page_36_Picture_22.jpeg)

NOTE: THESE DRAWINGS ARE BASED ON RECORD SET INF WITH NOTES ADDED TO DESCRIBE THE SCOPE OF WORK FO HURRICANE LAURA REPAIR PROJECT. CONTRACTOR SHA ARCHITECT/ENGINEER OF ANY DISCREPANCIES IDENTIFIED PRIOR TO ORDERING EQUIPMENT OR INSTALLATION.

NOTE: THE SCOPE OF THIS PROJECT IS TO REPAIR HURRICANE DAMAGED ITEMS FROM HURRICANES LAURA AND DELTA. ALL EQUIPMENT, FIXTURES, DUCTWORK, DEVICES SHALL BE REPLACED IN KIND. PRIOR TO SUBMITTING A BID CONTRACTOR SHALL FIELD VERIFY EXACT MODEL NUMBER, CAPACITIES, POWER REQUIREMENTS OF EQUIPMENT, DEVICES, FIXTURES TO BE REPLACED IN KIND.

![](_page_36_Picture_25.jpeg)

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Project No. 20284-4

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![](_page_36_Figure_45.jpeg)

![](_page_37_Figure_0.jpeg)

# DETAIL TAG SYMBOL

![](_page_37_Picture_4.jpeg)

——— DETAIL REFERENCE NUMBER

- DRAWING SHEET NUMBER WHERE DETAIL CAN BE FOUND

<u>NOTE:</u> THESE DRAWINGS ARE BASED ON RECORD SET INFORMATION WITH NOTES ADDED TO DESCRIBE THE SCOPE OF WORK FOR THE HURRICANE LAURA REPAIR PROJECT. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES IDENTIFIED IN FIELD PRIOR TO ORDERING EQUIPMENT OR INSTALLATION.

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# GENERAL ELECTRICAL NOTES:

Α.	CONTRACTOR SHALL REFER TO ALL OTHER PORTIONS OF THE CONTRACT DO
	SPECIFICATIONS, ADDENDA, ARCHITECTURAL SUPPLEMENTAL INSTRUCTIONS
	CHANGE ORDERS) AND PROVIDE ALL LIGHT FIXTURES, OUTLETS, TELE/DATA
	ASSOCIATED CIRCUITRY AS IF ORIGINALLY INCLUDED ON THE ELECTRICAL PL
	DISCREPANCIES, CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER IN WRIT
	EQUIPMENT, ROUGH-IN FOR EQUIPMENT AND/OR INSTALLATION OF EQUIPMENT
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# ELECTRICAL KEYNOTES:

(1) CONTRACTOR SHALL REPLACE LIGHT FIXTURES, FLEXIBLE CONDUIT AND CONDUCTORS WITHIN THIS DENOTED AREA. EXISTING LIGHT FIXTURES OUTSIDE OF THIS AREA SHALL REMAIN. REPLACE LIGHT SWITCHES, DIMMER SWITCHES, OCCUPANCY SENSORS, CONTROL DEVICES, AND COVERPLATES WITHIN THIS DENOTED AREA. LIGHT SWITCHES, DIMMER SWITCHES, OCCUPANCY SENSORS, CONTROL DEVICES, AND COVERPLATES OUTSIDE OF THIS AREA SHALL REMAIN. REPLACE RECEPTACLES AND FACEPLATES WITHIN THIS DENOTED AREA. EXISTING RECEPTACLES AND FACEPLATES OUTSIDE OF THIS AREA SHALL REMAIN. REPLACE DATA/COM AND CATV JACKS AND FACEPLATES WITHIN THIS DENOTED AREA. EXISTING DATA/COM AND CATV JACKS AND FACEPLATES OUTSIDE OF THIS AREA SHALL REMAIN. REPLACE FIRE ALARM DEVICES WITHIN THIS DENOTED AREA. EXISTING FIRE ALARM DEVICES OUTSIDE OF THIS AREA SHALL REMAIN.

![](_page_37_Picture_27.jpeg)

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![](_page_37_Figure_30.jpeg)

![](_page_37_Figure_45.jpeg)

![](_page_38_Figure_0.jpeg)

# DETAIL TAG SYMBOL

![](_page_38_Picture_4.jpeg)

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DRAWING SHEET NUMBER WHERE DETAIL CAN BE FOUND

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# ELECTRICAL KEYNOTES:

![](_page_38_Picture_26.jpeg)

![](_page_38_Picture_27.jpeg)

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![](_page_38_Figure_30.jpeg)

J. ANY VISIBLE CABLE/RACEWAYS NOT CURRENTLY SECURED SHALL BE SECURED PROPERLY PER NEC.

![](_page_38_Figure_40.jpeg)

![](_page_39_Figure_0.jpeg)

![](_page_39_Picture_4.jpeg)

![](_page_39_Picture_6.jpeg)

ELECTRICAL KEYNOTES:

 $\left< \mathsf{I} \right>$  REPLACE ELECTRICAL CIRCUITRY IN KIND.

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![](_page_39_Figure_9.jpeg)