

Hudsonville Public Schools



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DIVISION 00 – BIDDING & CONTRACT REQUIREMENTS

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END OF SECTION

SECTION 00 11 16
INVITATION TO BID

PART 1 - GENERAL

1.01 WORK INCLUDED: SECURITY SYSTEM RENOVATIONS

A. Hudsonville Public Schools (Owner) is seeking bids for upgrades and renovations to existing access control systems, associated equipment, and installation services. Proposed systems shall be configured and installed to service Owner's multiple instructional facilities, and as described herein.

B. Project: SECURITY SYSTEM RENOVATIONS

C. Owner: Hudsonville Public Schools
3886 Van Buren Street
Hudsonville, Michigan 49426

D. Designer: Communications by Design, Inc.

E. Sites of Work:

1. 5th-6th Grade Facility
8175 36th Ave.
Hudsonville, Michigan 49426
2. Administration Building
3886 Van Buren St
Hudsonville, Michigan 49426
3. Alward Elementary
3811 Port Sheldon Street
Hudsonville, Michigan 49426
4. Baldwin Street Middle School
3835 Baldwin Street
Hudsonville, Michigan 49426
5. Bauer Elementary
8136 48th Avenue
Hudsonville, Michigan 49426
6. Central Kitchen
5066 40th Avenue
Hudsonville, Michigan 49426

7. Forest Grove Elementary
1645 32nd Avenue
Hudsonville, Michigan 49426
8. Freshman Campus
3370 Allen Street
Hudsonville, Michigan 49426
9. Georgetown Elementary
3909 Baldwin Street
Hudsonville, Michigan 49426
10. Hudsonville Early Childhood Center
5535 School Avenue
Hudsonville, Michigan 49426
11. Hudsonville High School
5037 32nd Avenue
Hudsonville, Michigan 49426
12. Jamestown Lower Elementary
2522 Greely
Hudsonville, Michigan 49426
13. Jamestown Upper Elementary
3291 Lincoln Ct.
Hudsonville, Michigan 49426
14. Park Elementary
5525 Park Avenue
Hudsonville, Michigan 49426
15. Riley Street Middle School
2745 Riley Street
Hudsonville, Michigan 49426
16. South Elementary School
4900 40th Ave
Hudsonville, Michigan 49426

1.02 GENERAL DESCRIPTION OF PROJECT SEQUENCE

- A. Sequences and dates specified herein are for information only and indicate the plan and intent of the Owner. Actual dates shall be established based on final award of project.

B. Sequence of operations shall be established by the Contractor within the guidelines established by the Owner as required to meet schedules.

C. Schedule:

1. Request for Bid Distributed: March 25, 2022
2. Pre-Bid Meeting: April 5, 2022, 2:00pm
3. Intent to Bids Due: April 8, 2022, by 5:00pm
4. Question and Clarification Deadline: April 13, 2022, by 5:00pm
5. Public Bids Due: April 22, 2022, at 10:00am

1.03 TYPES OF BIDS

A. Bids shall be submitted in total and with required detail for each item bid and as is required herein and include all portions of the work identified for the individual bid package as specified herein. Bids shall be made on unaltered bid forms as included herein. Bidder shall fill in all blank spaces and the bid shall be signed by a legal officer or agent authorized to bind the bidder to a contract.

1.04 PRE-BID CONFERENCE

A. A pre-bid conference will be held. A discussion of the project and review of bid documents will be followed by a site review and an opportunity to ask questions. Attendance is highly encouraged for all contractors interested in bidding on any components or portions of this project. Attendance at the pre-bid conference will be a factor considered during evaluation of bids.

B. Time: April 5, 2022, at 2:00pm

C. Location: Hudsonville High School - Media Center
5037 32nd Avenue
Hudsonville, Michigan 49426

D. Any drawings identified in the table of contents herein will be distributed and reviewed at this conference.

E. Physical building inspections of sites of work will be provided for at this time.

1.05 TIME AND PLACE OF BID RECEPTION

A. Physically sealed bids for the base bid work will be received at the district office and read aloud at a public opening. Bids arriving after the appointed time as determined by the Owner's representative conducting the public

opening, shall be returned unopened. Bids will be accepted beginning forty-eight (48) hours prior to the appointed opening time provided they are in sealed packages and addressed as specified herein.

B. Bid Receipt Deadline: April 22, 2022, at 10:00am

C. Bid Opening Location: Administration Building
3886 Van Buren St
Hudsonville, Michigan 49426

D. Faxed or electronically delivered bids will not be accepted.

1.06 EXAMINATION AND PROCUREMENT OF DOCUMENTS

A. Specifications and any relevant Drawings may be obtained from the Technology Designer. Contractors may obtain copies by documented request to Communications by Design, Attn: Rebecca Szilagy. Requests may be made by:

1. Writing – 4101 Sparks Drive, Grand Rapids, Michigan 49546

2. Email – rszilagy@cbdconsulting.com

1.07 BID SECURITY

A. Bid security equal to five percent (5%) of the total bid amount, must accompany each base bid in accordance with the Instruction to Bidders.

B. Bid security shall be either a Bid Bond issued by a company licensed in the State of Michigan to furnish bid security or Certified Check made payable to the Owner.

1.08 PERFORMANCE BOND COVERAGE

A. Selected Contractor(s) will be required to provide a performance bond and payment bond in an amount equal to one hundred percent (100%) of the bid amount including any accepted alternates at the Owner's discretion. Such bonds shall be issued by surety licensed by the State of Michigan and acceptable to the Owner.

1.09 OWNER'S RIGHT TO REJECT BIDS

A. The Owner reserves the right to reject any and/or all bids. The Owner reserves the right to accept a bid, or portion thereof by issuance of a valid purchase order within ninety (90) calendar days following the bid opening. No bids may be withdrawn during this time without the specific approval of the Owner.

- B. Withdrawal of any Bids after the opening time without specific approval by Owner may result in forfeiture of required bid security by Bidder.

1.10 DEFINITIONS

- A. “Owner” is intended to mean Hudsonville Public Schools, a general powers school district.
- B. For purposes of this project, the terms “Architect”, “Engineer” and “Designer” are used synonymously to refer to Communications by Design, Inc., a Michigan Corporation.
- C. The term “Bidder” refers to any organization properly and accurately submitting a complete “Intent to Bid Form” prior to the required time specified herein and subsequently properly submitting completed set of bid documents as specified herein.
- D. The term “Contractor” herein is a reference to the firm(s) eventually selected by the Owner to provide the intended system(s), or any portion thereof, and fulfill the terms of the contract.
- E. The term Contract is a reference to the collective set of documents, drawings, diagrams, Owner’s Purchase Order, Addenda, and all other materials as provided for herein defining arrangement between Owner and Contractor.
- F. The term Addenda (or Addendum) are that portion of the Contract consisting of modifications, amendments, deletions, or substitutions to the contract documents issued prior to the execution of the Contract.

END OF SECTION

SECTION 00 40 00
BID FORMS

Intent to Bid Form

Complete and submit the following form if you have interest or intend to submit a Bid for this project. Unaltered and completed forms must be received on or before 5:00 PM on April 8, 2022. Only bidders returning a completed "Intent to Bid Form" will directly be notified of required addenda.

Company Information

Name: _____

Address Line1: _____

Address Line2: _____

City, State and Zip Code _____

Primary Contact Information

Name: _____

Phone No.: _____

Fax. No.: _____

E-Mail Address: _____

Portions of the bid for which you will be responding:

☐ Section 28 13 00 Building Access System

Submit unaltered and completed form to:

Rebecca Szilagy

Communications by Design, Inc.

rszilagy@cbdconsulting.com

SEALED BID LABEL

Separate, or fold over, the label on the line below, and affix to the exterior of sealed container so information is clearly visible for Bid Submission. Ensure label is attached in a manner to prevent accidental removal or defacement. Label shall serve as sole identification for sealed bid at submission.

BID TO: Hudsonville Public Schools
Attention: Mr. Patrick Briggs
3886 Van Buren Street
Hudsonville, Michigan 49426

BID FROM:

PROJECT: SECURITY SYSTEM RENOVATIONS
TECHNOLOGY BID #2708

INCLUDING Addendum No. _____ Dated _____
ADDENDA: Addendum No. _____ Dated _____

DUE: April 22, 2022, at 10:00am

BID FORM

BID TO: Hudsonville Public Schools
3886 Van Buren Street
Hudsonville, Michigan 49426

BID FROM: _____

PROJECT: SECURITY SYSTEM RENOVATIONS
TECHNOLOGY BID #2708

The undersigned, having familiarized themselves with all local conditions affecting the cost of work, and having examined the site and all applicable Bidding Documents herein, and herein referenced, including, but not limited to, all addenda issued thereto, hereby propose to furnish all labor, material, equipment, applicable taxes, and services required for proper completion of each of the following categories of this project for the sum of:

Bid Category _____ Title _____
_____ Dollars (\$ _____).

Said amount written above constituting the Base Bid

TAXES:

Bid sum includes all applicable taxes.

ALLOWANCES:

Base bid includes all applicable allowance cost(s) as set forth herein.

COST OF BONDS:

Bid sum includes cost of furnishing a Performance Bond and Labor and Material Payment Bond, each in the amount of one hundred percent (100%) of the bid.

ACKNOWLEDGEMENT OF ADDENDA:

The following addenda have been received, are hereby acknowledged, and their execution is included in both base bid and alternate bids herein.

Addendum No. _____ Dated _____ Addendum No. _____ Dated _____

ALTERNATES:

Based bid amount may be increased or decreased in accordance with each of the following alternate bids as may be selected, following procedures stated herein. Voluntary Alternates shown below are identified and described in detail on appropriate attachment(s) as referenced herein.

Mandatory Alternate A: 5 Yr Warranty _____

Mandatory Alternate B: Credentials Upgrade_____

Mandatory Alternate C: Existing Credential Readers Upgrade_____

Voluntary Alternate A: _____

Voluntary Alternate B: _____

Voluntary Alternate C: _____

Voluntary Alternate D: _____

Voluntary Alternate E: _____

PRINCIPAL SUBCONTRACTORS

As required herein, the following Subcontractors are proposed to be used for this project:

Legal Name:_____ Work Proposed_____

Legal Name:_____ Work Proposed_____

BID SECURITY:

Accompanying this Bid, as required herein, is a bid security in the form of Certified Check/Cashier's Check/Bidder's Bond in the amount of:

_____ Dollars (\$_____), payable to the Owner, which it is agreed, shall be retained as liquidated damages, not as a penalty, by the Owner, if the undersigned fails to execute the Contract in conformity with the form of Contract incorporated and referenced herein and fails to furnish specified bonds within ten (10) days after date of issuance of a Letter of Intent to the undersigned.

If awarded the Contract, the undersigned agrees to commence work within ten (10) calendar days after date of issuance of a Purchase Order, which shall be considered as the notice to proceed, and agrees to complete the work in accordance with the schedule herein.

FAMILIAL DISCLOSURE:

Accompanying this Bid, as required herein, is a legally executed and notarized Michigan Familial Disclosure Statement.

EXCEPTIONS:

Bidder takes no exception to terms, conditions, specifications and/or any other requirements herein unless expressly noted, and specifically identified as provided for herein on unaltered Contract Exception form accompanying this Bid.

SIGNATORY AUTHORITY:

The undersigned certifies they are an authorized agent of the bidding entity, and legally able to bind the bidding entity to the terms, conditions and responsibilities of this, and all referenced bid documents. Furthermore, the undersigned acknowledges an understanding that non-compliance of this authority or any other bidding requirements may result in forfeiture of bid security, dismissal of consideration of bid submitted, and/or personal liability against the signatory.

AGREEMENT:

The undersigned agree(s) to provide the post-bid information required within ten (10) days after notification of a Letter of Intent and to execute an agreement for work covered by this Bid on the Owner's standard Purchase Order for which terms and conditions are expanded to include all Bidding Documents and subsequent addenda issued thereto.

In submitting this bid, it is understood that the Owner reserves the right to reject any or all bids. It is further agreed that this bid is binding for a period of Ninety (90) days from the opening thereof.

Respectfully submitted,

Date: _____

Firm Name: _____

By: _____

Signed: _____

Title: _____

Official Address: _____

Telephone Number: _____

Fax Number: _____

Primary Contact Email Address: _____

(If Corporation, affix Seal)

Michigan Familial Relationship Disclosure Statement

In accordance with Section 1267 of Michigan Revised School Code this sworn and notarized statement of an authorized representative, discloses any familial relationship between the owner and/or any employee of the Bidder, and any member of the project Owner's governing Board(s) or Superintendent(s).

If any conflict of interest is discovered subsequent to submission of bid, written disclosure shall be submitted to the project Owner within seven (7) days of discovery. The project Owner reserves the right to immediately terminate any contract with Bidder upon notification of a conflict of interest. Upon such termination, the project Owner shall compensate Bidder only for the value of any goods or services provided to the Owner prior to such termination as determined by Designer.

(Check only one Box Below)

☐ It is hereby acknowledged and certified by Bidder that no familial relationship exists between the owner or any employee of the Bidder and any member of the project Owner's governing Board(s) or Superintendent(s).

☐ A familial relationship exists between the owner or an employee of the Bidder and a member of the project Owner's governing Board(s) or Superintendent(s). The person(s) and the relationship(s) are as follows:

Bidder

Board or Superintendent

_____	_____
_____	_____
_____	_____
_____	_____

Bidder Authorized Representative:

Bidder: _____

Representative's Signature: _____

Print or Type Name: _____

Representative's Title: _____

Subscribed and sworn this _____ day of _____, 2021.

In the County of _____ State of _____

By _____
Notary Public Signature

Seal or Stamp:

My commission expires on: _____

IRAN LINKED BUSINESS AFFIDAVIT

All Bids shall be accompanied by a sworn statement disclosing any Iran Linked Business relationship that exists within the owners, including its officers, directors, and employees.

The undersigned, owner or authorized officer of

_____ (bidder), pursuant to Michigan Public Act No. 517 of 2012, the "Iran Linked Business" requirement provided in the Hudsonville Public Schools Proposals hereby represents and warrants that the bidder, including its officers, directors and employees, is not an "Iran Linked Business" within the meaning of the applicable Public Act, and that in the event bidder is awarded a contract as a result of this RFB, the bidder will not become an "Iran Linked Business" at any time during the course of performing under the contract. The bidder further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than \$250,000.00 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the District investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on future Requests for Bids for three (3) years from the date that it is determined that the person has submitted the false certification.

There is not an "Iran Linked Business" that exists within the bidder and/or owner, officers, directors and employees.

Bidder:

[Company Name]

[Signature]

[Title]

Notary:

This instrument was acknowledged before me, a Notary Public in and for

_____ County, on this

_____ day of _____, 20____.

[Notary Public Signature]

My Commission expires: _____

Acting in the County of: _____

REFERENCES

Customer name: _____
Address: _____
City/State/Zip: _____
Contact name: _____
Contact title: _____
Phone: _____
E-mail: _____
Scope of project: _____

Date of completion: _____

Customer name: _____
Address: _____
City/State/Zip: _____
Contact name: _____
Contact title: _____
Phone: _____
E-mail: _____
Scope of project: _____

Date of completion: _____

Customer name: _____
Address: _____
City/State/Zip: _____
Contact name: _____
Contact title: _____
Phone: _____
E-mail: _____
Scope of project: _____

Date of completion: _____

CONTRACT EXCEPTIONS

Check one Box

☐ Bidder takes no exception to, and agrees to comply with all sections, terms, conditions and/or requirements of the Contract Documents.

☐ Bidder proposes the following exceptions to the Contract Documents:

<i>Paragraph Number</i>	<i>Explanation</i>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>
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NOTE:

Exception(s) to any bid sections, terms, conditions and/or requirements deemed excessive for any reason by the Owner and/or Designer may result in disqualification of Bid.

SCHEDULE OF VALUES/BID FORM

(Bidder may submit version of only this form with slight variation. All information in this form is required for each division/category of work being bid. Submit a completed separate form for each division/category of work clearly delineating on the form the division/category of work for that form. Form submitted must materially match below both in content and format. Electronic version of this form for each project section/division/category being bid is required with bid package as Microsoft Excel compatible spreadsheet on a USB drive. Failure to provide appropriate and complete SCHEDULE OF VALUES for each division/category of work, as determined by the Owner and/or Designer, may result in disqualification of Bid.)

Bidder: _____

Bid Division: 281300

[illegible]

END OF SECTION

SECTION 00 21 13
INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.01 OWNERSHIP

- A. Bidders prepare and provide bids without any cost to the Owner and/or Designer. Once opened, bids become the sole property of the Owner. Bidders have no claim to, or ownership of bids opened. Bids become subject to all legal statutes including, if applicable, United States and Michigan Freedom of Information Acts and related laws.

1.02 COMPLIANCE

- A. This document establishes the primary system(s) design configuration. The Bidder's bid response shall include all services, supplies, components, and equipment required to provide a complete turnkey system(s) which meets or exceeds all specifications for each given bid item being proposed.
- B. Owner prefers to enter into a contract with a single bidder for all materials for completion of this project but shall consider combinations of portions of bids from various bidders. The Owner reserves the right to award portions of the project to multiple bidders who will be required to cooperate with one another in order to complete the work.
- C. By their response, Bidders agree to comply with all sections, terms, conditions and/or requirements of the contract documents except as expressly noted, and specifically identified by paragraph number on the unaltered Contract Exceptions Bid Form. Exceptions to any bid sections, terms, conditions and/or requirements deemed excessive by the Owner and/or Bid Coordinator may disqualify Bid.
- D. In compliance with the Freedom of Information Act (FOIA), the Owner shall make bid documents available for public review after issuance of purchase order to the successful bidder/s.
- E. In connection with the execution of this Contract, Contractor and any Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, or national origin.
- F. Negligence in preparation, improper preparation, errors in, or omissions from Bids shall not relieve Bidder from fulfillment of any and all obligations and requirements of the Contract Documents.

- G. All Bid documents and worksheets must be completed in detail and submitted together on time.
- H. All documents constituting the entire present agreement shall be construed in accordance with and governed by the laws of the State of Michigan.
- I. Designer shall have authority for interpretation of Contract Documents. In the event terms, provisions or any other portion of the Contract Documents is/are in dispute, Designer shall have full and final authority to interpret the Contract Documents, and such interpretation shall be final and binding.
- J. In the event of a conflict between any terms or conditions in any of the documents comprising the entire present Agreement, the terms and conditions set forth in this document shall take precedence.

1.03 NOTICE AND RESPONSE

- A. Upon notification of Bidder being considered as a finalist, the Bidder shall provide to the Owner and Designer, within 48 hours, a current “Dunn and Bradstreet Supplier Evaluation Report” and other documentation as may be required of finalists herein and as requested by Owner and/or Bid Coordinator.
- B. Bidder shall provide timely response to all requests from Designer and/or Owner regarding clarification and/or elaboration concerning, but not limited to its Bid as may be deemed relevant by the Owner and/or Designer.

1.04 PROTECTION AND SAFETY

- A. Contractor shall continuously maintain adequate protection of all Work from damage and shall protect the Owner’s property from injury or loss arising in connection with the execution of the Contract. Contractor shall make good any such damage, injury, or loss, except such as may be directly caused by agents or employees of the Owner. The Contractor shall adequately protect adjacent property as required by law, by the Contract Documents, or as otherwise required, to cause no damage to them during the execution of the Contract. This requirement shall also apply to structures above and below ground as conditions of the site require.
- B. Contractor shall be solely responsible for, and have control over means, methods, techniques, sequences, and procedures for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the contract. Contractor shall take all necessary precautions for the safety of employees and visitors on the site of the Project and shall comply with applicable provisions of federal, state, and municipal safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and

progress of the Work, all necessary safeguards for the protection of workers and the community.

- C. Contractor shall vigorously defend any and all suits that may be brought against the Owner by any person and/or entity, whether in the employ of the Contractor or not, for damage to property, and/or injury or death to persons alleged or claimed to have been caused by or through the performance of work.

1.05 DRAWINGS DIAGRAMS AND ILLUSTRATIONS

- A. Drawings, Diagrams, and Illustrations are diagrammatic in nature and indicate general arrangement and nature of systems and work included.
- B. Floor plan drawings are provided to assist the contractor in preparing documentation and reports as required herein.

PART 2 - MATERIALS

2.01 VOLUNTARY ALTERNATES AND SUBSTITUTION OF SPECIFIED PRODUCTS

- A. This Request for Bid describes a particular implementation. All Bids must provide pricing on the “base bid” as described herein. Voluntary alternatives providing comparable functionality with significant cost reduction and/or performance enhancement may be proposed. Voluntary alternatives are encouraged but must be identified as “Voluntary Alternates” and detailed on unaltered Bid Forms contained herein. Voluntary Alternates may be further detailed and/or explained in attachments to the unaltered Bid Forms contained herein. Exceptions to the Request for Bid specifications must be clearly noted and explained for each Voluntary Alternate proposed.
- B. No substitutions of specified products may be made without specific prior authorization by Designer and Owner. Individual bid divisions herein contain particular information related to acceptable manufacturer and product requirements.
- C. Trade-in, equipment/license exchanges or other return allowances may be provided as a voluntary alternate. Trade-in, exchange, or other return equipment allowances shall not be included in base bid amount.

PART 3 - EXECUTION

3.01 EXAMINATION OF DOCUMENTS AND SITE

- A. Bidders shall carefully examine the Contract Documents and the construction site to obtain first-hand knowledge of existing conditions and requirements. No plea of ignorance of conditions that exist, or any other relevant matter

concerning work to be performed in the execution of work will be accepted as justification for failure to fulfill every detail of all requirements as described herein.

3.02 QUESTIONS, INTERPRETATIONS AND ADDENDA

- A. Any bidder finding discrepancies between Drawings, Specifications and/or Bid Documents, or be in doubt as to the exact meaning of any provision or detail shall notify the Designer at once, and before the deadline for Questions and Clarifications. The Designer may then, at their option, issue Addenda clarifying same. The Designer is not responsible for oral instructions, or Bidder's/Contractor's misinterpretations of Drawings, Specifications and/or Bid Documents.
- B. The Designer reserves the right to issue Addenda at any time up to thirty-six (36) hours prior to the scheduled bid opening. All such addenda shall become, upon issuance, an inseparable part of the Specification/Contract Documents. Each bidder shall incorporate within their bid all costs for items listed in any/all Addenda and shall acknowledge receipt and identifying number of each Addendum on the Bid Form and on the outside of the sealed bid container.
- C. Addenda will be forwarded to each bidder who has received a copy of the Bidding Documents and has submitted "Intent to Bid Form".

3.03 BID SECURITY, BONDS, AND INSURANCE

- A. Bid Security, Performance and Payment Bonds are required on this project.
 - 1. Bid security equal to five percent (5%) of the bid amount must accompany each bid in accordance with the Instruction to Bidders.
 - a. Bid security shall be either a Bid Bond issued by a company licensed in the State of Michigan to furnish bid security or Certified Check made payable to the Owner.
- B. The selected Contractor will be required to provide a performance bond and a payment bond each in an amount equal to one hundred percent (100%) of the bid amount including any accepted alternates at the Owner's discretion.
 - 1. The surety of the performance bond shall remain in effect until all acceptances and final contract close-out requirements herein have been executed by the Owner.
- C. Contractor shall provide, prior to beginning any work at the sites, certificate of insurance for delivery to Owner indicating all required insurance coverage is in force.

1. Workers' Compensation and Employer's Liability Insurance
 - a. Coverage A – Statutory
 - b. Coverage B - \$1,000,000 Per Accident
 2. Broad Form Comprehensive General Liability Insurance (including – Premises, Elevators, Contractor's Protective Liability, Contractual, Products & Completed Operations – including Broad Form Extensions).
 - a. Each Occurrence - \$1,000,000
 - b. General Aggregate - \$2,000,000
 - c. Products & Completed Operation Aggregate - \$2,000,000
 - d. Personal Injury & Advertising Injury - \$1,000,000
 - e. Fire Legal - \$100,000
 3. Sub-contractors Operations, Products – Completed Operations and Contractual Liabilities, plus such excess coverage as may be appropriate for the limits listed.
 4. Comprehensive Automobile Liability Insurance (owned, hired, and non-owned automobiles).
 - a. Bodily - \$1,000,000 each Person and \$1,000,000 each Occurrence
 - b. Property Damage - \$1,000,000
 5. Furnish Owner with Contingent Liability Insurance Policy with coverage and liability limits the same as for Public Liability Insurance specified herein. Designate on policy as assured, only the Owner.
 6. Furnish Owner with Contingent Property Damage Insurance Policy with coverage and liability limits the same as for Property Damage specified herein. Designate on policy as assured, only the Owner.
 7. Policies shall include notification clause requiring ninety (90) days written notice to Owner in the event of policy cancellation, expiration, non-renewal, coverage reduction or other material change.
 8. Contractor shall not commence work under the Contract until after all insurance required herein as been obtained and certificates for such are approved by Owner.
- D. All such bonds and/or insurance shall be issued by surety licensed by the State of Michigan and acceptable to the Owner.

1. Insurance certificate(s) shall be signed by insurance agent licensed in the state of Michigan or a representative of the insurance company.

E. Contractor agrees to indemnify and hold harmless the Owner and Designer, including their agents and employees, from and against all claims, damages, losses and expenses, including, but not limited to, attorney fees arising out of, or resulting from the performance of the work to the fullest extent allowed by law on a comparison basis of fault.

3.04 MODIFICATION AND WITHDRAWAL

A. Bids may be withdrawn and/or changed any time prior to the deadline for submission of bids. Bids may not be withdrawn or changed thereafter and shall be deemed a firm offer continuing for ninety (90) calendar days. Bids received after the deadline for submission will be returned unopened at the Owner's discretion.

B. Withdrawal of any Bid after the opening time without specific approval by Owner may result in forfeiture of required bid security by Bidder.

3.05 CODES, ORDINANCES, REGULATIONS AND RELATED

A. All labor and materials shall be furnished and installed in strict accordance with the latest applicable codes, ordinances and regulations of any governing body having jurisdiction over this project.

B. In the event the quality of labor and materials required by the Drawings and Specifications herein exceeds requirements of current applicable codes, ordinances and regulations, the Drawings and Specifications shall take precedence.

C. In the event the quality of labor and materials required by current applicable codes, ordinances and regulations having jurisdiction over this project exceeds that of the Drawings and Specifications herein, the applicable codes, ordinances and regulations shall take precedence.

D. The Contractor shall give all notices and comply with all codes, laws, ordinances, rules, and regulations of any authority having jurisdiction, which bears on the performance of its work. This compliance includes, but is not limited to, the Michigan School Safety Initiative (PA129, PA130, PA131 and PA138) if applicable to work being performed.

E. The Contractor shall pay for all licenses, permits, taxes, and fees required for this project; and shall comply with all federal, state, local and Owner's codes, laws, ordinances, regulations, and other requirements applicable to the work specified at no additional cost to the Owner. Contractor shall submit copies of all approved certificates and approvals to the Owner upon receipt.

3.06 SUB-CONTRACTOR AND MATERIAL SUPPLIER

- A. The successful Bidder shall submit to the Owner and Designer a complete list of all sub-contractors and all material suppliers proposed to engage on the work. Sub-contracts shall not be awarded until after they have been approved by the Designer and Owner.
- B. Finalist bidders may be required to submit additional details related to sub-contractors and suppliers within forty-eight (48) hours after the bid opening.
- C. Names of any principal sub-contractors must be listed on the Bid Form.
- D. All contracts made by the successful Bidder with Subcontractors shall be covered by the terms and conditions herein. The successful Bidder shall see to it that Subcontractors are fully informed in regard to these terms and conditions and shall bind all subcontractors to the same terms and conditions. Failure to do so will absolve the Owner from any liability for additional cost due to subcontractor claims for additional cost, time, or any claim(s) for additional cost by subcontractor(s).

3.07 BID RESPONSE FORMAT

- A. Bidder shall provide complete Bid copies in two formats as described herein.
 - 1. One (1) Hard copy format responses shall be in a bound tabulated format. Each response shall have tab indicators for each section.
 - 2. One (1) Electronic copy format responses shall be submitted on a USB Drive, readable by a standard Microsoft Windows 10 workstation. Electronic media shall contain separate folders to organize response documentation as described herein. Files submitted electronically shall be ***Adobe Acrobat*** "PDF" format (SCHEDULE OF VALUES is additionally required to be on the disk in the appropriate folder as an ***Excel*** compatible spreadsheet and as described herein).
- B. All Bid Response formats shall be clearly externally marked to include, but not be limited to:
 - 1. Bidder identification.
 - 2. Project Owner identification.
 - 3. Project name.
 - 4. Bid submission date.

- C. Bid Responses shall include an index containing copies/PDF of a complete index of documents comprising Bid Response. Responses shall include, but not be limited to the following tabbed/folder sections:
1. Section 1 – Forms, which shall contain copies/PDF files of all required and completed bid forms.
 - a. BID FORM
 - b. Michigan Familial Relationship Disclosure Statement
 - c. REFERENCES
 - d. CONTRACT EXCEPTIONS
 - e. SCHEDULE(s) OF VALUES
 - f. BID BOND
 2. Section 2 – Overview, which shall contain copies/PDF files of cover letter and/or executive overview.
 3. Section 3 – Submittals, which shall contain copies/PDF files of all required and voluntary submittals.
 4. Section 4 – Appendices, which shall contain copies/PDF files of other reference materials Bidder wishes to or is required to submit.

3.08 AWARD OF CONTRACT

- A. The material proposed to be used for the completion of work, and the competency, solvency and responsibility of bidders will receive due consideration before award of contract. In the reception of bids for this work, the Owner incurs no obligation to accept the lowest, or any bid submitted. The right to accept or reject any and all bids or portion thereof is reserved by the Owner. The Owner reserves the right to require testimonial, accounting or legal documents pertaining to the solvency of a Contractor, or any other decision factor the Owner deems appropriate, prior to award of contract.
- B. Owner reserves the right to select individual components from schedule of values independent of installation as may be determined in Owners best interest. Selected bidder may be required to install selected components provided by others.
- C. Issuance of a Purchase Order by Owner in response to a valid bid shall be a Notice to Proceed, and shall become part of, but not limited to, all terms, conditions, and requirements herein. Notice to Proceed shall have the full effect of contract award, and shall make all terms, conditions, requirements,

and responsibilities of Bidder binding upon issuance. Notice to Proceed, once issued, shall become an inseparable part of the contract documents herein, and constitute both Bidder and Owner's acceptance of contract.

3.09 TIME, SCHEDULES, PROJECT MANAGEMENT, MEETINGS AND PLANS

- A. Time is of the essence on this project. Award of contracts for this project will be contingent on the bidder's agreement to complete the work on or before the contract completion date stated herein.
- B. All Contractors will commence work in such a manner and at such a time as to expeditiously interface with the work of other Contractors and will pursue the project diligently to completion. All Contractors will work in a cooperative manner with Owner and other Contractors.
- C. Contractor shall appoint an overall Project Manager acceptable to Owner, with skills and experience deemed appropriate by the Owner for the scope and size of the project. Project Manager shall be responsible for the scheduling of all Contractor resources and attending all project meetings. Upon notification of Bidder being considered a finalist, the Bidder shall submit professional resume of proposed Project Manager within forty-eight (48) hours.
 - 1. Project meetings shall be conducted at Owner's selected and identified location weekly and at Owner's and/or Designer's discretion.
 - 2. Within five (5) days of Notice to Proceed (issuance of a Purchase Order by the Owner), Contractor's Project Manager shall provide to the Owner a critical flow path in the form of a "Gantt Chart" (or equivalent) indicating the proposed sequence of events and approximate beginning and completion dates in accordance with, compliance to, and coordinated with requirements herein.
 - 3. Changes of the Project Manager during the project shall not be acceptable without prior written approval from the Owner.
 - 4. It is the responsibility of the Contractor's Project Manager to schedule work, work out issues, ensure that all required products and services are delivered according to schedule and attend to any other matters required by the Owner in the interest of professional and timely completion of the project.
 - 5. The appointed Project Manager, or a designee acceptable to the Owner, shall be in attendance of all project meetings throughout the term of the project. Failure to do so may be considered a material breach of contract.
 - 6. After a ten (10) business day notice, the Owner reserves the right to request a new Project Manager, when it appears that, in the Owner's sole

discretion, the Project Manager is not fulfilling the full responsibilities of the position. Failure by Contractor to provide adequate Project Manager meeting requirements of the Owner, may result in Contract termination.

3.10 CHANGES IN THE WORK

- A. No changes in work with the effect of either increasing or decreasing in the project value shall be made without specific and prior authorization by the Owner and Designer.
- B. Owner, without invalidating the contract and without notice to any surety, may at any time order extra work or make changes by altering, adding to or deducting from the work, the Contract Sum being adjusted accordingly. All such work shall be authorized by a written Change Order approved by Owner and Contract Designer. Upon receipt of such an order Contractor shall promptly proceed with the work involved. All such work shall be executed under the conditions of the original Contract. Owner authorized change order(s) may be issued at any time prior to Contract close out.
- C. When so directed, Contractor shall promptly submit an itemized estimate and a unit price for performing or deleting such extra or changed work as may be contemplated. Any extensions or reductions of the contract time associated with extra or changed work shall be identified at the time Contractor submits such documentation.
- D. At the Owner's discretion, adjustments in the Contract Sum shall be determined by one or more of the following methods:
 - 1. By mutual acceptance of a lump sum cost, including overhead and profit, itemized and supported by sufficient substantiating data to permit evaluation.
 - 2. By unit prices stated in the Contract Documents including, but not limited to, Schedule of Values.
 - 3. By unit prices mutually agreed upon.

3.11 PAYMENT REQUESTS AND PAYMENTS

- A. Contractor's invoices shall be submitted monthly in correlation with the Project Schedule indicating percentage of work completed.
- B. All contract and change order invoices shall be sent directly to Contract Designer.
- C. A 10% retainage shall be held back on all payment requests, including, but not limited to hardware, software, change orders and services, until final

completion and close out of the project or project phase as determined by Owner and Designer.

- D. Contractors are required to submit all invoices on approved AIA Payment Request Forms or other billing format pre-approved by Contract Designer. Each AIA Payment Request Form shall be accompanied by a properly completed, executed, and notarized Waiver of Lien which shall be in a format and contain verbiage approved by Owner.
- E. The Contract Designer and Owner shall process payment requests on a monthly schedule and in accordance with their respective established processes and procedures. Payments will be made by the Owner based only on AIA Request Forms having been previously certified, audited and approved by Contract Designer and accompanied by acceptable Waiver of Lien.

END OF SECTION

SECTION 00 65 00
CONTRACT CLOSE OUT

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Provide an orderly and efficient transfer of the completed work to Owner.
- B. Details affecting work of this Section includes but is not limited to all other Sections herein and all related Contract Documents.
- C. Activities relative to Contract close-out are described in, but not limited to, this and other Sections of this document.

1.02 SUBSTANTIAL COMPLETION

- A. "Substantial Completion" shall be defined as:
 - 1. All responsibilities of Contractor for all provisions and requirements of all divisions and sections of complete Contract herein, and as amended, are properly and fully completed, or properly, accurately, and acceptably provisioned for.
 - 2. All systems, equipment, facilities, services, programming and/or components required by all divisions and sections of complete Contract are fully operational, acceptable, and useful to the Owner for their intended purposes.
- B. Prior to requesting inspection by Designer to certify Substantial Completion, Contractor shall use adequate means to assure the Work is completed in accordance with the specified requirements and is ready for such inspection.

PART 2 - MATERIALS

2.01 NOT USED FOR THIS SECTION

PART 3 - EXECUTION

3.01 PROCEDURES

- A. Contractor shall submit a written request to Designer indicating they have achieved Substantial Completion of Work.
- B. Within a reasonable time after receipt of the request, Designer will inspect Work to determine status of completion.
- C. Should Designer determine the Work is not substantially complete:

1. Designer promptly will so notify Contractor, in writing giving reasons therefore and providing sufficient details to allow Contractor to make corrective actions.
2. Contractor shall then expeditiously remedy the deficiencies and notify Designer in writing when ready for re-inspection.
3. Designer will re-inspect the Work.
4. Excessive re-inspections of Work may result in fees being assessed Contractor.

D. Should Designer concur the Work is substantially complete:

1. Designer will prepare a letter of Substantial Completion.
2. Designer will submit the letter to Owner and Contractor.
3. Contract shall be deemed "Closed Out" for retainage purposes.
4. Final Acceptance of the system shall be deemed complete.

END OF SECTION

SECTION 28 13 00
BUILDING ACCESS SYSTEM

PART 1 - GENERAL

1.01 DESCRIPTION OF PROJECT

- A. Work described in this specification section pertains to upgrade or replacement of organization wide Vanderbilt access control system installed over multiple years. Current available system documentation is provided in relevant appendices contained herein.
- B. The Owner desires that a single contractor be engaged to, over time, standardize the installation, connectivity, and workmanship across the system in the district. It is expected this effort is likely to involve new software systems based on the bids received in this process. And it almost certainly will include at a minimum, upgrades to the most current versions of all system licensing currently deployed through the effort.
- C. Then Owner intends to invest only in open system platforms moving forward that will allow for support of standardized hardware across the organization. Manufacturer specific and/or proprietary hardware will not be favorably considered in the evaluation of bids for this project.
- D. The Owner has numerous existing access-controlled doors throughout the district. It is the intent of this process to update the existing panels with open system platform hardware to integrate with the new software while reusing the existing cabling, readers, and door hardware. The Owner is also interested in evaluating costs to upgrade all locations with credential readers which are capable of the most current security and credential compatibility features.
- E. The Owner has identified additional existing doors to be added to the new system which will require, but not limited to, new door panel, cabling, card reader, and door hardware.
- F. The Owner has contracted for construction of a new building and multiple additions to existing facilities that will require expansion of the current access control system. Hardware for these systems has been contracted for in the construction budgets of the work, but no software or licensing has been provided for in those contracts. It is the intent of this process to select a consistent contractor for access controls that will provide for final licensing, connection, and configuration of these system expansions as well as integration into a system migration plan.
- G. Owner intends to change all facilities to the new open industry standard platform. The selected Contractor is expected to work cooperatively with

Owner and Designer to implement strategies for successful operation of a “split” system during a period of transition.

- H. Contractor shall advise, coordinate, and work cooperatively with Owner representatives and/or owner’s designee related to any installation or special security provisions.
- I. The Contractor shall design, engineer, configure, supply, connect, test, document, train Owner representatives and warrant a fully operational and compliant system, complete and with full functionality as specified herein.
- J. Contractor shall coordinate their installation with other contractors, Designer and the Owner as is appropriate.

1.02 WARRANTY

- A. Complete installation shall be free from defect and/or failure for a period of three (3) years. Any replacement, upgrade, or fix, including labor for any non-conforming or non-operational part of the system shall be fixed and/or replaced at no cost to the Owner.

1. **REQUIRED ALTERNATE A – 5 YEAR WARRANTY**

- a. Bidder shall provide alternate, as provided for in bid form, for a five (5) year warranty in lieu of base bid warranty term as provided for herein.
- B. Manufacturer’s warranty shall be provided for all components of the system.
 - 1. Any documents and/or submittals required by individual manufacturers for compliance with the standard and/or applicable extended warranty programs shall be provided and submitted for approval by the Contractor.
 - 2. Contractor shall submit all documents, apply for warranty or extended warranty certification, and provide a Certificate of Warranty or Extended Warranty as may be applicable from the manufacturer prior to project closeout.
- C. On site services provided under the warranty shall be performed by personnel or representatives of Contractor as herein defined and located within physical proximity to provide response levels deemed acceptable to Owner.
- D. Contractor shall provide the following response times for all malfunctioning equipment:
 - 1. Eight (8) hours or less for matters that render twenty percent (20%) or more of the system unable to maintain normal functionality.

2. Two (2) business days for matters not meeting the above criteria.
 3. Response time shall be measured from the time Contractor is notified by Owner to the time work is begun to resolve the matter.
- E. To facilitate continued satisfactory operation during warranty period, Contractor shall provide the following warranty services at least once each year during the warranty term:
1. Review of all central server and/or processor logs and files to address errors and/or system anomalies to ensure continued compliance with manufacturer recommended best practices.
 2. Application of latest versions of all applicable manufacturer firmware, software upgrades/updates and any manufacture recommended patches and/or system fixes across the entire system, including, but not limited to all hardware components as well as server(s), to maintain the system in the most current configuration recommended by manufacturers.
 3. Ensure all Owner documentation and record documents are updated with current and accurate information including, but not limited to equipment/material locations, specific system component hardware models, serial numbers, Software and firmware versions, installation locations, settings, compliance level with district standards of installation, configuration, workmanship, and Server configuration parameters.
 4. Functional testing of each system component across the entire enterprise system to ensure all components are functional at manufacturer documented levels.
- F. Bidder shall provide current annual maintenance contract pricing for recommended maintenance programs for all equipment following the specified and included period as a Voluntary Alternate. This information will be considered by Owner and Designer as part of the bid evaluation process.
- G. System Warranty shall commence on date of substantial completion as certified by Designer and provided for herein. Delivery to work site of materials, physical removal from packaging, issuance of Contractor documents including, but not limited to invoices and/or packing slips, or any event or documentation, not specifically provided for herein, shall have no effect on Warranty or System Acceptance by Owner and/or Designer.

1.03 STORAGE OF MATERIALS

- A. All materials shall be secured when not in use by the Contractor.
- B. It shall be the Contractor's responsibility to secure all equipment including material to be installed as part of the contract. No changes shall be made to the

contract due to loss or theft of equipment and/or materials not officially accepted by the Owner.

- C. Formal receipt of the materials shall not be completed by the Owner until completion of project closeout. The Contractor shall be responsible for all equipment until time of closeout as provided for herein.

1.04 SUBMITTALS

- A. Submittals shall consist of, but not be limited to, technical cut sheets and detailed information pamphlets on all components of the system to be installed. All cut sheets and submittals shall be distinctly marked to highlight the actual part number of the item being submitted for approval with Bid Proposals.
- B. Shop drawings and diagrams shall be submitted by Bidder for approval by Designer with Bid Proposals.
 - 1. Shop drawings and diagrams shall show all data relating to structural, electrical, wiring, cross connect, interconnect, equipment arrangement/layout, and any other information deemed significant by the Designer.
 - 2. No work constituting final installation shall be commenced until after approval of shop drawings by Designer.
- C. Contractor shall provide proof of manufacturer support by photocopy of certification and letter of support from major component manufacturers for this specific project with Bid Proposals.
- D. Equipment or material installed for this project that does not have an approved submittal associated with it, will be removed, and replaced with acceptable equipment or material as defined by the Designer. All replacement costs including, but not limited to material and labor, shall be the sole responsibility of the Contractor.
 - 1. The Owner and/or Designer may notify Contractor of any offending situations under this provision allowing Contractor up to forty-eight (48) hours to correct the situation prior to taking other corrective action.
 - 2. The Owner reserves the right to replace unapproved materials and deduct the costs of doing so as defined herein from any amounts that may be due, or become due Contractor.
- E. The Contractor shall submit within ten (10) calendar days after the Notice to Proceed, a schedule that reflects the sequence of activities of the contractor's approach to the execution of and completion of the work. The schedule shall be broken into work areas to provide for a clear identification of the planned

progress of the work. Included in the schedule will be a list of tasks with list of deliverables and the percentage of work completed. This schedule shall coincide with progress payments applications dates and projected amounts. All durations shown will be in working days. The timeframe described in the Contractor's Schedule shall represent the Contractor's plan for organizing, directing, managing, controlling, staffing, and executing the work required by the Contract Documents. Owner will rely on such schedules to coordinate and otherwise plan related work of Owner personnel, other separate contractors, or the Owner's routine daily work.

1.05 REFERENCE SPECIFICATIONS

- A. All work, products, and materials shall conform with the following standards as applicable for the intended use:
 - 1. IEEE
 - 2. EIA/TIA Commercial and Administration Standards
 - 3. NEC
 - 4. FCC – All Applicable Rules and Regulations
 - 5. UL
 - 6. MIOSHA Safety Standards

1.06 CONTRACTOR

- A. The Contractor shall accept complete responsibility for the installation, certification, and support of the system. Contractor shall be an authorized vendor of all major components.
- B. All work shall be performed and supervised by Project Managers, Engineers and/or Technicians who are qualified to install system and perform related tests as recommended by the manufacturer and in accordance with the manufacturer's best practices and methods.
- C. Contractor shall comply with Owner's policies related to background checks for any personnel who work on the project.
- D. Project Managers, Engineers and Technicians employed on this project shall be properly and fully trained and qualified by the manufacturer on the installation and testing of the equipment and systems to be installed.
- E. The Contractor shall have a proven track record in security system configuration and installation. This must be shown by the inclusion of references of at least three (3) projects involving the installation of similar

systems completed by the Contractor in the prior two (2) years on unaltered forms with the sealed Bid Proposal as provided herein. Bid Proposal Form(s) may be duplicated as required in order to provide adequate space to list required number of reference installations for each division Bidder is responding to.

1.07 CONTRACT TERM PRICING

- A. Owner intends to work exclusively with awarded Contractor during the contract warranty period related to additions, changes and/or system modifications. All such work that is not applicable to the warranty specified herein shall be conducted at rates and pricing consistent with that provided for and documented herein.
 - 1. Such work shall be conducted in a professional and expeditious manner consistent with best practices and industry norms.
 - 2. Hourly rates, including travel charges, shall remain fixed for the term of the contract except as provided for herein.
- B. During the contract term, Contractor shall provide a consistent cost-plus model of fixed pricing for the Contract duration, with certain audit provisions, to Owner for all materials and products during the implementation and through the Warranty term of this project.
 - 1. Alternatively, Owner may consider a discount from current published US List prices to Owner for all materials and products from the same product family, or replacement product family, as may be introduced by Manufacturer during the implementation and through the Warranty term of this project. Bidders are encouraged to propose such pricing options and strategies in their bid documents for Owner evaluation.
 - 2. Owner may direct at its sole discretion, Designer to conduct a spot audit of Contractor pricing to verify compliance with the agreed upon mark-up or discount models of pricing. Contractor shall fully and completely cooperate with Designer by providing all requested materials, including, but not limited to vendor invoices, vendor contract documents and other related documentation deemed relevant by Designer.
- C. Owner reserves the right, with input from Designer and Contractor, to select other model(s) of materials, products, and/or equipment at their sole discretion, at any point during the contract term. Any such model change, being from the same or replacement product family, shall be accommodated by Contractor and provided at the same pricing strategy as similar and/or prior models as proposed under this contract.
- D. Owner may, or may not, elect to purchase individual integrated door hardware components, as may be applicable to system expansion from Contractor or

other related door vendors. Contractor shall fully cooperate with Owner decisions for related product sourcing and provide all integration services for such products as is appropriate for a fully functioning and operational system to meet the Owner's needs.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers (In alphabetical order):

1. Allegion
 - a. Credentials
2. ASSA ABLOY
 - a. Door Interface Hardware
3. Avigilon
 - a. Central Management Software
4. Bosch
 - a. REX, Door Position Switch, Door Cord
5. General Electric
 - a. REX, Door Position Switch, Door Cord
6. HES
 - a. Integrated Door Hardware
7. HID / Mercury
 - a. Control Panel, Credential Reader, Credentials
8. Honeywell
 - a. REX, Door Position Switch, Door Cord
9. Lenel / S2
 - a. S2 Central Management Software
10. Trine

a. Door Interface Hardware

11. Or equal

- 2.02 Supply most current version of all products provided.
- A. Manufacturer shall have five (5) years of experience and history manufacturing similar products to those specified.
 - B. Proposed components shall have been field tested and proven in actual use.
 - C. Prior and/or old versions of products, unless specifically approved and documented by Designer and/or Owner shall not be acceptable.
 - D. In cases where a newer version of hardware or software is available at the time of installation, Contractor shall request clarification from Designer on which version is to be used.
- 2.03 Furnish only new, first-class quality materials and equipment.
- 2.04 System shall be comprised of interoperable components including, but not limited to, controller, credential sensors and management software integrated into a common working system.
- 2.05 System administrator shall be capable of complete system back-up and full system restoration from a previously saved configuration.
- 2.06 System shall be of a distributed processing design with a fully distributed database including, but not limited to time, date, valid codes, access levels and related data so that each Controller makes access control decisions for that location. If communications with central station equipment is lost, all transactions shall be buffered until the restoration of a connection to the central station.
- 2.07 In the event of a power failure, complete system shall automatically re-initialize and “become active” to the last configuration in use with no human intervention.
- 2.08 Contractor shall be responsible for final and working system. Use of existing components and materials provided by others during new construction shall be integral to system configuration and cost-effective installation. Bidders are encouraged to use all compatible and working components in system solution. See schedule(s) and reference files for additional detail.
- 2.09 CENTRAL MANAGEMENT SOFTWARE
- A. Central management software shall meet or exceed the following:
 - 1. Accessed natively from a standard Apple Macintosh Personal Computer provided by Owner. Addition of other OS based access to platform will

not be favorably considered. Owner preference will be to provide a virtual server on existing Hyper Converged based system.

2. Capable of being fully administered from any web browser attached to the network to view alarm notifications.
3. Administration access shall be protected by unique and secure log on (User ID and Password).
4. Update industry standard controller(s) in real-time for changes including, but not limited to adding and deleting access levels, adding, and deleting card holders and deactivating card holders.
5. Provide badge creation enabling Owner to create customized photo identification credentials. System shall be compatible with both real-time video camera to capture images, or with images taken with a standard digital camera and saved in a standard picture format.
6. Provide communication to credential readers, each with individual associated door interface hardware. See associated schedules herein.
7. System reporting shall include, but not be limited to:
 - a. Access through entrance doors.
 - b. Attempted access per entrance.
 - c. Propped and unsecured door alerting.
8. Systems providing Microsoft Active Directory integration will be favorably considered.
9. System shall provide for Owner definition of access groups, schedules and door groups that can be combined by Owner's system administrator into combinations of access policies for users.
10. All licensing shall be provided for in base bids for complete and functional system as specified herein.
11. Systems providing integration with Video Monitoring System and/or Intrusion Detection System as specified herein shall be favorably considered.
 - a. Owner's existing VMS is exacqVision
 - b. The Owner does not currently deploy a standard Intrusion Detection System across all facilities.

2.10 CONTROLLERS

- A. In general, Contractor shall provide and install the appropriate number of controllers and I/O monitoring/control expansion interfaces as needed to handle the number of card readers, locking devices, door status devices, and alarm inputs provided for herein and in the included appendices or a fully integrated, functional, and operational system.
 - 1. Mercury based hardware to support multiple software vendor's systems. Proprietary hardware will not be favorably considered.
 - 2. Mercury based hardware flashed with manufacturer's supported firmware may be considered.
- B. Where existing panel-based Controllers (Replace Existing) are in use, Contractor shall provide compliant Controllers that include, but are not be limited to:
 - 1. Support multiple doors and other access points from a single centralized panel cabinet location.
 - 2. Support a wide range of reader technologies, including OSDP, Wiegand, NFC, Bluetooth, and biometric.
 - 3. Communicate with the host via on-board 10/100/1000 Ethernet port and support TLS encryption as a minimum-security implementation.
 - 4. On-board regulator allows 12 VDC reader power from 24 VDC power source.
 - 5. Product shall be Mercury LP / MR Series
- C. Where new doors are added to the system, Contractor shall provide PoE+ based IP Door Controller(s) as needed (Additional Doors) which shall provide, but not be limited to:
 - 1. Support a wide range of reader technologies, including OSDP, Wiegand, NFC, Bluetooth, and biometric.
 - 2. 802.3at compliant 10/100/1000 PoE+ Ethernet port.
 - 3. Two (2) inputs for credential readers.
 - 4. Two (2) outputs for door interface hardware.
 - 5. Door controllers shall be installed above/behind the finished surfaces on the secure side of the opening and be enclosed in an appropriate tamper proof enclosure.
 - 6. Product shall be Mercury LP series

2.11 CREDENTIALS

A. Contractor shall supply seven hundred (700) new credentials. Credentials shall meet or exceed the following requirements:

1. 125 kHz, 26-bit clamshell proximity access card.
2. Credentials shall be Schlage (Allegion Brand) Part #7410, or equal.

B. REQUIRED ALTERNATE B – CREDENTIALS UPGRADE

1. Bidders shall provide alternate cost for quantity of two thousand (2000) HID Seos/MIFARE Classic 5806 credentials, or equal.

2.12 CREDENTIAL READERS

A. New Credential Readers (For Additional Doors) shall be provided that meet or exceed the following requirements:

1. Compatible with industry standard 125 kHz proximity and 13.56 MHz contactless technologies.
2. Read Schlage (Allegion Brand) Part #7410 Proximity HID Credentials.
3. DC powered from associated Controller.
4. Response time for passage requests of 800ms.
5. Sealed weatherproof shell enclosure rated for outdoor operation.
6. Surface mounted on exterior or interior surface of structure as indicated herein.
7. LED or other type of visual indicator indicating request status.
8. Audible status indicator upon user prompt.
9. Range of four inches (4”).
10. Native OSDP secure channel compatibility.
11. IP65 Rating

B. Product shall be HID Signo Reader Model 20, or equal.

C. See associated schedule(s) herein for location and quantity.

D. REQUIRED ALTERNATE C – EXISTING CREDENTIAL READERS UPGRADE

1. Bidders shall provide alternate cost to supply and install upgraded credential readers for all existing reader locations. Upgraded credential reader shall meet or exceed the requirements herein. Refer to relevant schedules and appendices herein for locations and quantities of existing reader hardware.

4.02 DOOR INTERFACE HARDWARE (ELECTRIC STRIKE)

A. Door Interface Hardware shall meet or exceed the following:

1. End-of-line resistors terminated at the controller to protect against surges generated by activation of electric door strikes.
2. Preference will be given to configurations that integrate Door interface hardware Devices (electric strike) with PoE+ based door controllers and eliminate the necessity for additional power sources.
3. Door Interface Hardware shall be Low Current Draw devices from Trine 4000 Series, Trine EN Series, or Equal.
4. Appropriate Door Interface Hardware model and type shall match and be compatible with existing door hardware types and conditions.

B. In locations where Door Interface Hardware is to be installed on a removable mullion, contractor shall provide adequate slack cable and a secure and durable, “quick disconnect point” on power cable for easy and damage free removal and replacement of mullion.

C. Contractor shall provide and install an armored door cord for each door with a continuous hinge that requires power transfer from frame to door.

1. Armored door cord shall be Alarm Controls DL series, or equal.

D. See associated schedule(s) herein for location and quantity.

4.03 REQUEST TO EXIT (REX) DEVICES

A. Each door controlled by the system shall be equipped with PIR REX device.

B. Devices not included integral to door hardware shall be mounted on the overhead door casing.

C. Devices shall provide three (3) beam configurations and include appropriate contact closure for system signaling.

- D. Devices shall operate on low DC power (PoE+ friendly). Preference will be given to configurations that integrate REX Devices with PoE+ based door controllers and eliminate the necessity for additional power sources.

4.04 DOOR POSITION SWITCH (DPS)

- A. Where new door controllers are to be provided, each door shall be equipped with magnetic DPS and shall be integrated into the door controller installation by Contractor.
- B. DPS devices shall be mounted internally to the frame and door wherever possible and shall not be surface mounted except for in rare cases without alternative “hidden” mounting options being available and must be approved by the Designer and Owner on a case by case basis.

4.05 COMPONENT INTERCONNECTION

- A. All wiring not installed in conduit shall be plenum type cable and shall be so identified with continuous marking.
- B. Wiring color shall remain the same throughout the system. Colors used for coding shall be as directed by the system manufacturer, Owner, and Designer.
- C. Wire shall be copper.

4.06 ALLOWANCES

- A. Contractor shall include allowances for equipment and/or other contract service reimbursements as required below in base bid lump sum amount(s). Equipment and/or contract services shall be provided and sourced at Owner’s discretion and convenience with full cooperation by Contractor and paid for from successful bidder’s contract in the amount(s) provided for herein. Any allowance amount proving to be excessive for the intended equipment and/or contract services shall be credited to the Owner against contract payment requests.
 - 1. Allowance shall be made in the amount of \$90,000.00 for contract services related to supply, installation and connection of related Owner provided hardware.

PART 5 - EXECUTION

5.01 PREPARATION

- A. Contractor shall conduct detailed walk-through examination with Designer and Owner verifying equipment and material locations as well as mounting and placement requirements prior to commencement of other installation activities.

- B. Contractor shall insure all submittals and shop drawings have been provided to, and approval has been obtained from Designer prior to commencement of any final installation activities.

5.02 INSTALLATION

- A. Contractor shall be familiar with the environment where work will be done as specified herein and make every reasonable effort to minimize interference with Owner's or other contractor's activities.
- B. Work Areas shall be cleaned at the end of each day. All debris shall be cleared, removed, and disposed of in an approved container for the site. All equipment and tools shall be removed from common areas and stored in approved, secure storage locations. Any work that may impede the general use of the space and/or other contractor's work and cannot be removed shall be flagged and cordoned off by the Contractor prior to their departure.
- C. All equipment and materials shall be installed in a neat and workmanlike manner. Best practices installation principles shall be used throughout the project.
- D. The Contractor shall furnish, set in place, and install all equipment necessary for a fully compliant and operational system as specified herein. The installation process includes, but is not limited to the following:
 - 1. Inventory receipt of all components and equipment.
 - 2. Storage of all equipment and components until such time those items are installed according to the specifications.
 - 3. Transport equipment to the Owner's installation location(s).
 - 4. Assemble, install, configure, and test all equipment and components, maintaining accurate inventory records and status documents and discarding packaging.
 - 5. Collect all information necessary to accurately program all system devices to the Owner's intended use and need.
 - 6. Label all system devices as may be appropriate and required by Owner and Designer.
 - 7. Complete end user and system administrator training programs as specified herein.
 - 8. Work shall be performed to meet local codes and industry standards including proper grounding and bonding of installed equipment.

9. Existing Locations:

- a. Replace existing controller panel with new Mercury based control panel.
- b. Reuse existing, cabling, readers, power supplies, and door strikes, and any other connected equipment.
- c. Test to ensure that all components are functioning properly.
- d. Doors shall maintain full current functionality unless otherwise directed by Owner or Owner's representative.

10. Additional Door Upgrade Locations:

- a. New door panel shall be mounted in accessible ceiling above the secure side of the door location.
- b. Connect door controller to Owner's PoE+ data network using Contractor supplied patch cords at both ends of tested and certified cable drop supplied by others, and verify connection to Central Management Software.
- c. Test to ensure that all components are functioning and configured properly.
 - 1. Doors shall be configured to remain locked until a valid credential is presented.
 - 2. Electric strikes shall be unlocked when energized.
 - 3. Door position switches shall report door status to central management software.
 - 4. REX shall be installed to provide optimal coverage for capturing valid exits and reduce or eliminate false readings.
- d. Where possible, all cabling shall be installed inside walls, doors, door frames, and mullions. Provide appropriate metallic channels for cables in locations where it is not possible to install otherwise. There shall be no exposed cabling.
- e. All devices shall be securely attached to building structure using manufacturer's installation recommendations and industry best practices.

11. New Construction Locations:

- a. Coordinate with Owner's Construction Manager, construction trades and hardware suppliers to ensure functionality of doors provided for herein and as described in respective construction specification documents.
- b. Provide licensing and central management system configuration(s) for all devices provided for herein and as described in respective construction specification documents.

E. Worksites include the following:

1. 5th-6th Grade Facility
8175 36th Ave.
Hudsonville, Michigan 49426
2. Administration Building
3886 Van Buren St
Hudsonville, Michigan 49426
3. Alward Elementary
3811 Port Sheldon Street
Hudsonville, Michigan 49426
4. Baldwin Street Middle School
3835 Baldwin Street
Hudsonville, Michigan 49426
5. Bauer Elementary
8136 48th Avenue
Hudsonville, Michigan 49426
6. Central Kitchen
5066 40th Avenue
Hudsonville, Michigan 49426
7. Forest Grove Elementary
1645 32nd Avenue
Hudsonville, Michigan 49426
8. Freshman Campus
3370 Allen Street
Hudsonville, Michigan 49426
9. Georgetown Elementary
3909 Baldwin Street
Hudsonville, Michigan 49426

10. Hudsonville Early Childhood Center
5535 School Avenue
Hudsonville, Michigan 49426
 11. Hudsonville High School
5037 32nd Avenue
Hudsonville, Michigan 49426
 12. Jamestown Lower Elementary
2522 Greely Street
Hudsonville, Michigan 49426
 13. Jamestown Upper Elementary
3291 Lincoln Ct.
Hudsonville, Michigan 49426
 14. Park Elementary
5525 Park Avenue
Hudsonville, Michigan 49426
 15. Riley Street Middle School
2745 Riley Street
Hudsonville, Michigan 49426
 16. South Elementary School
4900 40th Ave
Hudsonville, Michigan 49426
- F. It shall be the responsibility of the Contractor to repair or replace any damage done to the structure of finishes in the building by the Contractor. If in the course of work, Contractor damages, marks, or misplaces any surfaces or access plates/panels the Contractor shall repair and/or replace the surface, plate, or panel to the original condition.
1. Final determination as to the damage condition and/or repair/replacement fitness of any surface, plate or panel shall be the sole responsibility of the Designer.
 2. The building and work area shall be returned to its original condition prior to final sign off of the project.
- G. Following installation and system “turn-up”, but prior to final acceptance of the system, Contractor shall conduct follow-up interviews with Owner identified administrators and staff to review system functionality, suitability and confirm feature and program fitness for Owner applications.
1. Follow-up interviews shall be fully documented by Contractor and submitted to Owner for approval.

5.03 TESTING

- A. In an effort to ensure a smooth “turn-up” of the new system Contractor shall submit to a thorough testing process as defined herein prior to cut-over.
- B. Prior to requesting testing by Designer, the Contractor shall use adequate means to assure the Work is completed in accordance with the specified requirements, meets the owner’s specific application requirements and is ready for functionality and integrity testing.
- C. Testing Procedures
 - 1. Prior to system “turn-up”, Contractor shall submit a written request to Designer indicating they have completed full and final configuration of the system and are ready to have system integrity and functionality tested.
 - 2. Within reasonable time after receipt of request, Designer will provide a test schedule and coordinate testing date(s) with Owner and Contractor.
 - 3. Should Designer determine the Work is not acceptably configured or not of adequate integrity:
 - a. Designer promptly will so notify Contractor, giving reasons therefore and providing sufficient details to allow Contractor to make corrective actions.
 - b. Contractor shall then expeditiously remedy the deficiencies and notify Designer in writing when ready for re-testing.
 - c. Designer will schedule re-test of the Work.
 - d. Excessive re-testing of Work may result in fees being assessed Contractor.
 - 4. Should Designer and Owner concur the Work is configured properly and system integrity is as required:
 - a. Designer will review Contractors detailed “turn-up” plan, and upon finding it acceptable issue a memorandum of Testing Completion to Owner and Contractor after which system “turn-up” can proceed.

5.04 DOCUMENTATION

- A. Contractor shall, throughout the completion of the project, provide Owner a file storage system that shall include all necessary equipment, including if reasonably required, file drawers, folders, dividers, etcetera, to contain all as-built drawings, owner’s manuals of all equipment installed, warranty and maintenance information and other information the Contractor, Designer

and/or Owner deem necessary. Documentation shall also be provided in a digital format in file formats and on media as specified by Owner and/or Designer.

- B. Contractor shall be responsible for providing thorough, timely documentation on all hardware, software. Documentation shall include, but not be limited to:
1. Equipment description.
 2. Equipment make.
 3. Model number.
 4. Software release.
 5. Date installed.
 6. Manufacturer's warranty.
 7. Maintenance contract terms.
 8. Verification of maintenance contract engagement.
 9. Telephone numbers for service and support.
 10. Detailed technical support and service procedure instructions.
 11. All product (hardware and software) manuals and manufacturer supplied documentation, including, but not limited to owner manuals, system administrator manuals and configuration guides. Where number of duplicate copies for particular manual or documentation item could be reasonably considered excessive, Contractor shall request direction from Owner and Designer.
 12. Photocopy of original invoice listing make and model for all components and equipment from individual manufacturer(s), distribution source(s), or authorized agent(s) to establish manufacturer warranty start date for potential use after end of contract warranty provisions.
 13. CAD as built drawings for each building.
 14. System Configuration Report.
 15. Complete inventory of installed hardware and system software. Hardware inventory shall include, but not be limited to, model numbers, serial number, physical installation location and software/firmware options.

5.05 TRAINING

- A. Training shall be conducted at the Owner's discretion and at times and places convenient to Owner personnel. Prior to any training being conducted, Contractor shall provide Owner and Designer with detailed training syllabus and schedule for proposed training event. Compliant syllabus and schedule shall be provided at least ninety-six 96 hours in advance. Owner reserves the right to postpone training if syllabus and/or schedule submitted are deemed inadequate. Training shall not be conducted until such time a syllabus and schedule submitted by Contractor are found to be acceptable to Owner.
- B. Contractor shall provide training for the Owner designated system operators(s). Owner shall designate up to six (6) system operators to be trained. Training shall be a minimum of one (1), four (4) hour session(s) in length, at the convenience of the Owner personnel, and of sufficient duration to satisfactorily complete training on all system administration functions including, but not limited to:
 - 1. Basic credential and user adds, changes, and management.
 - 2. Creation of, review of, communication of and response to system alerts.
 - 3. Review of system alerts, logs and monitoring of configuration parameters including, but not limited to, configuration changes and device status.
- C. Contractor shall provide training for the Owner designated system administrator(s). Owner shall designate up to four (4) administrators to be trained. Training shall be a minimum of one (1), four (4) hour session(s) in length, at the convenience of the Owner personnel, and of sufficient duration to satisfactorily complete training on all system administration functions including, but not limited to:
 - 1. Basic trouble shooting of the installed system and components including diagnostic and problem resolution actions.
 - 2. System back-up and restore functions and procedures for all system parameters and configurations.
 - 3. Review of system alerts, logs and monitoring of configuration parameters including, but not limited to, configuration changes and device status.

5.06 SCHEDULE, MEETINGS AND PLANS

A. Schedule

- 1. Final Vendor Presentations: Week of April 25, 2022
- 2. Contractor Chosen: May 12, 2022
- 3. Work Commences: May 2022

4. Construction Projects Schedule:
 - a. Freshman Campus Choir Suite and Connector Units G, H, J) - Begin Work May 2022
 - b. Forest Grove Gym Addition - Begin Work May 2022
 - c. High School Fieldhouse (Units E, F, G, H) - Begin Work January 2023
 - d. High School Cafeteria (Unit M) - Begin Work March 2023
- B. Planned sequence of operations shall be established by the Contractor within the guidelines established by the Owner, as required herein and as required to meet schedules.
- C. All work shall be coordinated with Owner's construction manager on site.
- D. Project progress meetings shall be held, but not limited to, weekly at a site and time identified as convenient for Owner and as required herein. Meetings will be attended as required herein.

END OF SECTION

APPENDIX A - EXISTING EQUIPMENT INVENTORY LIST - 01

Building	Map - Building Name	Door Name (Vanderbilt Software)	Map	Controller Attached to:	Controller Map	Address	Channel
AES	Alward Elementary	AES Cafeteria Door Q, ID 149	Q	AES CONTROLLER # 1, ID 323	aes-dac-01	4	2
AES	Alward Elementary	AES IT Closet (Dr. A115B), ID 3243	MDF	AES CONTROLLER # 1, ID 323	aes-dac-01	1	2
AES	Alward Elementary	AES NW West Entrance (Temp Name), ID 541	T	AES CONTROLLER # 1, ID 323	aes-dac-01	3	2
AES	Alward Elementary	AES SW Old Main Entrance (Temp Name), ID 529	R	AES CONTROLLER # 1, ID 323	aes-dac-01	2	2
AES	Alward Elementary	AES East Door (Temp Name), ID 3257	N	AES CONTROLLER # 2, ID 2869	aes-dac-02	2	3
AES	Alward Elementary	AES Media Center Entrance, ID 2870	O	AES CONTROLLER # 2, ID 2869	aes-dac-02	1	2
AES	Alward Elementary	AES North Playground Door (Temp Name), ID 3270	M	AES CONTROLLER # 2, ID 2869	aes-dac-02	3	3
AES	Alward Elementary	AES Back Office Exit to Hallway, ID 3126	4	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	8	2
AES	Alward Elementary	AES DR # 1 Main Entrance, ID 517	A	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	2	3
AES	Alward Elementary	AES DR # 117A IT Closet, ID 3162	IDF1	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	1	2
AES	Alward Elementary	AES DR # Gym/Music W Entrance, ID 3098	B	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	4	2
AES	Alward Elementary	AES DR # Lower EI E Entrance Playground, ID 3091	K	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	3	2
AES	Alward Elementary	AES DR # Lower EI W Entrance, ID 3084	W	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	2	2
AES	Alward Elementary	AES DR # Main Hallway East, ID 3147	H	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	5	3
AES	Alward Elementary	AES DR Gym/Art E Entrance, ID 3105	F	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	5	2
AES	Alward Elementary	AES Main Office Entrance, ID 3112	2	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	6	2
AES	Alward Elementary	AES Main Office Exit, ID 3119	3	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	7	2
AES	Alward Elementary	AES Vestibule Entrance, ID 3140	1	AES CONTROLLER # 3 (New Addition 8/7/17), ID 3070	aes-dac-03	3	3
BES	Bauer Elementary	BES DR # 1 Main Entrance, ID 1815	A	BES CONTROLLER # 1, ID 426	bes-dac-01	1	3
BES	Bauer Elementary	BES DR # 2 South Entrance, ID 442	H	BES CONTROLLER # 1, ID 426	bes-dac-01	6	3
BES	Bauer Elementary	BES DR # 3 East Upper Playground Entrance, ID 3042	G	BES CONTROLLER # 1, ID 426	bes-dac-01	1	2
BES	Bauer Elementary	BES DR # 4 Gazebo Entrance, ID 3049	F	BES CONTROLLER # 1, ID 426	bes-dac-01	2	2
BES	Bauer Elementary	BES DR # 5 North Entrance, ID 3063	D	BES CONTROLLER # 1, ID 426	bes-dac-01	4	2
BES	Bauer Elementary	BES DR # 6 Kitchen Entrance, ID 3056	C	BES CONTROLLER # 1, ID 426	bes-dac-01	3	2
BES	Bauer Elementary	BES Hall Double Doors, ID 2491	1	BES CONTROLLER # 1, ID 426	bes-dac-01	4	3
BES	Bauer Elementary	BES Office Entry, ID 2481	2	BES CONTROLLER # 1, ID 426	bes-dac-01	2	3
BES	Bauer Elementary	BES Office Exit (NR), ID 2486	3	BES CONTROLLER # 1, ID 426	bes-dac-01	3	3
BES	Bauer Elementary	BES # 7 Ext Kindergarten, ID 3155	E	BES CONTROLLER # 2, ID 3154	bes-dac-02	1	2
BMS	Baldwin Street Middle	BMS DR # 2 Main Entrance CR, ID 1159	A	BMS CONTROLLER # 2 MEDIA CENTER, ID 1156	bms-dac-01	2	2
BMS	Baldwin Street Middle	BMS DR # 2 Main Entrance NO CR, ID 1165	A	BMS CONTROLLER # 2 MEDIA CENTER, ID 1156	bms-dac-01	3	2
BMS	Baldwin Street Middle	BMS Office, ID 2526	2	BMS CONTROLLER # 2 MEDIA CENTER, ID 1156	bms-dac-01	6	2
BMS	Baldwin Street Middle	BMS Staff Hallway to Office # 1, ID 2533	4	BMS CONTROLLER # 2 MEDIA CENTER, ID 1156	bms-dac-01	7	2
BMS	Baldwin Street Middle	BMS Vestibule to Main Hallway (CR) , ID 2512	1	BMS CONTROLLER # 2 MEDIA CENTER, ID 1156	bms-dac-01	4	2
BMS	Baldwin Street Middle	BMS Vestibule to Main Hallway (NO CR), ID 2519	1	BMS CONTROLLER # 2 MEDIA CENTER, ID 1156	bms-dac-01	5	2
BMS	Baldwin Street Middle	BMS Door G, ID 3517	G	BMS CONTROLLER # 3, ID 2511	bms-dac-02	5	2
BMS	Baldwin Street Middle	BMS Office To Hallway # 3, ID 2547	3	BMS CONTROLLER # 3, ID 2511	bms-dac-02	2	2
BMS	Baldwin Street Middle	BMS Staff Hallway to Office # 2 (2 Readers), ID 2540	4	BMS CONTROLLER # 3, ID 2511	bms-dac-02	1	2
BMS	Baldwin Street Middle	BMS DR # 1 "B" Entrance, ID 817	B	BMS CONTROLLER #1 DAYCARE, ID 815	bms-dac-03	2	3
BMS	Baldwin Street Middle	BMS Office Lockdown Keypad, ID 829 (Console BOX)	B	BMS CONTROLLER #1 DAYCARE, ID 815	bms-dac-03	1	3
BMS	Baldwin Street Middle	BMS DR # 3 East Gym Entrance, ID 1171	M	BMS PIM400 AT MEDIA CENTER CONTROLLER, ID 1157	bms-dac-04	2	3
BMS	Baldwin Street Middle	BMS DR # 4 East Custodial Entrance, ID 1180	H	BMS PIM400 AT VSRC400 CONTROLLER, ID 1155	bms-dac-05	2	3
ECC	Early Childhood Center	ECC A Main Entrance (Card Reader), ID 1484	A	ECC Controller # 1, ID 217	ecc-dac-01	3	2
ECC	Early Childhood Center	ECC Interior Gym Entrance, ID 3524	2	ECC Controller # 1, ID 217	ecc-dac-01	7	2
ECC	Early Childhood Center	ECC Interior Parent Entrance, ID 1465	1	ECC Controller # 1, ID 217	ecc-dac-01	2	2
ECC	Early Childhood Center	ECC Tennis Court Entrance (Card Reader), ID 1960	H	ECC Controller # 1, ID 217	ecc-dac-01	4	2
ECC	Early Childhood Center	ECC Bus Loop Entrance, ID 1477	D	ECC Controller # 2, ID 218	ecc-dac-02	2	3
ECC	Early Childhood Center	ECC ECSE HC Playground Entrance, ID 1490	E	ECC Controller # 2, ID 218	ecc-dac-02	3	3
ECC	Early Childhood Center	ECC Front Preschool Playground Entrance, ID 1471	C	ECC Controller # 2, ID 218	ecc-dac-02	1	3
ECC	Early Childhood Center	ECC Madison Street Playground Entrance, ID 1497	B	ECC Controller # 2, ID 218	ecc-dac-02	4	3
FES	Forrest Grove Elementary	FES DR # 1 Main Entrance, ID 1129	A	FES CONTROLLER, ID 1128	fes-dac-01	2	2
FES	Forrest Grove Elementary	FES DR # 2 Pre K / K Entrance, ID 1135	C	FES CONTROLLER, ID 1128	fes-dac-01	3	2
FES	Forrest Grove Elementary	FES DR # 3 Upper EL Entrance, ID 1141	D	FES CONTROLLER, ID 1128	fes-dac-01	4	2
FES	Forrest Grove Elementary	FES DR # 4 Lower EL Entrance, ID 1147	E	FES CONTROLLER, ID 1128	fes-dac-01	5	2
FES	Forrest Grove Elementary	FES Hallway, ID 2506	1	FES CONTROLLER, ID 1128	fes-dac-01	8	2
FES	Forrest Grove Elementary	FES Office Entry, ID 2496	2	FES CONTROLLER, ID 1128	fes-dac-01	7	2
FES	Forrest Grove Elementary	FES Office Exit (NR), ID 2501	3	FES CONTROLLER, ID 1128	fes-dac-01	6	2
GES	Georgetown Elementary	GES DR # 1 Main Entrance, ID 3035	A	GES CONTROLLER, ID 318	ges-dac-01	7	3

APPENDIX A - EXISTING EQUIPMENT INVENTORY LIST - 02

GES	Georgetown Elementary	GES DR # 2 SW Entrance, ID 3028	E	GES CONTROLLER, ID 318	ges-dac-01	7	2
GES	Georgetown Elementary	GES DR # 3 Grade 4/5 Entrance, ID 3000	I	GES CONTROLLER, ID 318	ges-dac-01	5	2
GES	Georgetown Elementary	GES DR # 4 Grade 2/3 Entrance, ID 3007	J	GES CONTROLLER, ID 318	ges-dac-01	6	2
GES	Georgetown Elementary	GES DR # 5 Bus Drop Off, ID 3014	K	GES CONTROLLER, ID 318	ges-dac-01	8	2
GES	Georgetown Elementary	GES DR # 6 Room 110, ID 2979	N	GES CONTROLLER, ID 318	ges-dac-01	2	2
GES	Georgetown Elementary	GES DR # 7 Eaglenest Main Entrance, ID 2972	O	GES CONTROLLER, ID 318	ges-dac-01	1	2
GES	Georgetown Elementary	GES DR #8 Room 112, ID 2986	M	GES CONTROLLER, ID 318	ges-dac-01	3	2
GES	Georgetown Elementary	GES DR #9 Room 114, ID 2993	L	GES CONTROLLER, ID 318	ges-dac-01	4	2
GES	Georgetown Elementary	GES Main Entry Interior Doors, ID 1976	1	GES CONTROLLER, ID 318	ges-dac-01	3	3
GES	Georgetown Elementary	GES Main Office Entry, ID 1967	2	GES CONTROLLER, ID 318	ges-dac-01	1	3
GES	Georgetown Elementary	GES Office Exit Door, ID 2430	3	GES CONTROLLER, ID 318	ges-dac-01	4	3
GES	Georgetown Elementary	GES Office Rear Hall Door, ID 2435	4	GES CONTROLLER, ID 318	ges-dac-01	5	3
GES	Georgetown Elementary	GES Office to Staff Lounge, ID 1973	5	GES CONTROLLER, ID 318	ges-dac-01	2	3
HAB	Administration Building	ADMIN Conference Room, ID 2854	C	ADMIN CONTROLLER, ID 2839	hab-dac-01	3	2
HAB	Administration Building	ADMIN Main Entrance, ID 2840	A	ADMIN CONTROLLER, ID 2839	hab-dac-01	1	2
HAB	Administration Building	ADMIN Southwest Entrance, ID 2847	B	ADMIN CONTROLLER, ID 2839	hab-dac-01	2	2
HCK	Central Kitchen	CENTRAL KITCHEN ENTRANCE, ID 1946	A	CENTRAL KITCHEN VSRC CONTROLLER, ID 1945	hck-dac-01	1	1
HFC	Freshman Campus	(9+) DR # 1 Main Entrance, ID 1385	E	9+ Controller (A-Wing), ID 1371	hfc-dac-06	1	2
HFC	Freshman Campus	(9+) DR # 2 Locker Hallway, ID 1391	13	9+ Controller (A-Wing), ID 1371	hfc-dac-06	2	2
HFC	Freshman Campus	(9+) DR # 3 A-Wing Parking Entrance, ID 1415	G	9+ Controller (A-Wing), ID 1371	hfc-dac-06	5	2
HFC	Freshman Campus	(9+) DR # 7 A-Wing 2nd Floor, ID 1459	23	9+ Controller (A-Wing), ID 1371	hfc-dac-06	7	2
HFC	Freshman Campus	(9+) DR # 8 IDF 2nd Floor A-Wing, ID 1453	IDF1	9+ Controller (A-Wing), ID 1371	hfc-dac-06	6	2
HFC	Freshman Campus	(9+) Elevator 1st Floor, ID 1403	14	9+ Controller (A-Wing), ID 1371	hfc-dac-06	3	2
HFC	Freshman Campus	(9+) Elevator 2nd Floor, ID 1409	24	9+ Controller (A-Wing), ID 1371	hfc-dac-06	4	2
HFC	Freshman Campus	HFC A-Wing 1st Floor South Interior Doors (New 1/16), ID 1533	12	9+ Controller (A-Wing), ID 1371	hfc-dac-06	8	2
HFC	Freshman Campus	HFC A-Wing 2nd Floor South Interior Doors (New 1/16), ID 2883	22	9+ Controller (A-Wing), ID 1371	hfc-dac-06	1	3
HFC	Freshman Campus	(9+) DR # 10 B-Wing 2nd Floor, ID 1447	20	9+ Controller (B-Wing), ID 1372	hfc-dac-05	5	2
HFC	Freshman Campus	(9+) DR # 4 B-Wing Parking Entrance, ID 1421	H	9+ Controller (B-Wing), ID 1372	hfc-dac-05	1	2
HFC	Freshman Campus	(9+) DR # 5 B-Wing Stairway, ID 1428	11	9+ Controller (B-Wing), ID 1372	hfc-dac-05	2	2
HFC	Freshman Campus	(9+) DR # 6 Media Center Door, ID 1435	15	9+ Controller (B-Wing), ID 1372	hfc-dac-05	3	2
HFC	Freshman Campus	(9+) DR # 9 MDF 2nd Floor B-Wing, ID 1441	MDF	9+ Controller (B-Wing), ID 1372	hfc-dac-05	4	2
HFC	Freshman Campus	HFC B-Wing 2nd Floor South Interior Doors (New 1/16), ID 2890	21	9+ Controller (B-Wing), ID 1372	hfc-dac-05	6	2
HFC	Freshman Campus	HFC Auditorium 1st Floor West Stairs to Hall (New 1/16), ID 2904	142	HFC IDF 141 Controller, ID 1580	hfc-dac-04	7	2
HFC	Freshman Campus	HFC Auditorium Common to West Hall (New 1/16), ID 2911	141	HFC IDF 141 Controller, ID 1580	hfc-dac-04	8	2
HFC	Freshman Campus	HFC Dr # B101A Auditorium Entrance, ID 1699	D	HFC IDF 141 Controller, ID 1580	hfc-dac-04	1	2
HFC	Freshman Campus	HFC Dr # F118A NE Hall, ID 1714	118	HFC IDF 141 Controller, ID 1580	hfc-dac-04	6	2
HFC	Freshman Campus	HFC Dr # F120B Band, ID 1712	120	HFC IDF 141 Controller, ID 1580	hfc-dac-04	5	2
HFC	Freshman Campus	HFC Dr # F132A Band / Choir, ID 1710	132	HFC IDF 141 Controller, ID 1580	hfc-dac-04	4	2
HFC	Freshman Campus	HFC Dr # F140D Auditorium Stage Entrance, ID 1706	140	HFC IDF 141 Controller, ID 1580	hfc-dac-04	2	2
HFC	Freshman Campus	HFC Dr # F141 IDF Room, ID 1708	IDF2	HFC IDF 141 Controller, ID 1580	hfc-dac-04	3	2
HFC	Freshman Campus	HFC Office to Corridor Area (New 1/16), ID 2897	7	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	6	3
HFC	Freshman Campus	HFC Dr # 130A Pool Alarms, ID 1649	4	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	1	3
HFC	Freshman Campus	HFC Dr # D105A Elevator to Hall, ID 1618	105	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	6	2
HFC	Freshman Campus	HFC Dr # D110 IDF Room, ID 1677	IDF3	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	5	3
HFC	Freshman Campus	HFC Dr # E131C Vestibule to Office, ID 1611	2	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	5	2
HFC	Freshman Campus	HFC Dr # E141A Exterior Front Entrance (Bal of Doors), ID 1590	A	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	2	2
HFC	Freshman Campus	HFC Dr # E141B Exterior Front Entrance (Card Reader), ID 1583	A	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	1	2
HFC	Freshman Campus	HFC Dr # E141C Main Ent Interior Vestibule (Bal of Doors) , ID 1604	1	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	4	2
HFC	Freshman Campus	HFC Dr # E141D Main Ent Interior Vestibule (Card Reader) , ID 1597	1	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	3	2
HFC	Freshman Campus	HFC Elevator 1st Floor, ID 1632	E1	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	8	2
HFC	Freshman Campus	HFC Elevator 2nd Floor, ID 1625	E2	HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	7	2
HFC	Freshman Campus	HFC Lockdown, ID 1656		HFC IDF D110 # 1 Controller, ID 1578	hfc-dac-01	2	3
HFC	Freshman Campus	HFC Dr # C101 Cafe Outside Eating, ID 1679	101	HFC IDF D110 # 2 Controller, ID 1579	hfc-dac-02	1	2
HFC	Freshman Campus	HFC Dr # D105C Exterior Door from Football Field, ID 1690	K	HFC IDF D110 # 2 Controller, ID 1579	hfc-dac-02	4	2
HFC	Freshman Campus	HFC Dr # D106B Loading Dock, ID 1688	106	HFC IDF D110 # 2 Controller, ID 1579	hfc-dac-02	3	2
HFC	Freshman Campus	HFC Dr # D107A Loading Dock, ID 1686	107	HFC IDF D110 # 2 Controller, ID 1579	hfc-dac-02	2	2
HFC	Freshman Campus	HFC Dr # E114 Lifeguard (VIONX (3) Chexit Alarms), ID 1692	3	HFC IDF D110 # 2 Controller, ID 1579	hfc-dac-02	8	2

APPENDIX A - EXISTING EQUIPMENT INVENTORY LIST - 03

HFC	Freshman Campus	hfc-lock-303.hudsonville.k12.mi.us	303	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-304.hudsonville.k12.mi.us	304	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-305.hudsonville.k12.mi.us	305	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-306.hudsonville.k12.mi.us	306	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-307a.hudsonville.k12.mi.us	307a	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-307b.hudsonville.k12.mi.us	307b	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-400.hudsonville.k12.mi.us	400	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-401.hudsonville.k12.mi.us	401	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-choir.hudsonville.k12.mi.us	choir	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-j1.hudsonville.k12.mi.us	j1	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-j2.hudsonville.k12.mi.us	j2	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HFC	Freshman Campus	hfc-lock-j3.hudsonville.k12.mi.us	j3	hfc-acp-J.hudsonville.k12.mi.us	hfc-dac-03		
HHS	High School	HHS DR # 1 Main Entrance (CR), ID 2689	A	HHS Controller # 1, ID 1241	hhs-dac-01	2	2
HHS	High School	HHS DR # 1 Main Entrance (NO CR), ID 2696	A	HHS Controller # 1, ID 1241	hhs-dac-01	3	2
HHS	High School	HHS DR # 1 Main Entrance (Side Ent), ID 2703	A	HHS Controller # 1, ID 1241	hhs-dac-01	4	2
HHS	High School	HHS DR # 5 Music Entrance, ID 1329	G	HHS Controller # 1, ID 1241	hhs-dac-01	4	3
HHS	High School	HHS DR # 6 Social Studies Entrance, ID 1322	D	HHS Controller # 1, ID 1241	hhs-dac-01	3	3
HHS	High School	HHS DR # 7 Science Entrance, ID 1315 (New Construction)	C	HHS Controller # 1, ID 1241	hhs-dac-01	2	3
HHS	High School	HHS DR # 8 Media Center Entrance, ID 1308 (New Construction)	B	HHS Controller # 1, ID 1241	hhs-dac-01	1	3
HHS	High School	HHS Elevator 1st Floor, ID 1373	3	HHS Controller # 1, ID 1241	hhs-dac-01	5	3
HHS	High School	HHS Elevator 2nd Floor, ID 1379	4	HHS Controller # 1, ID 1241	hhs-dac-01	6	3
HHS	High School	HHS DR # 10 Aux Gym Entrance, ID 1252	R	HHS Controller # 2, ID 1242	hhs-dac-02	4	2
HHS	High School	HHS DR # 2 Interior Pool Toggle, ID 1545	9	HHS Controller # 2, ID 1242	hhs-dac-02	8	2
HHS	High School	HHS DR # 2 Pool Entrance, ID 1539	P	HHS Controller # 2, ID 1242	hhs-dac-02	3	2
HHS	High School	HHS DR # 3 West Maintenance Entrance, ID 1259	O	HHS Controller # 2, ID 1242	hhs-dac-02	5	2
HHS	High School	HHS Dr # A106A NE Fitness, ID 1753	Q	HHS IDF A108 Controller, ID 1582	hhs-dac-03	1	2
HHS	High School	HHS Dr # B106A & B106B Lockdown, ID 1755	8	HHS IDF A108 Controller, ID 1582	hhs-dac-03	2	2
HHS	High School	HHS Dr # B101A & B101B Lockdown, ID 1746	5	HHS IDF B127 Controller # 2 (Bottom), ID 1581	hhs-dac-04	6	3
HHS	High School	HHS Dr # B102A & B102B Lockdown, ID 1732	6	HHS IDF B127 Controller # 2 (Bottom), ID 1581	hhs-dac-04	4	3
HHS	High School	HHS Dr # B103A & B103B Lockdown, ID 1739	7	HHS IDF B127 Controller # 2 (Bottom), ID 1581	hhs-dac-04	5	3
HHS	High School	HHS Dr # C102A Main Entrance Doors (Card Reader), ID 1716	A	HHS IDF B127 Controller # 2 (Bottom), ID 1581	hhs-dac-04	1	3
HHS	High School	HHS Dr # C102B Main Entrance Interior Doors (Bal of Doors), ID 1723	1	HHS IDF B127 Controller # 2 (Bottom), ID 1581	hhs-dac-04	2	3
HHS	High School	HHS Dr # C107 Vestibule to Office, ID 1730	2	HHS IDF B127 Controller # 2 (Bottom), ID 1581	hhs-dac-04	3	3
HTD	Transportation	TD East Main Door #2, ID 1083	A	TRANSPORTATION, ID 1076	htd-dac-01	2	2
HTD	Transportation	TD North Main Door #1, ID 1077	B	TRANSPORTATION, ID 1076	htd-dac-01	1	2
HTD	Transportation	TD North Mechanic's Door #4, ID 1095	D	TRANSPORTATION, ID 1076	htd-dac-01	4	2
HTD	Transportation	TD South Driver's Door #3, ID 1089	C	TRANSPORTATION, ID 1076	htd-dac-01	3	2
HTD	Transportation	TD South Mechanic's Door #5, ID 1101	E	TRANSPORTATION, ID 1076	htd-dac-01	5	2
HTO/ECC	ECC District Technology Office	HTO - Repair Center Main Door, ID 3483	3	ECC/Tech Office, ID 3462	hto-dac-01	3	2
HTO/ECC	Technology Office	HTO Main Door, ID 3463	G	ECC/Tech Office, ID 3462	hto-dac-01	1	2
HTO/ECC	Technology Office	HTO Main Hallway Door, ID 3504	4	ECC/Tech Office, ID 3462	hto-dac-01	6	2
HTO/ECC	Technology Office	HTO Repair Center Hall Door, ID 3490	5	ECC/Tech Office, ID 3462	hto-dac-01	4	2
HTO/ECC	Technology Office	HTO- WAN Door, ID 3470	6	ECC/Tech Office, ID 3462	hto-dac-01	2	2
HTO/ECC	Technology Office	HTO WAN Room Hall Door, ID 3497	7	ECC/Tech Office, ID 3462	hto-dac-01	5	2
JES	Jamestown Upper Elementary	Jamestown Eagle Nest Entrance, ID 113	B	JES Controller #2, ID 2453	jes-dac-01	5	3
JES	Jamestown Upper Elementary	Jamestown Main Entrance, ID 100	A	JES Controller #2, ID 2453	jes-dac-01	3	2
JES	Jamestown Upper Elementary	Jamestown Main Office Lockdown Keyswitch, ID 102 (Console Box)		JES Controller #2, ID 2453	jes-dac-01	2	2
JES	Jamestown Upper Elementary	Jamestown Playground East Entrance, ID 132	F	JES Controller #2, ID 2453	jes-dac-01	1	3
JES	Jamestown Upper Elementary	Jamestown Playground Entrance, ID 119	E	JES Controller #2, ID 2453	jes-dac-01	3	3
JES	Jamestown Upper Elementary	Jamestown Staff Entrance, ID 125	I	JES Controller #2, ID 2453	jes-dac-01	5	2
JES	Jamestown Upper Elementary	JES Hall Double Doors, ID 2464	1	JES Controller #2, ID 2453	jes-dac-01	4	3
JES	Jamestown Upper Elementary	JES Office Entry, ID 2454	2	JES Controller #2, ID 2453	jes-dac-01	6	3
JES	Jamestown Upper Elementary	JES Office Exit, ID 2459	3	JES Controller #2, ID 2453	jes-dac-01	2	3
JES	Jamestown Upper Elementary	Jamestown Maintenance Entrance, ID 643	G	JES CONTROLLER, ID 97	jes-dac-02	2	2
JLE	Jamestown Lower Elementary	JLE Door R, ID 105	R	SES Controller # 3, ID 2807	jle-dac-02	2	3
JLE	Jamestown Lower Elementary	JLE Office Entry, ID 2815	2	SES Controller # 3, ID 2807	jle-dac-02	2	2
JLE	Jamestown Lower Elementary	JLE Office Exit, ID 2808	3	SES Controller # 3, ID 2807	jle-dac-02	1	2

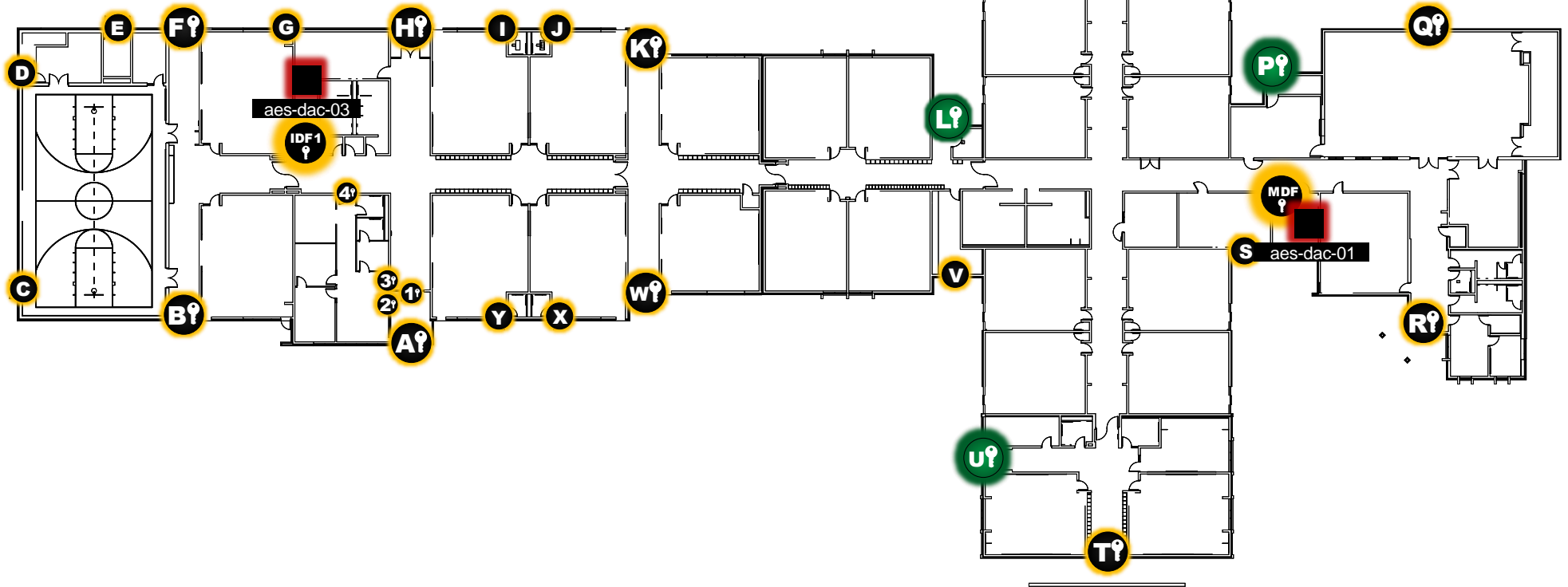
APPENDIX A - EXISTING EQUIPMENT INVENTORY LIST - 04

JLE	Jamestown Lower Elementary	SES Delivery # 3, ID 964	Q	SES PIM A1, ID 933	jle-dac-01	3	2
JLE	Jamestown Lower Elementary	SES Gym # 4, ID 973	O	SES PIM A1, ID 933	jle-dac-01	2	2
JLE	Jamestown Lower Elementary	SES Main Entrance # 1, ID 937	A	SES PIM A2, ID 934	jle-dac-01	6	2
JLE	Jamestown Lower Elementary	SES Main Vestibule # 2, ID 946	1	SES PIM A2, ID 934	jle-dac-01	7	2
JLE	Jamestown Lower Elementary	SES Office Lockdown, ID 955		SES PIM A2, ID 934	jle-dac-01	8	2
JLE	Jamestown Lower Elementary	SES Corridor 100 Exterior # 8, ID 994	E	SES PIM B1, ID 935	jle-dac-03	5	3
JLE	Jamestown Lower Elementary	SES Kindergarten # 9, ID 982	D	SES PIM B1, ID 935	jle-dac-03	4	3
JLE	Jamestown Lower Elementary	SES Room 101 Exterior # 10, ID 1018	C	SES PIM B1, ID 935	jle-dac-03	3	3
JLE	Jamestown Lower Elementary	SES Room 102 Exterior # 7, ID 1006	F	SES PIM B1, ID 935	jle-dac-03	6	3
JLE	Jamestown Lower Elementary	SES Room 103 Exterior # 11, ID 1030	B	SES PIM B1, ID 935	jle-dac-03	2	3
JLE	Jamestown Lower Elementary	SES C Wing Parking #12, ID 1063	K	SES PIM D1, ID 936	jle-dac-04	4	2
JLE	Jamestown Lower Elementary	SES Upper EL East # 6, ID 1042	H	SES PIM D1, ID 936	jle-dac-04	2	2
JLE	Jamestown Lower Elementary	SES Upper EL West # 5, ID 1051	J	SES PIM D1, ID 936	jle-dac-04	3	2
PES	Park Elementary	PES Art Entrance # 4, ID 910	G	PES Controller #2, ID 2407	pes-dac-01	1	3
PES	Park Elementary	PES Break Room Door, ID 2425	4	PES Controller #2, ID 2407	pes-dac-01	4	2
PES	Park Elementary	PES Interior Double Doors, ID 2408	1	PES Controller #2, ID 2407	pes-dac-01	1	2
PES	Park Elementary	PES Main Entrance # 1, ID 863	A	PES Controller #2, ID 2407	pes-dac-01	7	2
PES	Park Elementary	PES Media Entrance # 5, ID 919	F	PES Controller #2, ID 2407	pes-dac-01	2	3
PES	Park Elementary	PES Music Entrance # 2, ID 886	P	PES Controller #2, ID 2407	pes-dac-01	3	3
PES	Park Elementary	PES Office Entry Door, ID 2415	2	PES Controller #2, ID 2407	pes-dac-01	2	2
PES	Park Elementary	PES Office Exit Door, ID 2420	3	PES Controller #2, ID 2407	pes-dac-01	3	2
PES	Park Elementary	PES Playground Entrance # 3, ID 898	K	PES Controller #2, ID 2407	pes-dac-01	6	2
RMS	Riley Street Middle	RMS DR New Wing Main Entrance (No CR) , ID 2562	D	RMS Controller # 3, ID 2554	rms-dac-01	2	2
RMS	Riley Street Middle	RMS DR New Wing Main Entrance (CR), ID 2555	D	RMS Controller # 3, ID 2554	rms-dac-01	1	2
RMS	Riley Street Middle	RMS DR New Wing North, ID 2569	E	RMS Controller # 3, ID 2554	rms-dac-01	3	2
RMS	Riley Street Middle	RMS DR East Stairway Entrance , ID 2576	C	RMS Controller # 3, ID 2554	rms-dac-01	4	2
RMS	Riley Street Middle	RMS DR Group Learning Center, ID 2618	B	RMS Controller # 3, ID 2554	rms-dac-01	2	3
RMS	Riley Street Middle	RMS DR Group Learning Entrance, ID 2625	B	RMS Controller # 3, ID 2554	rms-dac-01	3	3
RMS	Riley Street Middle	RMS Lobby To Cafeteria Area (CR) (B102C, ID 2583	4	RMS Controller # 3, ID 2554	rms-dac-01	5	2
RMS	Riley Street Middle	RMS Lobby To Cafeteria Area (No CR) (B102B), ID 2590	4	RMS Controller # 3, ID 2554	rms-dac-01	6	2
RMS	Riley Street Middle	RMS Office ((B110A), ID 2597	1	RMS Controller # 3, ID 2554	rms-dac-01	1	3
RMS	Riley Street Middle	RMS Office to Hallway (B110C), ID 2611	2	RMS Controller # 3, ID 2554	rms-dac-01	7	2
RMS	Riley Street Middle	RMS Staff Tto Office (B110B, ID 2604	3	RMS Controller # 3, ID 2554	rms-dac-01	8	2
RMS	Riley Street Middle	RMS DR # 2 Main Entrance (NOCR), ID 1519	A	RMS CONTROLLER, ID 581	rms-dac-02	3	2
RMS	Riley Street Middle	RMS DR # 2 Main Entrance, ID 1213	A	RMS CONTROLLER, ID 581	rms-dac-02	2	2
RMS	Riley Street Middle	RMS DR # 1 Group Learning Entrance, ID 584	B	RMS PIM # 2, ID 583	rms-dac-03	2	3
RMS	Riley Street Middle	RMS DR # 4 North Storage Entrance, ID 1201	I	RMS PIM400 AT VSRC400, ID 1200	rms-dac-04	2	2
RMS	Riley Street Middle	RMS DR # 3 East Gym Entrance, ID 1220	N	RMS PIM400-2 AT RMS CONTROLLER, ID 1219	rms-dac-05	5	3
SES	South Elementary	SES3 DR A Main Entrance (B101A), ID 2640	A	SES3 Controller # 1, ID 2632	ses-dac-01	2	2
SES	South Elementary	SES3 DR A2 Main Vestibule Entrance (B102B), ID 2647	1	SES3 Controller # 1, ID 2632	ses-dac-01	3	2
SES	South Elementary	SES3 DR G Playground, ID 91	G	SES3 Controller # 1, ID 2632	ses-dac-01	7	2
SES	South Elementary	SES3 DR H West Entrance (A101A), ID 2633	H	SES3 Controller # 1, ID 2632	ses-dac-01	1	2
SES	South Elementary	SES3 Exterior from Gym (Dr. 132B), ID 2718	D	SES3 Controller # 1, ID 2632	ses-dac-01	2	2
SES	South Elementary	SES3 Office (B103A), ID 2654	2	SES3 Controller # 1, ID 2632	ses-dac-01	4	3
SES	South Elementary	SES3 Office from Copy Room (B111D), ID 2732	4	SES3 Controller # 1, ID 2632	ses-dac-01	4	2
SES	South Elementary	SMS3 DR D Art Entrance (B132A), ID 2668	D	SES3 Controller # 1, ID 2632	ses-dac-01	6	2
SES	South Elementary	SES3 Bus Entrance (Dr. 113A), ID 2725	E/F	SES3 Controller # 2, ID 2710	ses-dac-02	3	2
SES	South Elementary	SES3 Kindergarten Playground, ID 2711	I	SES3 Controller # 2, ID 2710	ses-dac-02	1	2
SES	South Elementary	SES3 Lockdown Keyswitch, ID 2675		SES3 Controller # 2, ID 2710	ses-dac-02	2	2
SES	South Elementary	SES3 Staff Office (B103B), ID 2661	3	SES3 Controller # 2, ID 2710	ses-dac-02	5	2



Alward Elementary School
3811 Port Sheldon St
Hudsonville, MI 49426
(616) 669-6700





AES	
	New Card Reader (Qty:3)
	Existing Card Reader (Qty:17)
	No Card Reader (Qty:10)
	Existing Door Controller (Qty:3)

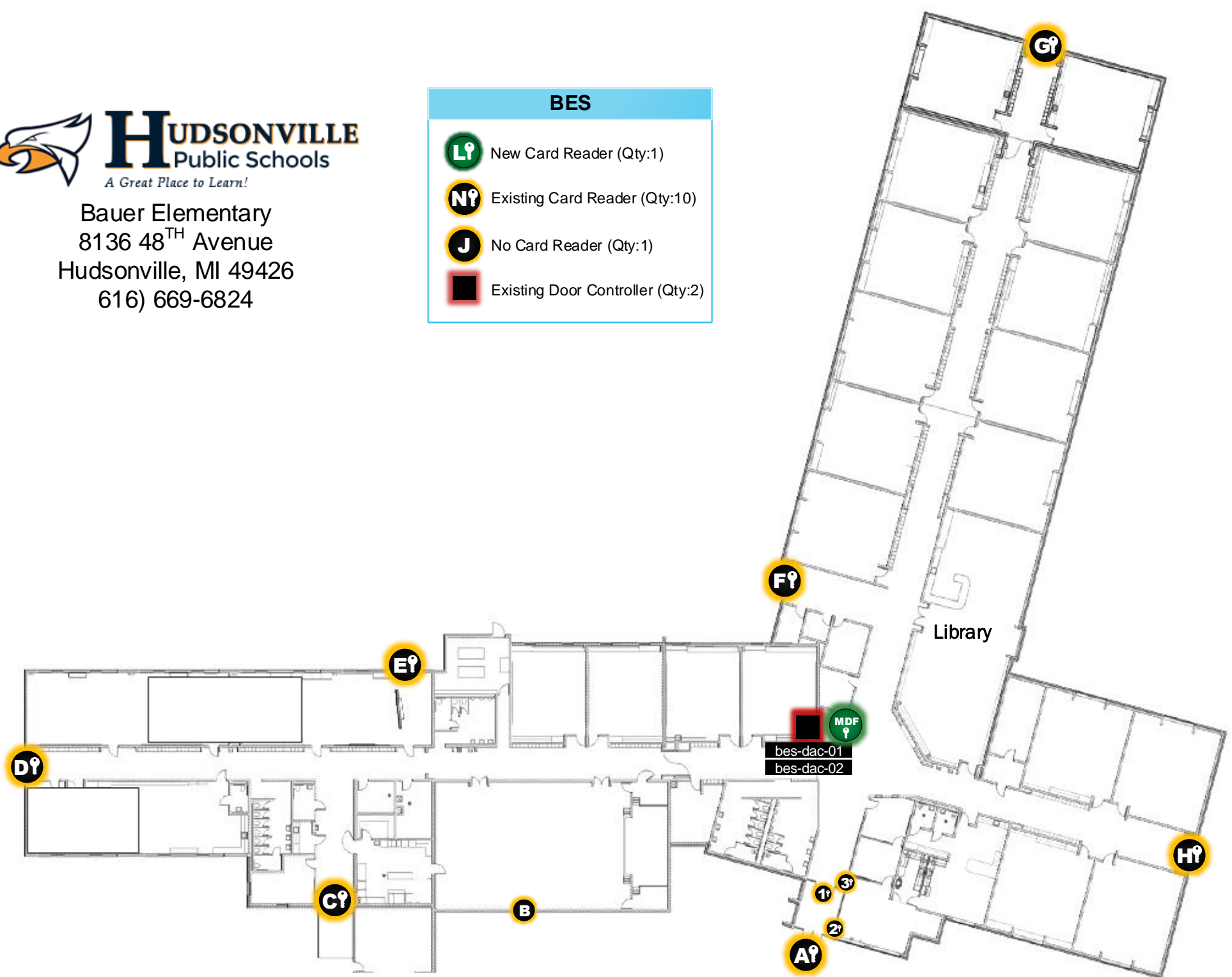


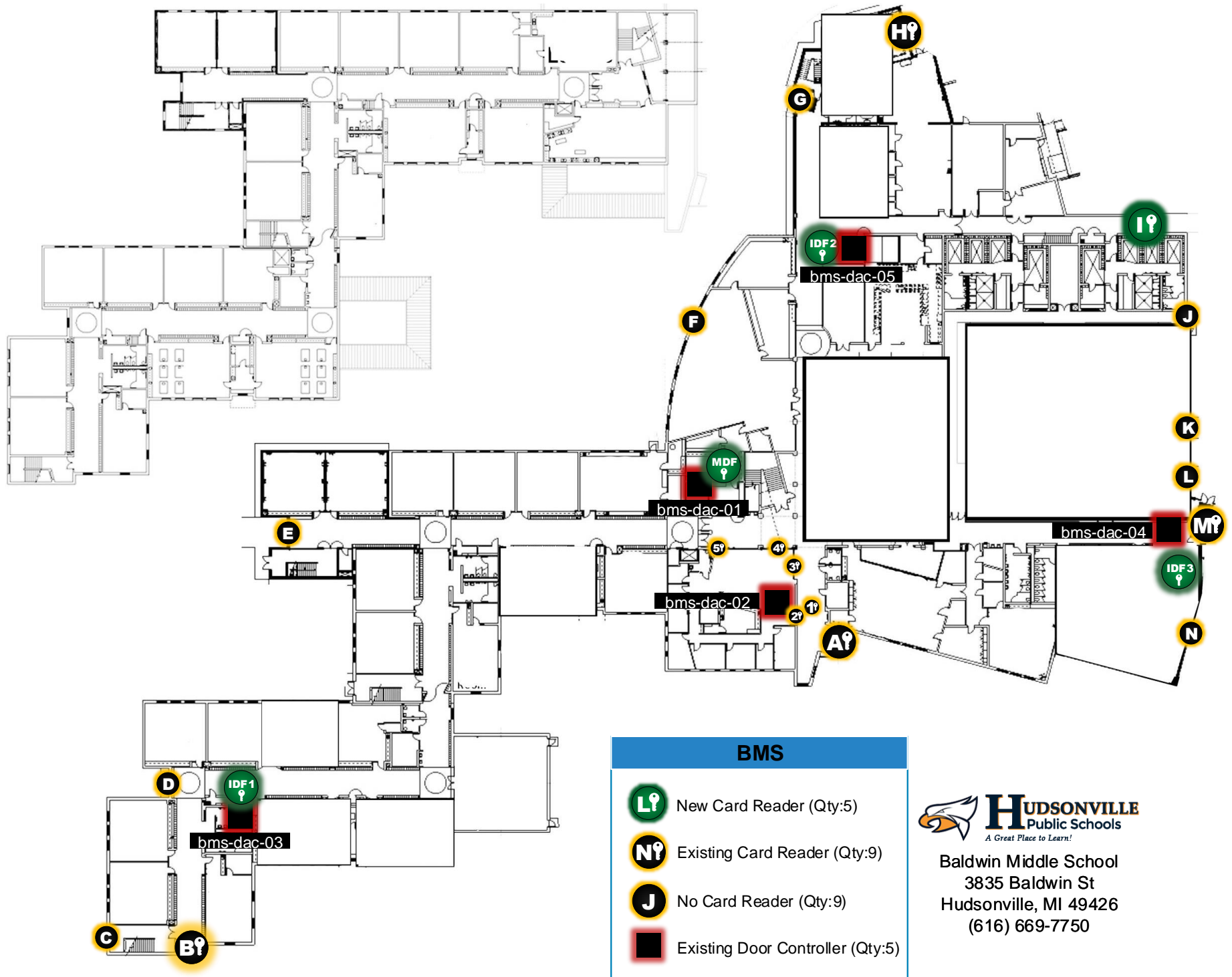


Bauer Elementary
8136 48TH Avenue
Hudsonville, MI 49426
616) 669-6824

BES

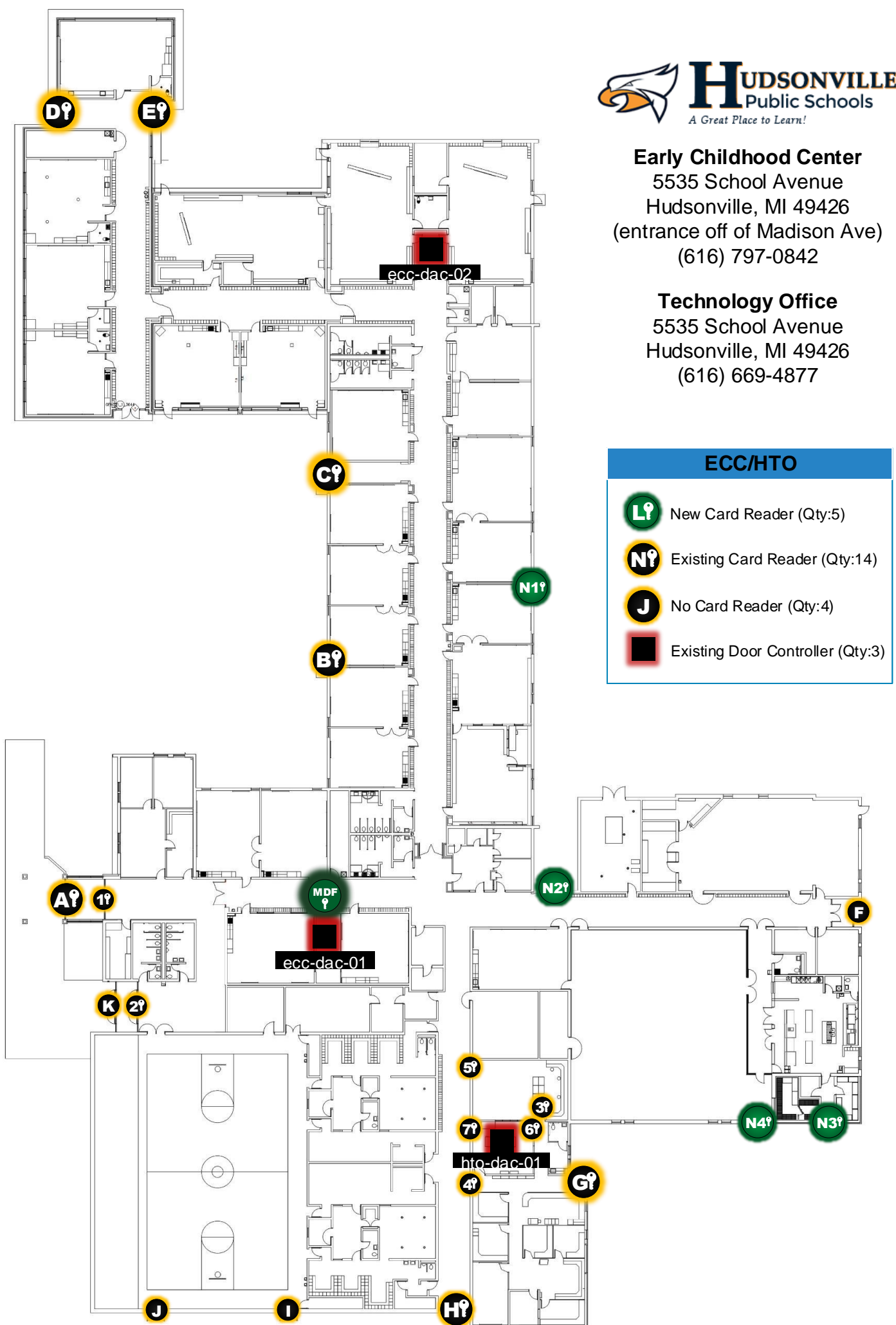
-  New Card Reader (Qty:1)
-  Existing Card Reader (Qty:10)
-  No Card Reader (Qty:1)
-  Existing Door Controller (Qty:2)

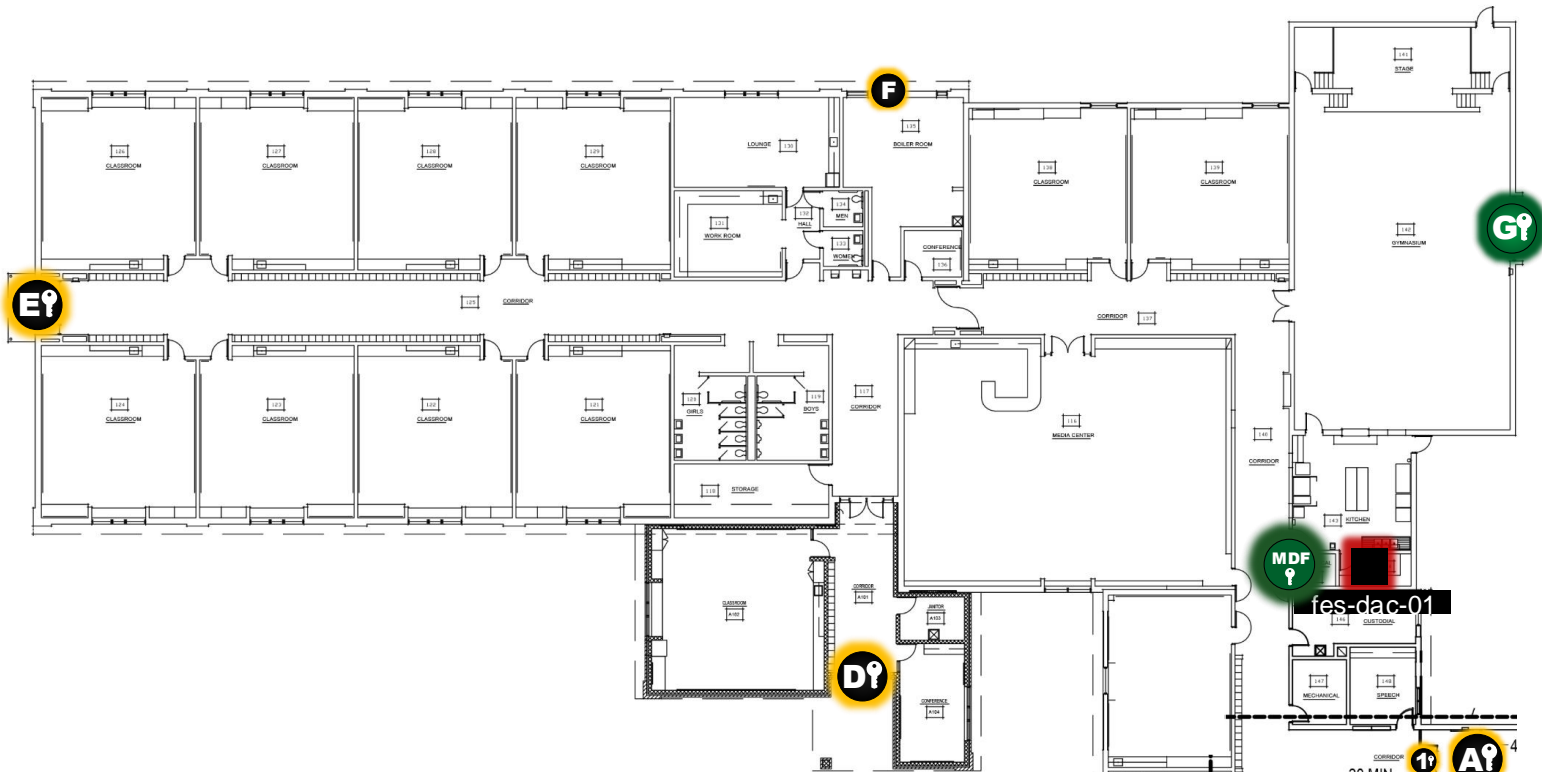




Early Childhood Center
5535 School Avenue
Hudsonville, MI 49426
(entrance off of Madison Ave)
(616) 797-0842

Technology Office
5535 School Avenue
Hudsonville, MI 49426
(616) 669-4877

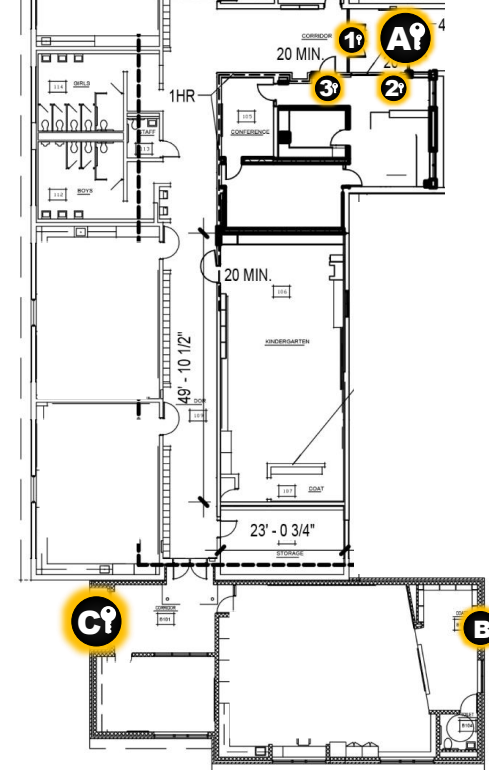


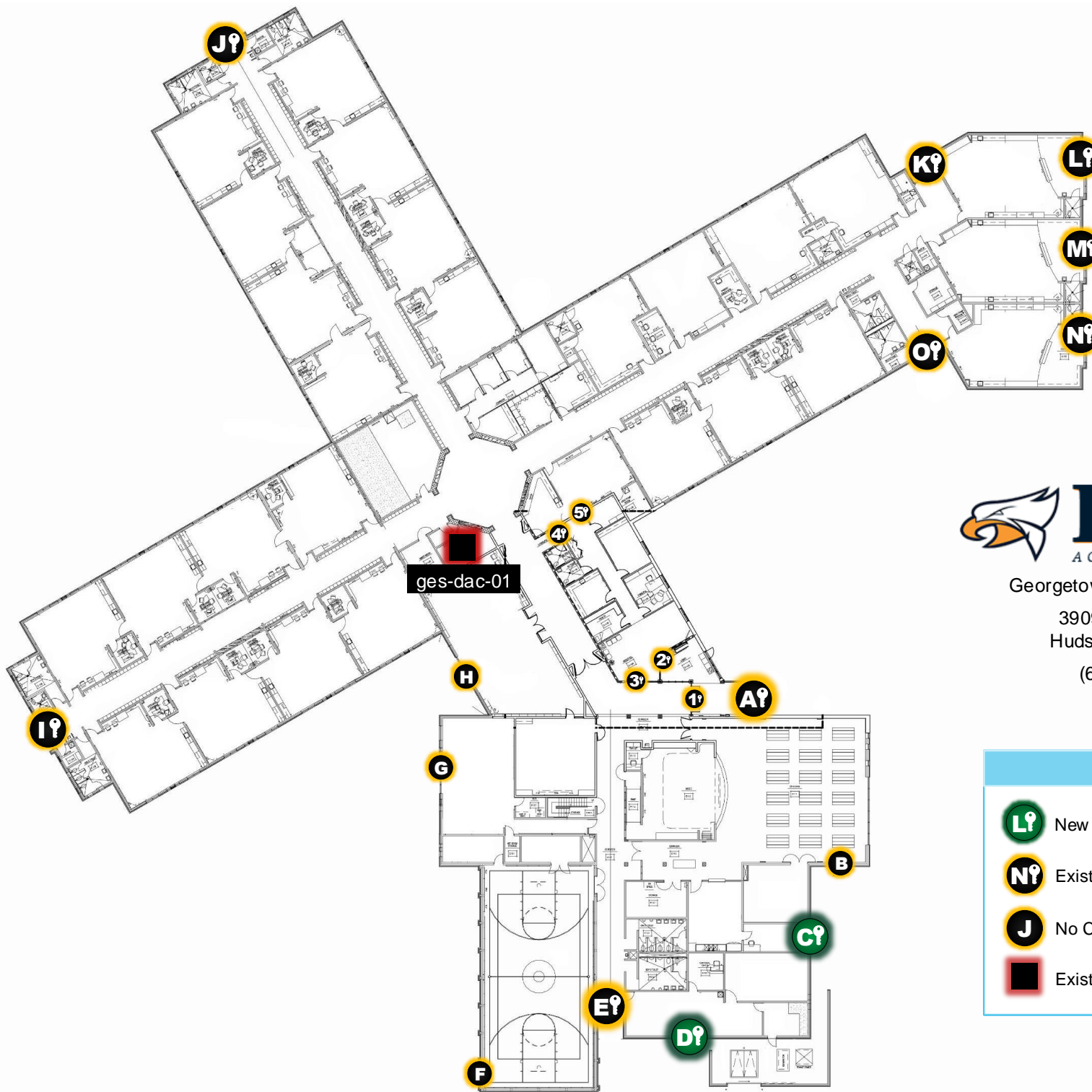


Forest Grove Elementary
1645 32nd Avenue
Hudsonville, MI 49426
616) 896-9429

FES

- L** New Card Reader (Qty:2)
- N** Existing Card Reader (Qty:7)
- J** No Card Reader (Qty:2)
- Existing Door Controller (Qty:1)









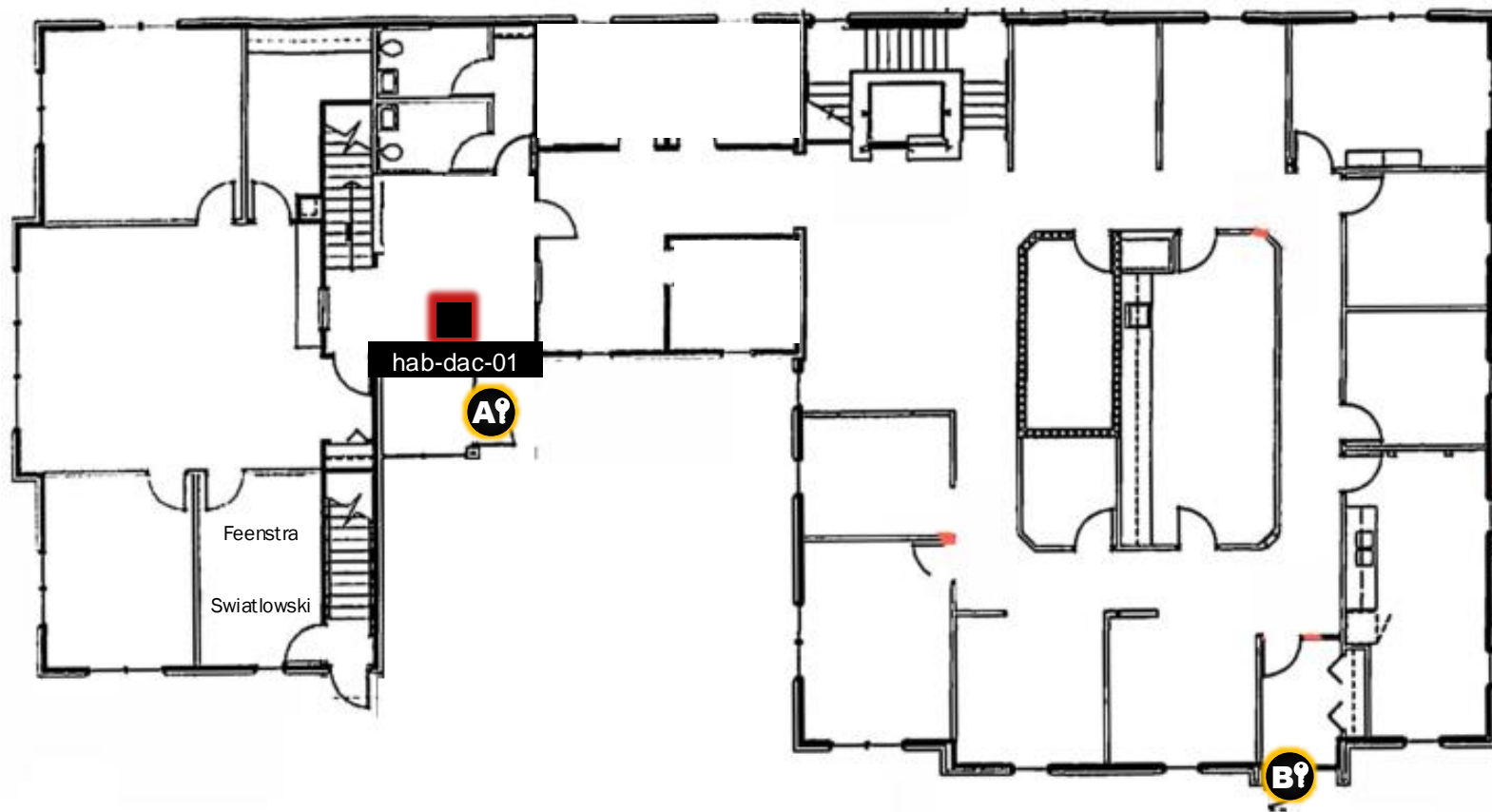
Georgetown Elementary School

3909 Baldwin Street
Hudsonville, MI 49426

(616) 797-9797

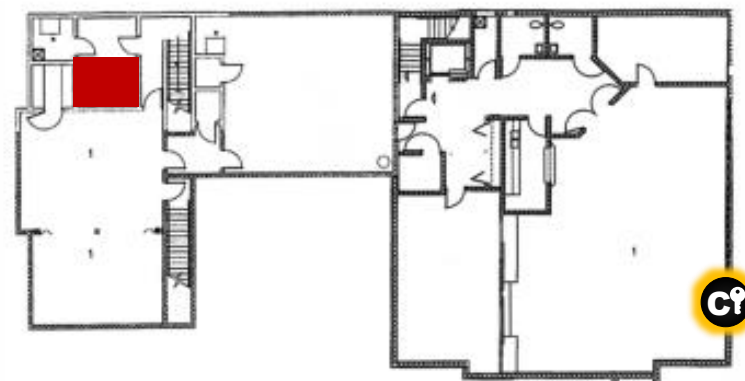
GES

-  New Card Reader (Qty:2)
-  Existing Card Reader (Qty:14)
-  No Card Reader (Qty:4)
-  Existing Door Controller (Qty:1)



Administration Building
3866 Van Buren
Hudsonville, MI 49426
(616) 669-1740


HAB	
	Existing Card Reader (Qty:3)
	Existing Door Controller (Qty:1)





Central Kitchen/Food Service
5066 40th Avenue
Hudsonville, MI 49426
(616) 662-0937

HAB

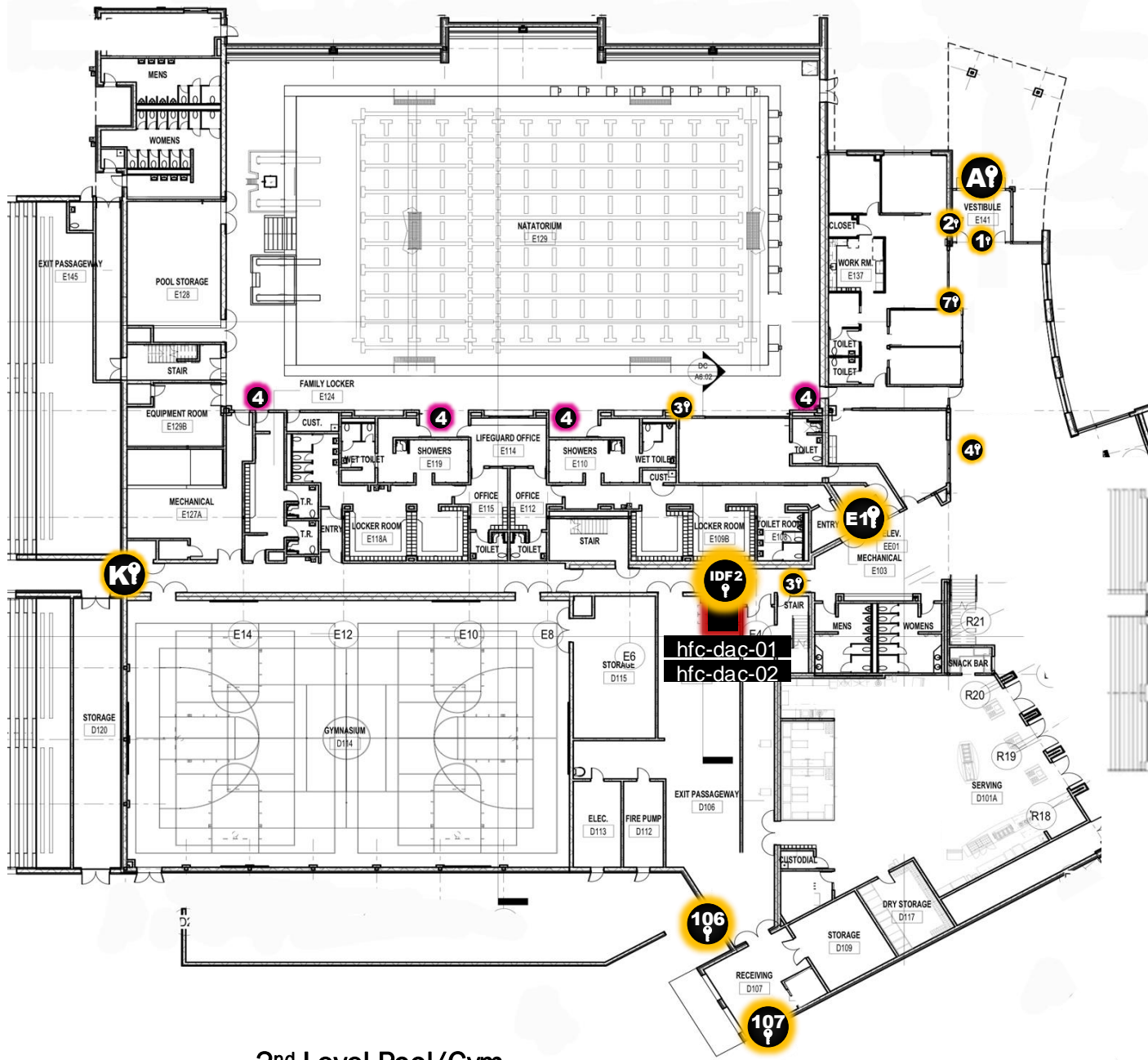
 Existing Card Reader (Qty:1)

 Existing Door Controller (Qty:1)





Hudsonville Freshman Campus
 3370 Allen St
 Hudsonville, MI 49426
 (616)-669-1510

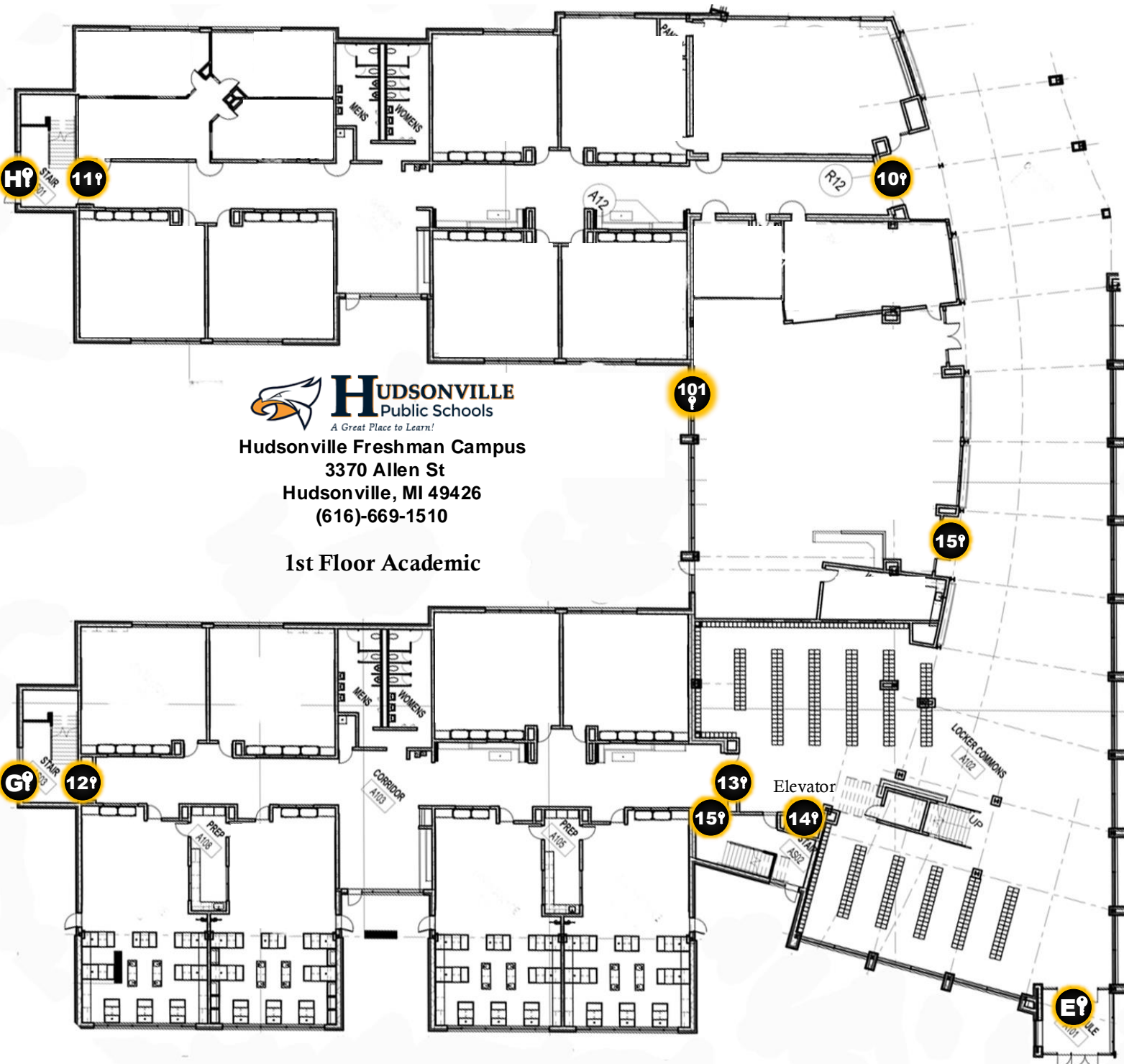


2nd Level Pool/Gym



HFC

- N** Existing Card Reader (Qty:5)
- J** No Card Reader
- 1** Pool Alarms (Qty:4)
- 4** Existing Door Controller (Qty:2)

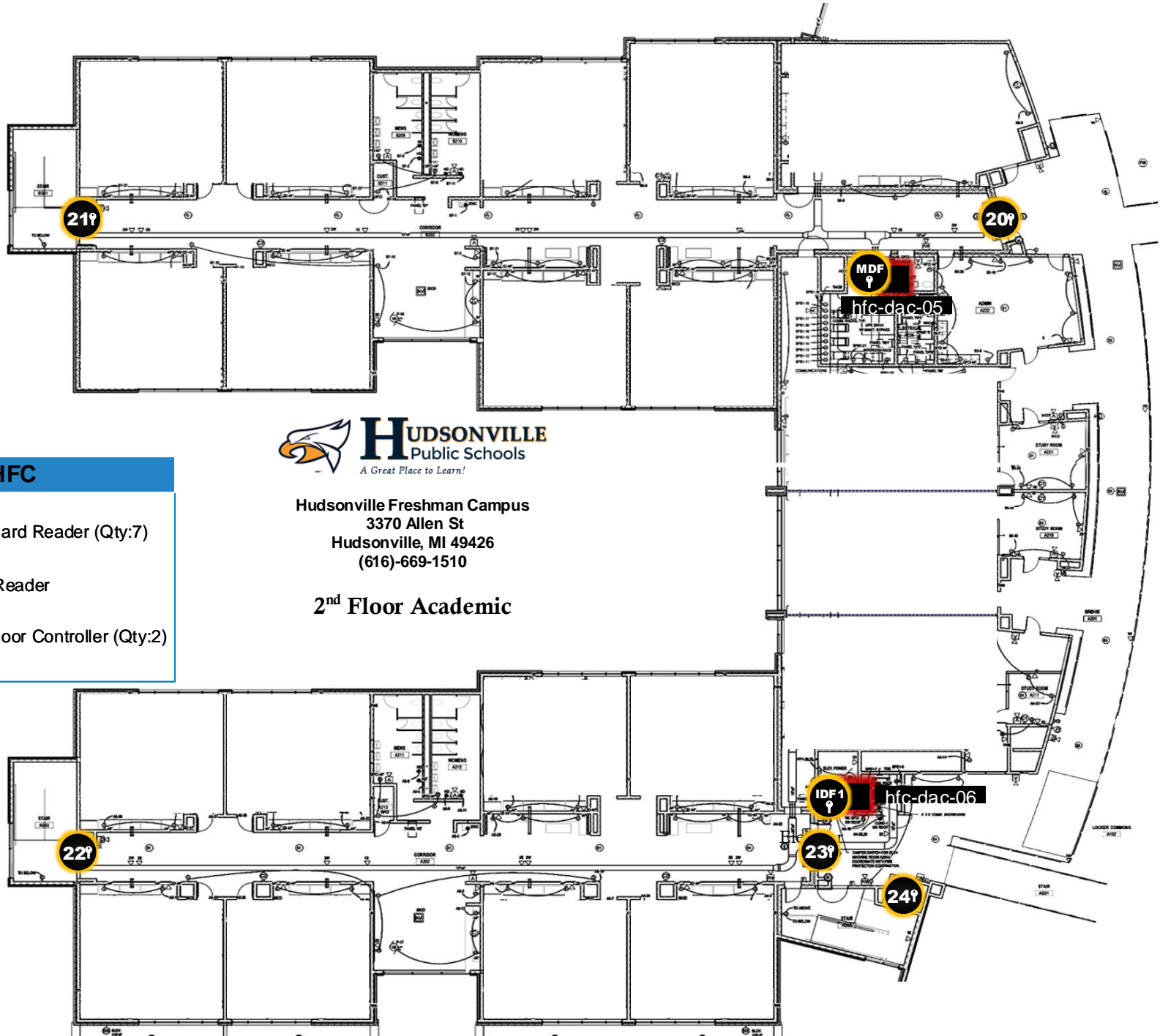


Hudsonville Freshman Campus
3370 Allen St
Hudsonville, MI 49426
(616)-669-1510

1st Floor Academic

HFC

Existing Card Reader (Qty:11)



Hudsonville Freshman Campus
 3370 Allen St
 Hudsonville, MI 49426
 (616)-669-1510

2nd Floor Academic

HFC

N Existing Card Reader (Qty:7)

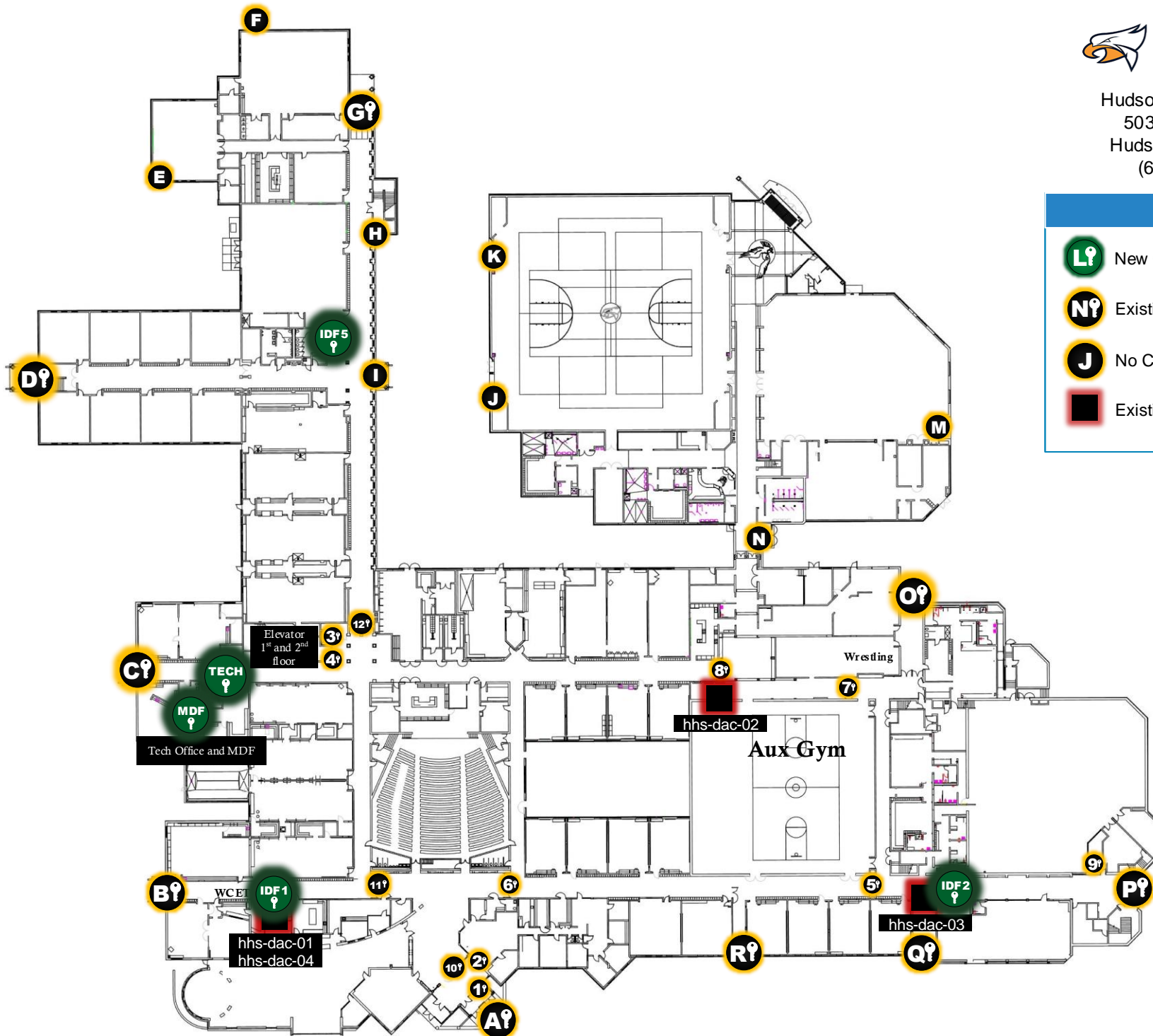
J No Card Reader

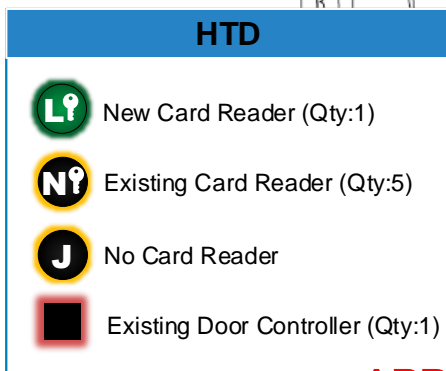
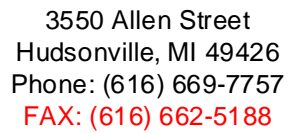
■ Existing Door Controller (Qty:2)

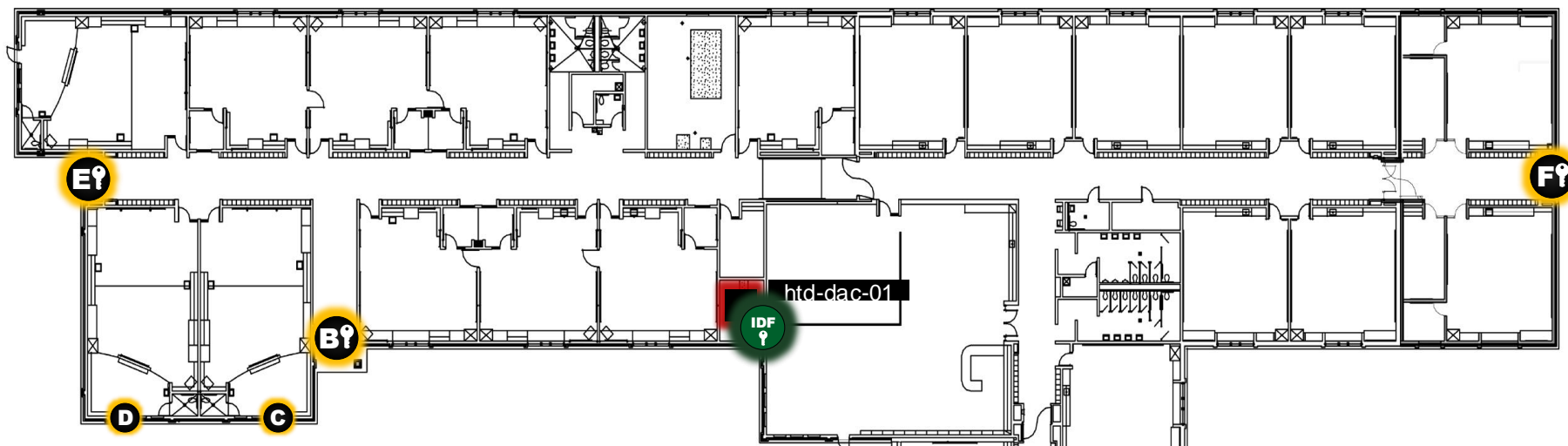
Hudsonville High School
5037 32nd Avenue
Hudsonville, MI 49426
(616)-669-1500

HHS

- L?** New Card Reader (Qty:5)
- N?** Existing Card Reader (Qty:22)
- J** No Card Reader (Qty:8)
- Existing Door Controller (Qty:4)

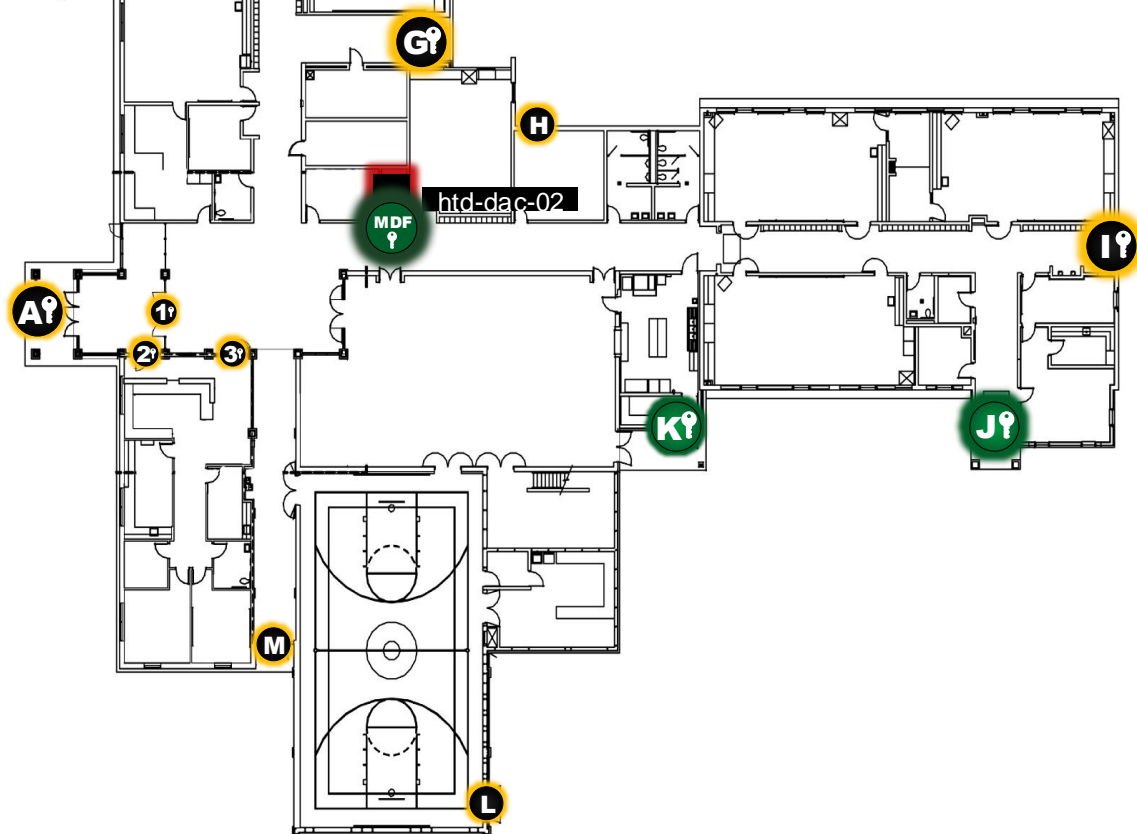


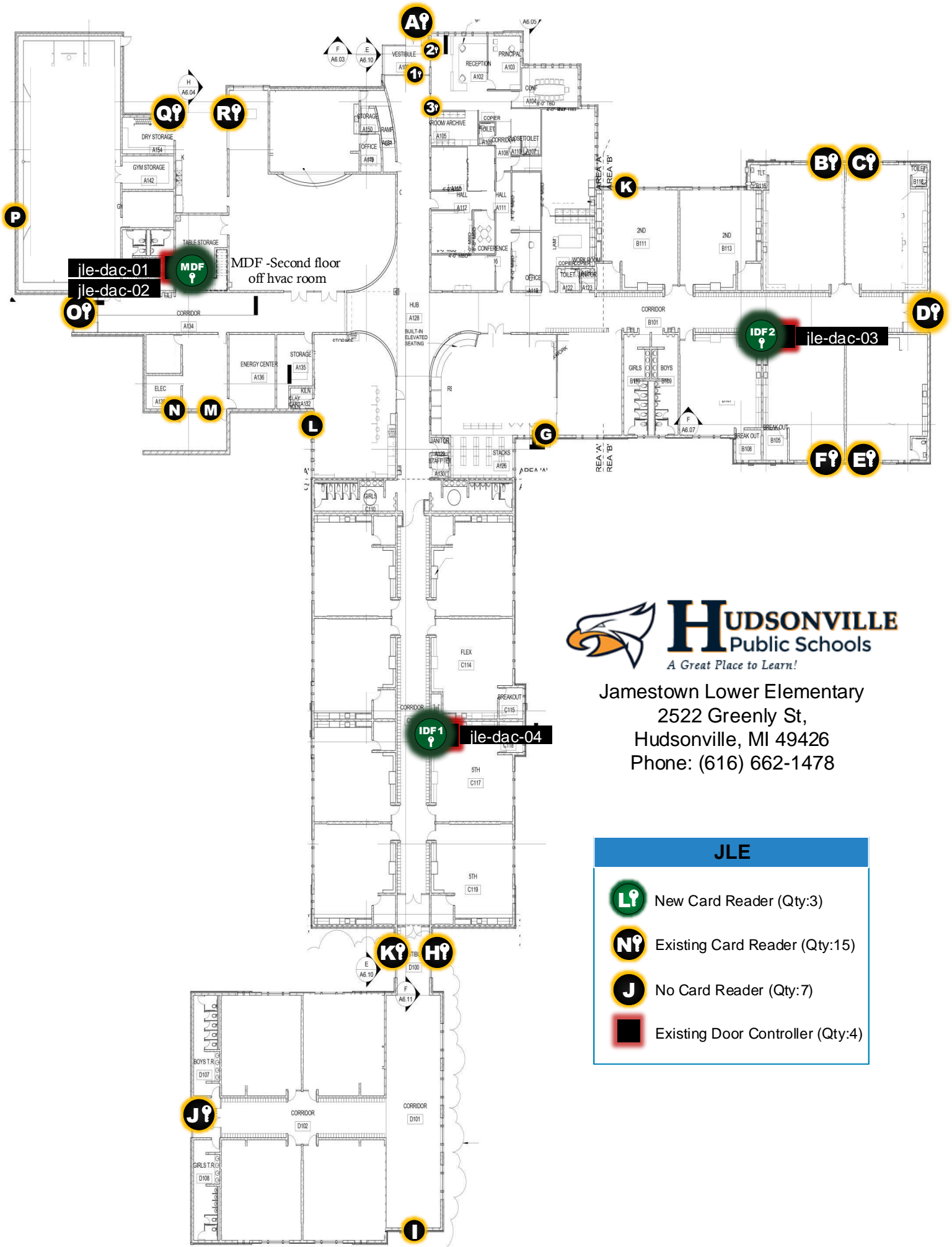




Jamestown Upper Elementary School
 3291 Lincoln Ct.
 Hudsonville, MI 49426
 (616) 896-9375

JES	
	New Card Reader (Qty:4)
	Existing Card Reader (Qty:9)
	No Card Reader (Qty:5)
	Existing Door Controller (Qty:2)





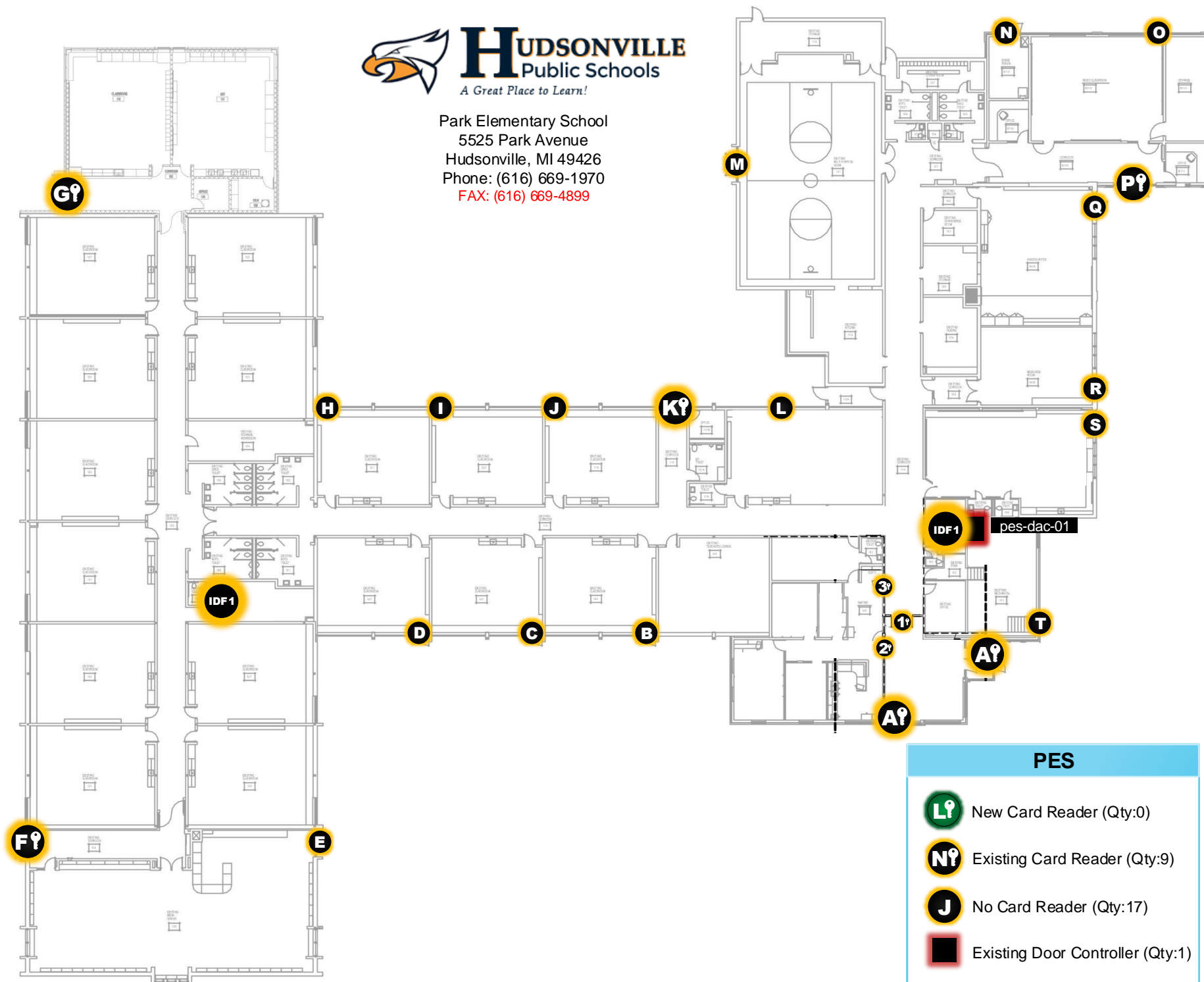
Jamestown Lower Elementary
2522 Greenly St,
Hudsonville, MI 49426
Phone: (616) 662-1478

JLE

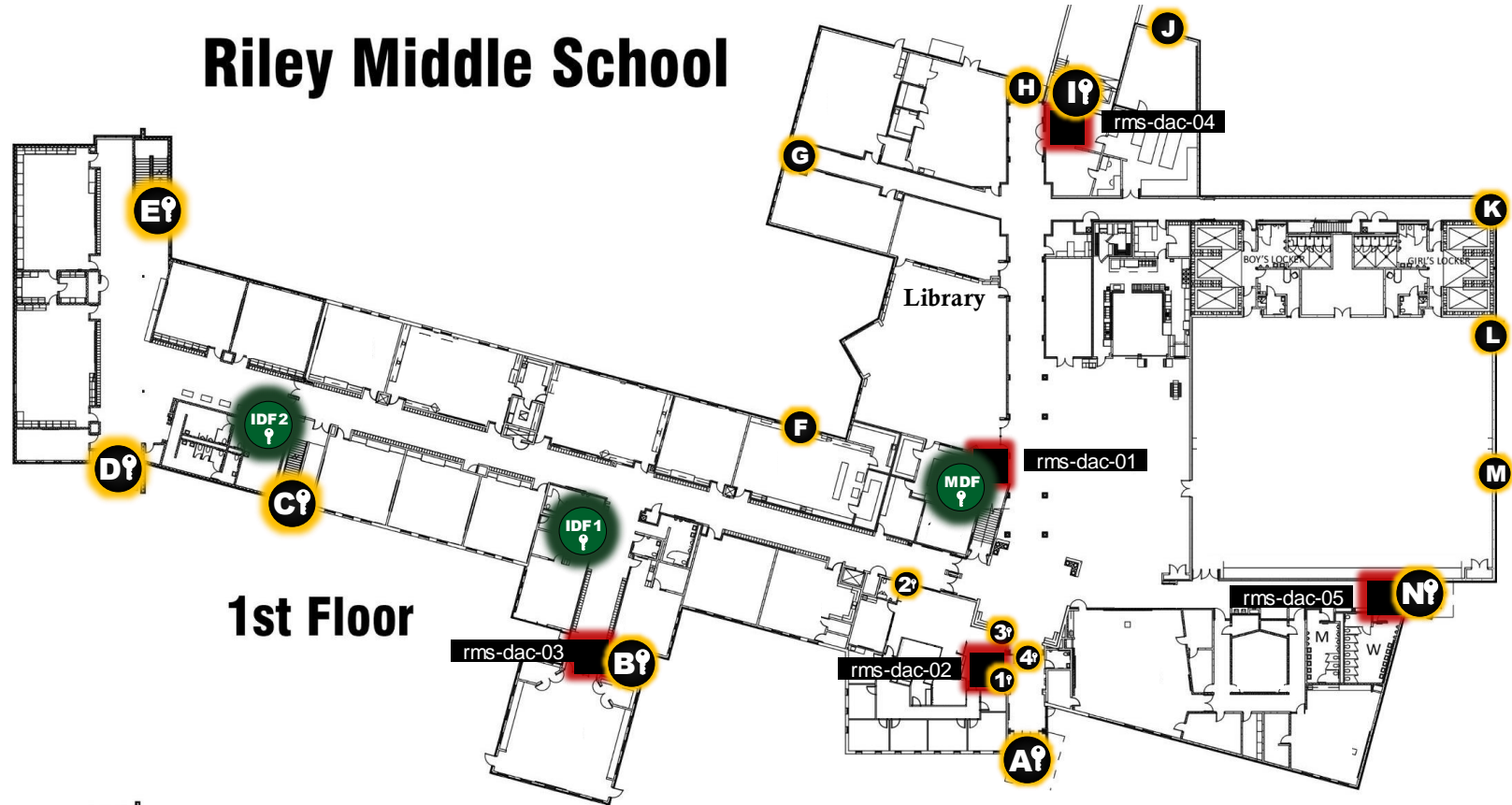
- L?** New Card Reader (Qty:3)
- N?** Existing Card Reader (Qty:15)
- J** No Card Reader (Qty:7)
- Existing Door Controller (Qty:4)



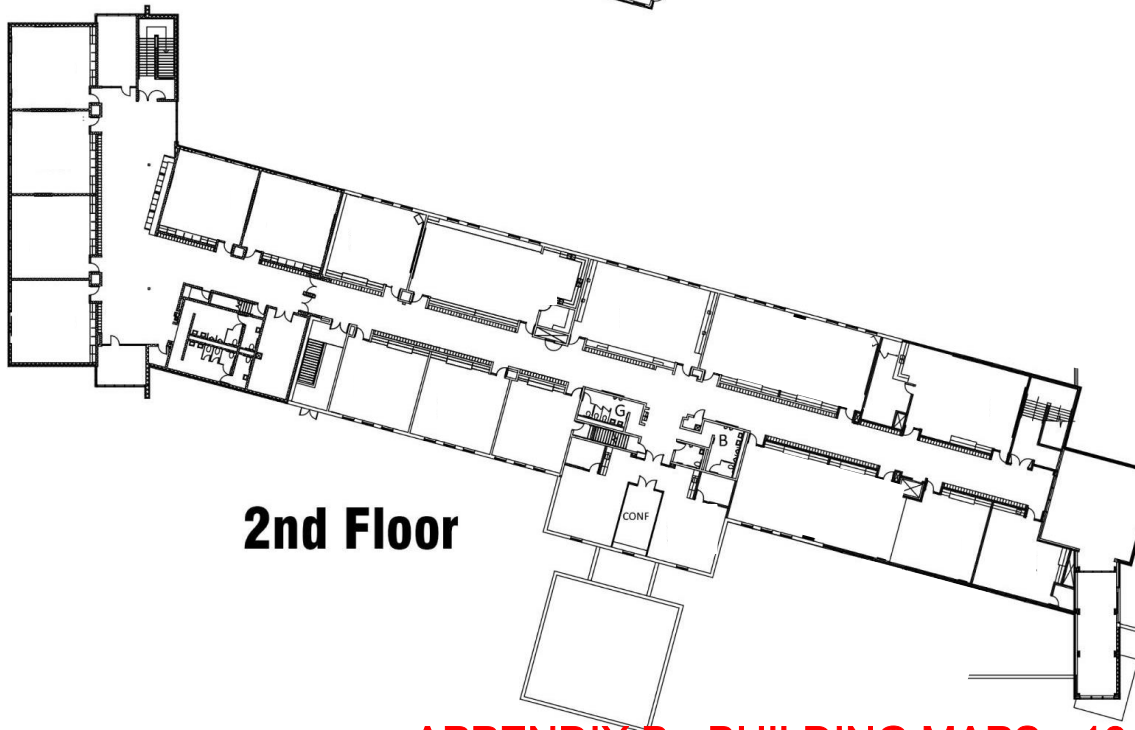
Park Elementary School
 5525 Park Avenue
 Hudsonville, MI 49426
 Phone: (616) 669-1970
 FAX: (616) 669-4899



Riley Middle School



1st Floor







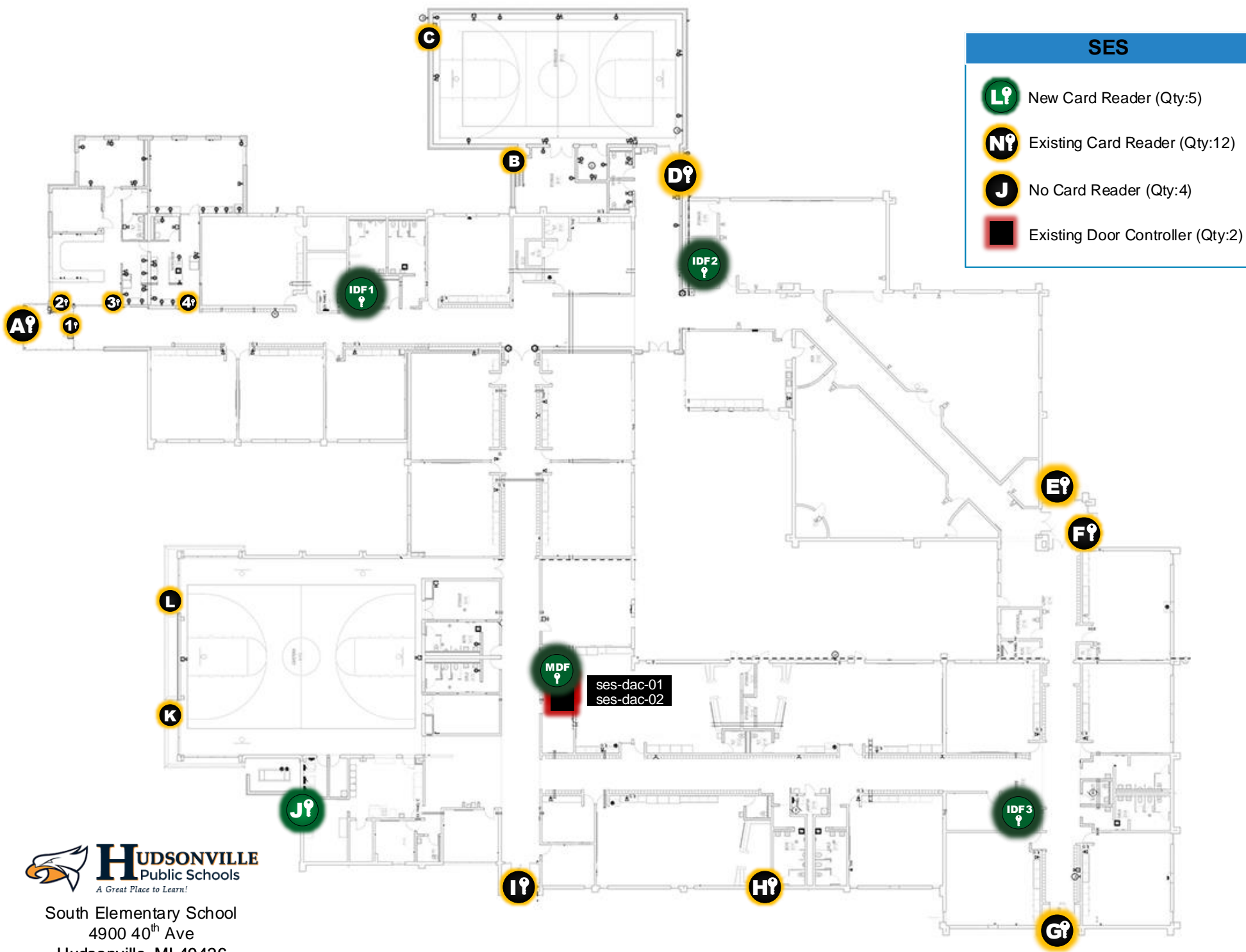
2nd Floor



Riley Street Middle School
 2745 Riley Street
 Hudsonville, MI 49426
 Phone: (616) 896-1920

RMS

-  New Card Reader (Qty:3)
-  Existing Card Reader (Qty:11)
-  No Card Reader (Qty:7)
-  Existing Door Controller (Qty:5)



South Elementary School
 4900 40th Ave
 Hudsonville, MI 49426
 616) 797-9797

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 01

Hudsonville Public Schools

Appendix C: Additional Existing Door Upgrades Equipment List

Building	Door Controller	Electric Strike	REX	DPS
Alward Elementary	3	3	3	4
Baldwin Street Middle School	5	4	5	5
Bauer Elementary	1	1	1	1
Forest Grove Elementary	2	2	2	3
Georgetown Elementary	2	2	2	4
Early Childhood Center / Technology Office	5	5	5	7
Hudsonville High School	5	5	5	5
Jamestown Lower Elementary	3	3	3	3
Jamestown Upper Elementary	5	5	5	7
Riley Street Middle School	3	3	3	3
South Elementary	5	5	5	6
TOTALS	39	38	39	48

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 02

Alward Elementary					
Door/Reader ID	Door Controller	Electric Strike	REX	DPs	
<u>L</u>	1	1	1	1	
<u>P</u>	1	1	1	1	
<u>U</u>	1	1	1	2	
Totals	3	3	3	4	

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 03

Baldwin Street Middle School				
Door/Reader ID	Door Controller	Electric Strike	REX	DPS
MDF	1	1	1	1
IDF1	1	1	1	1
IDF2	1	1	1	1
IDF3	1	1	1	1
I	1		1	1
Totals	5	4	5	5

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 04

Bauer Elementary				
Door/Reader ID	Door Controller	Electric Strike	REX	DPS
MDE	1	1	1	1
Totals	1	1	1	1

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 05

Forest Grove Elementary				
Door ID	Door Controller	Electric Strike	REX	DPS
MDE	1	1	1	1
G	1	1	1	2
Totals	2	2	2	3

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 06

Georgetown Elementary				
Door/Reader ID	Door Controller	Electric Strike	REX	DPS
D	1	1	1	2
C	1	1	1	2
Totals	2	2	2	4

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 07

Early Childhood Center / Technology Office				
Door/Reader ID	Door Controller	Electric Strike	REX	DPS
MDF	1	1	1	1
204	1	1	1	1
113	1	1	1	2
E	1	1	1	2
118	1	1	1	1
Totals	5	5	5	7

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 08

Hudsonville High School				
Door/Reader ID	Door Controller	Electric Strike	REX	DPS
MDF	1	1	1	1
IDF1	1	1	1	1
IDF2	1	1	1	1
IDF3	1	1	1	1
IDF5	1	1	1	1
Totals	5	5	5	5

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 09

Jamestown Lower Elementary				
Door/Reader ID	Door Controller	Electric Strike	REX	DPS
MDF	1	1	1	1
IDF1	1	1	1	1
IDF2	1	1	1	1
Totals	3	3	3	3

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 10

Jamestown Upper Elementary				
Door/Reader ID	Door Controller	Electric Strike	REX	DPS
MDF	1	1	1	1
IDF1	1	1	1	1
J	1	1	1	2
K	1	1	1	2
602	1	1	1	1
Totals	5	5	5	7

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 11

Riley Street Middle School				
Door/Reader ID	Door Controller	Electric Strike	REX	DPS
MDF	1	1	1	1
IDF1	1	1	1	1
IDF5	1	1	1	1
Totals	3	3	3	3

APPENDIX C: ADDITIONAL EXISTING DOOR UPGRADES - 12

South Elementary				
Door/Reader ID	Door Controller	Electric Strike	REX	DPS
MDF	1	1	1	1
IDF1	1	1	1	1
IDF2	1	1	1	1
IDF3	1	1	1	1
J	1	1	1	2
Totals	5	5	5	6

APPENDIX D: CONSTRUCTION SPECS AND DRAWINGS - 01

ELECTRICAL ABBREVIATIONS			
AFB	ABOVE FINISHED FLOOR	INTLK	INTERLOCK
BKR	BREAKER	JCT	JUNCTION
BOB	BOTTOM OF BOX	JB	JUNCTION BOX
BOS	BOTTOM OF STRUCTURE	KW	KILOWATT
BP	BREAKER PANEL	KWH	KILOWATT HOUR
BUD	BUILDING	KO	KNOCK OUT
CAP	CAPACITY	LBL	LABEL
CLG	CEILING	LT	LIGHT
CKT	CIRCUIT	LC	LIGHT CONTROL
CB	CIRCUIT BREAKER	LCM	LIGHTING CONTROL MODULE
C	CONDUIT	LON	LIGHTING CONTROL NARRATIVE
COMM	COMMUNICATIONS	LTO	LIGHTING
CONN	CONNECTION	MAX	MAXIMUM
CONST	CONSTRUCTION	MOC	MOTOR CONTROL CENTER
CONTR	CONTRACT (OR)	MIN	MINIMUM
CLL	CONTRACT LIMIT LINE	MRS	MOTORIZED ROLLER SHADE
CT	CURRENT TRANSFORMER	NEC	NATIONAL ELECTRIC CODE
E.C.	ELECTRICAL CONTRACTOR	NEG	NEGATIVE (-)
END	ELECTRIC HAND DRIVER	NC	NORMALLY CLOSED
ELEC	ELECTRIC (AL)	NO	NORMALLY OPEN
EWG	ELECTRIC WATER COOLER	N/A	NOT APPLICABLE
EM	EMERGENCY	NIC	NOT IN CONTRACT
ENT	ENTRANCE	NL	NIGHT LIGHT
EQ	EQUAL	PC	PHOTO CELL
EQUIP	EQUIPMENT	POS	POSITIVE (+)
EST	ESTIMATE	PWR	POWER
EF	EXHAUST FAN	P & L	POWER & LIGHTING
ETR	EXISTING TO REMAIN	S	SURFACE
EX	EXISTING	S.B.O.	SUPPLIED BY OTHERS
F	FLUSH	SP	SINGLE POLE
FA	FIRE ALARM	SPO	SURGE PROTECTION DEVICE
FSE	FOOD SERVICE EQUIPMENT	SPR	SPEAKER
FP	FIRE PROOF / FIRE PROTECTION	SPEC	SPECIFICATION
FLR	FLOOR	SUB	SUBSTITUTE
FLUOR	FLUORESCENT	SWBD	SWITCHBOARD
GEN	GENERATOR	TEL	TELEPHONE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TS/AT	THERMOSTAT
GND	GROUND	TRMR	TRANSFORMER
HORIZ	HORIZONTAL	UG	UNDERGROUND
HTR	HEATER	UL	UNDERWRITERS LABORATORIES
HEATING	HEATING / VENTILATING	UH	UNIT HEATER
HV	HEATING / VENTILATING	UNO	UNLESS NOTED OTHERWISE
HVAC	HEATING, VENTILATING, AIR CONDITIONING	VERT	VERTICAL
HDA	HAND - OFF - AUTOMATIC	WI	WITH
HP	HEAT PUMP	W/O	WITHOUT
		WL	WET LOCATION
		WP	WEATHER PROOF

MAXIMUM CONDUCTOR LENGTHS FOR TYPICAL BRANCH CIRCUITS									
FEET ONE-WAY BASED ON SINGLE PHASE, 20A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL CONDUIT, 3% VOLTAGE DROP									
CIRCUIT VOLTAGE	CONDUCTOR SIZE								
	#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG				
120	60	100	150	245	385				
208	100	170	265	425	670				
277	135	230	355	565	890				
480	240	400	615	980					
FEET ONE-WAY BASED ON THREE PHASE, 20A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL CONDUIT, 3% VOLTAGE DROP									
CIRCUIT VOLTAGE	CONDUCTOR SIZE								
	#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG				
120	120	200	305	490	775				
480	275	460	710	1,130					
FEET ONE-WAY BASED ON SINGLE PHASE, 30A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL CONDUIT, 3% VOLTAGE DROP									
CIRCUIT VOLTAGE	CONDUCTOR SIZE								
	#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG				
120	60	100	150	245	385				
208	100	170	265	425	670				
277	135	230	355	565	890				
480	240	400	615	980					
FEET ONE-WAY BASED ON THREE PHASE, 30A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL CONDUIT, 3% VOLTAGE DROP									
CIRCUIT VOLTAGE	CONDUCTOR SIZE								
	#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG				
120	120	200	305	490	775				
480	275	460	710	1,130					

COMMUNICATIONS SYMBOL LEGEND	
	COMMUNICATIONS OUTLET ROUGH-IN
	COMMUNICATIONS OUTLET, ONE DATA ACTIVATION
	COMMUNICATIONS OUTLET, CEILING-MOUNTED
	COMMUNICATIONS OUTLET, FLOOR-MOUNTED
	CEILING-MOUNTED VIDEO PROJECTOR
	COMMUNICATIONS EQUIPMENT RACK, FLOOR-MOUNTED
	COMMUNICATIONS EQUIPMENT RACK, WALL-MOUNTED
	CONDUIT SLEEVE FOR COMMUNICATIONS CABLING, 2" TYPE, UNLESS NOTED
	LOUDSPEAKER, CEILING-MOUNTED, DEVICE FURNISHED AND INSTALLED BY OWNER'S TECHNOLOGY CONTRACTOR
	LOUDSPEAKER, WALL-MOUNTED, DEVICE FURNISHED AND INSTALLED BY OWNER'S TECHNOLOGY CONTRACTOR
	INTERCOM SYSTEM CALL STATION BUTTON
	VOLUME CONTROL FOR AUDIO SYSTEM, PAGING, OR INTERCOM LOUDSPEAKERS
	SECONDARY CLOCK, CEILING-MOUNTED, DEVICE FURNISHED AND INSTALLED BY OWNER'S TECHNOLOGY CONTRACTOR
	SECONDARY CLOCK, WALL-MOUNTED, DEVICE FURNISHED AND INSTALLED BY OWNER'S TECHNOLOGY CONTRACTOR
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

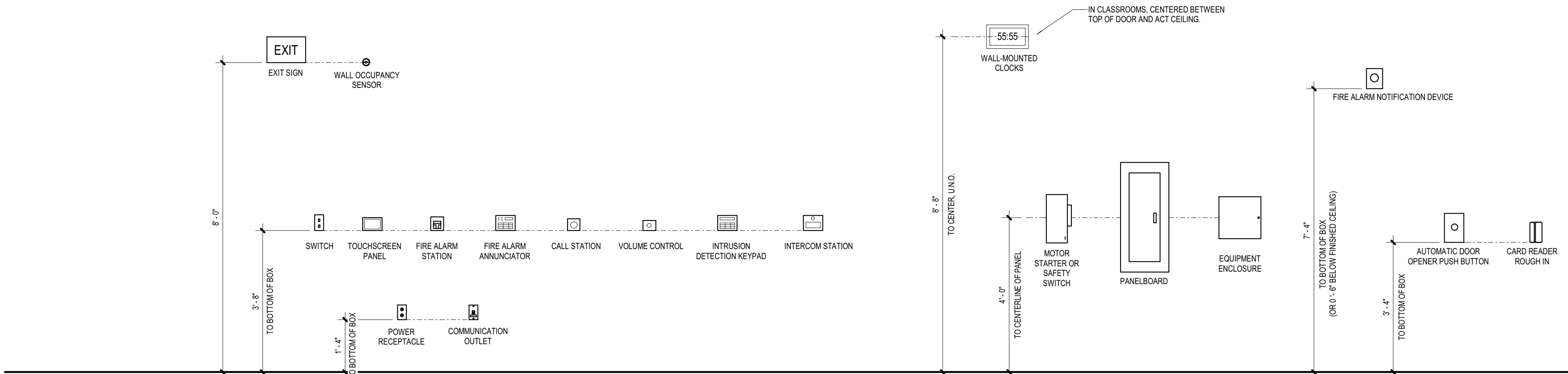
ELECTRONIC SAFETY / SECURITY SYMBOL LEGEND	
	DOOR CONTACT
	ELECTRONIC LATCH
	ELECTRONIC STRIKE
	PADLOCK
	WALL-MOUNTED SURVEILLANCE CAMERA COMMUNICATIONS ROUGH-IN
	CEILING-MOUNTED SURVEILLANCE CAMERA COMMUNICATIONS ROUGH-IN
	CARD READER
	ACCESS CONTROL SYSTEM EQUIPMENT
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

POWER SYMBOL LEGEND	
	THREE PHASE MOTOR CONNECTION, 5 HORSE POWER
	SINGLE PHASE MOTOR CONNECTION, 1/2 HORSE POWER
	SAFETY SWITCH DISCONNECTING MEANS, NOT FUSIBLE
	SAFETY SWITCH DISCONNECTING MEANS, FUSIBLE
	COMBINATION MOTOR STARTER AND FUSIBLE DISCONNECTING MEANS
	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECTING MEANS
	MOTOR STARTER
	BOX-COVER FUSIBLE DISCONNECT SWITCH
	MANUAL MOTOR CONTROLLER
	POWER SWITCH, REFER TO LIGHTING SYMBOL LEGEND FOR SIMILAR SWITCH TYPES
	DIRECT ELECTRICAL CONNECTION
	SINGLE RECEPTACLE
	SINGLE RECEPTACLE, FLOOR-MOUNTED
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, CEILING-MOUNTED
	DUPLEX RECEPTACLE, FLOOR-MOUNTED
	DUPLEX STANDBY POWER RECEPTACLE
	DUPLEX SPLIT WIRED RECEPTACLE
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	QUADRIPLEX RECEPTACLE
	QUADRIPLEX RECEPTACLE, CEILING-MOUNTED
	QUADRIPLEX RECEPTACLE, FLOOR-MOUNTED
	MULTI-PHASE RECEPTACLE, SEE PLAN FOR TYPE
	MULTI-PHASE RECEPTACLE, FLOOR-MOUNTED
	SURFACE RACEWAY SYSTEM
	ATS
	AUTOMATIC TRANSFER SWITCH
	SWITCHBOARD
	PANELBOARD
	TRANSFORMER
	MOTOR CONTROL CENTER
	EMERGENCY STOP STATION, REFER TO DETAIL FOR REQUIREMENTS
	ON/OFF PUSH BUTTON
	THREE-FUNCTION PUSH BUTTON
	FLOORBOX, TYPE 1
	JUNCTION BOX
	METER
	THERMOSTAT ROUGH-IN
	RELAY
	ENCLOSED CONTROL CONTACTOR
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

LIGHTING SYMBOL LEGEND	
	SINGLE POLE LIGHT SWITCH
	DOUBLE POLE LIGHT SWITCH
	THREE-WAY LIGHT SWITCH
	FOUR-WAY LIGHT SWITCH
	SINGLE POLE LIGHT SWITCH WITH INTEGRAL OCCUPANCY SENSOR
	OCCUPANCY SENSOR DIMMER
	WALL BOX DIMMER SWITCH
	THREE-WAY DIMMER SWITCH
	ELECTRONIC INTERVAL TIMER SWITCH
	LIGHT SWITCH WITH PILOT LIGHT
	LIGHTING CONTROL SWITCH, REFER TO LIGHTING CONTROL SWITCH SCHEDULE AND SPECIFICATIONS FOR DETAILS
	DOUBLE THROW (MAINTAINED) LIGHT SWITCH
	KEY-OPERATED LIGHT SWITCH (SUFFIX DESIGNATION) (BLANK: SINGLE POLE, 2 DOUBLE POLE, 3 THREE-WAY, 4 FOUR-WAY)
	LOOKING SWITCH (SUFFIX DESIGNATION) (BLANK: SINGLE POLE, 2 DOUBLE POLE, 3 THREE-WAY, 4 FOUR-WAY)
	TOUCHSCREEN PANEL
	CIRCUIT NUMBER FOR LIGHT FIXTURES WITHIN INDICATED SPACE
	LP-A-X
	RECESSED LIGHTING FIXTURE, TYPE 'X'
	SURFACE MOUNTED LIGHTING FIXTURE, TYPE 'X'
	TRACK LIGHTING
	SINGLE FACE EXIT SIGN, TYPE 'X' IN SCHEDULE UNLESS OTHERWISE NOTED, SHADING INDICATES FACE ORIENTATION
	DOUBLE FACE EXIT SIGN, TYPE 'X' IN SCHEDULE UNLESS OTHERWISE NOTED, SHADING INDICATES FACE ORIENTATION
	WALL-MOUNTED EXIT SIGN
	EMERGENCY LIGHT FIXTURE DESIGNATION
	EMERGENCY LIGHTING AUTOMATIC LOAD CONTROL RELAY
	LIGHTING CONTROL RELAY
	LIGHTING CONTROL ENCLOSED CONTACTOR
	TIME SWITCH
	LIGHTING CONTROL MODULE
	EMERGENCY LIGHTING INVERTER, TYPE 1
	WALL-MOUNTED OCCUPANCY SENSOR
	CEILING-MOUNTED OCCUPANCY SENSOR
	WALL-MOUNTED PHOTOCELL FOR ON/OFF CONTROL
	CEILING-MOUNTED PHOTOCELL FOR ON/OFF CONTROL
	WALL-MOUNTED PHOTOSENSOR FOR DAYLIGHT HARVESTING DIMMING CONTROL
	CEILING-MOUNTED PHOTOSENSOR FOR DAYLIGHT HARVESTING DIMMING CONTROL
	POLE-MOUNTED SITE/AREA FIXTURE
	SELF-CONTAINED EMERGENCY LIGHTING UNIT
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

FIRE ALARM SYMBOL LEGEND	
	MANUAL PULL STATION
	AUDIBLE NOTIFICATION APPLIANCE, WALL-MOUNTED
	VISUAL NOTIFICATION APPLIANCE, WALL-MOUNTED
	AUDIBLE/VISUAL NOTIFICATION APPLIANCE, WALL-MOUNTED
	AUDIBLE NOTIFICATION APPLIANCE, CEILING-MOUNTED
	AUDIBLE/VISUAL NOTIFICATION APPLIANCE, CEILING-MOUNTED
	VISUAL NOTIFICATION APPLIANCE, CEILING-MOUNTED
	WHERE 'WGPC' IS NOTED, PROVIDE LISTED WIRE GUARD OR PROTECTIVE POLYCARBONATE COVER FOR NOTIFICATION DEVICE
	WHERE 'WL' IS NOTED, PROVIDE LISTED WET LOCATION NOTIFICATION DEVICE, SUITABLE FOR INDOOR OR OUTDOOR USE
	SMOKE DETECTOR
	HEAT DETECTOR
	DUCT SMOKE DETECTOR
	SMOKE DAMPER OPERATOR MOTOR
	FIRE PROTECTION FLOW SWITCH
	FIRE PROTECTION TAMPER SWITCH
	ELECTROMAGNETIC DOOR HOLD-OPEN DEVICE
	ADDRESSABLE RELAY FOR FIRE ALARM CONTROL
	PRESSURE SWITCH
	CARBON MONOXIDE DETECTOR
	NOTIFICATION APPLIANCE CONTROL PANEL
	FIRE ALARM REMOTE ANNUNCIATOR
	FIRE ALARM CONTROL PANEL
	KEYED TEST SWITCH AND REMOTE INDICATOR FOR DUCT SMOKE DETECTOR
	FIRE PROTECTION OR ALARM BELL
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

ELECTRICAL GENERAL NOTES	
1.	ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE AS AMENDED AND ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION WHERE THE WORK IS PERFORMED.
2.	ALL "LOW-VOLTAGE" CONTROLS, COMMUNICATIONS, AND SAFETY/SECURITY CABLING MAY BE INSTALLED WITHOUT CONDUIT, RACEWAY, OR CABLE TRAY ONLY WHERE CONCEALED ABOVE A SUSPENDED CEILING SYSTEM AND ACCESSIBLE FOR FUTURE MAINTENANCE. OTHERWISE, ALL CABLING (INCLUDING BUT NOT LIMITED TO CABLES ASSOCIATED WITH SYSTEMS SUCH AS ARCHITECTURAL EQUIPMENT, BUILDING ENERGY MANAGEMENT, TEMPERATURE CONTROLS, LIGHTING CONTROLS, COMMUNICATIONS NETWORKS, TELEPHONE, AUDIO-VIDEO, INTERCOM, PAGING, CLOCK, SURVEILLANCE, ACCESS CONTROL, FIRE ALARM, ETC.) SHALL BE INSTALLED IN AN APPROVED CONDUIT, RACEWAY SYSTEM, AND/OR CABLE TRAY UNLESS OTHERWISE NOTED. IN EXPOSED STRUCTURE CEILING AREAS, CONCEALED INSTALLATION OF CABLES IN RACEWAYS SHALL BE REQUIRED FOR AESTHETIC REASONS. REFER TO REFERENCED CEILING PLANS FOR LOCATIONS. THIS APPLIES TO ALL TRADES AND WORK CATEGORIES. EXCEPTIONS: A. DEDICATED MECHANICAL AND/OR ELECTRICAL ROOMS ABOVE 6'-0" AFF B. DEDICATED TELECOMMUNICATIONS ROOMS
3.	"LOW-VOLTAGE" CONTROLS, COMMUNICATIONS, AND SAFETY/SECURITY CABLING SHALL NOT BE PAINTED. PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY PROTECTION OF ANY EXISTING CABLING PRIOR TO PAINTING EXISTING AREAS. CONTRACTORS INSTALLING CABLING WHERE APPROVED FOR EXPOSED INSTALLATION SHALL INSTALL CABLES AFTER PAINTING HAS BEEN COMPLETED OR PROVIDE TEMPORARY PROTECTION OF CABLES UNTIL PAINTING HAS BEEN COMPLETED. PAINTED CABLES SHALL BE REPLACED AT THE EXPENSE OF THE NEGLIGENT CONTRACTOR.
4.	METAL CLAD CABLE MAY BE USED FOR FIXTURE WHIPS IN LENGTHS OF 6 FEET OR LESS ABOVE AN ACCESSIBLE SUSPENDED CEILING SYSTEM ONLY. OTHERWISE, METAL CLAD OR OTHER FLEXIBLE CABLE TYPES SHALL NOT BE USED UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER. IT IS THE INTENT OF THESE CONTRACT DOCUMENTS THAT ALL INSTALLED BRANCH CIRCUITS CONSIST OF SEPARATE RACEWAY AND CONDUCTORS ALLOWING REMOVAL AND REPLACEMENT OF WIRING AS REQUIRED FOR FUTURE UPGRADES. REFER TO SPECIFICATIONS FOR EXCEPTIONS.
5.	CIRCUIT WIRING FOR ARTICLE 700 EMERGENCY SYSTEMS AND ARTICLE 708 CRITICAL OPERATIONS POWER SYSTEMS SHALL BE INSTALLED IN SEPARATE CONDUITS/RACEWAYS AND BE KEPT ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND EQUIPMENT PER NEC REQUIREMENTS.
6.	ALL FEEDERS AND BRANCH CIRCUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR SIZED ACCORDING TO THE NEC RACEWAYS INCLUDING CONDUITS, BOXES, WIREWAYS, ETC. SHALL NOT BE CONSIDERED AN ACCEPTABLE GROUND.
7.	CONDUITS AND CABLES SHALL NOT BE INSTALLED WITHIN 4" OF ROOF DECK, EXCEPT AS NECESSARY TO SERVE ROOF-MOUNTED ITEMS AND ONLY WHEN THE CONDUIT OR CABLE IS ROUTED VERTICALLY TO SUCH EQUIPMENT FROM BELOW.
8.	SUPPLEMENTAL METAL FRAMING SHALL BE PROVIDED FOR SUSPENSION POINTS OF ALL ITEMS LOCATED BETWEEN OVERHEAD STRUCTURAL MEMBERS (JOISTS, TRUSSES, BEAMS, ETC.) IN DEPENDABLE STRUCTURE CEILING AREAS. METAL FRAMING SHALL SPAN ACROSS THE TOP CHORD OR FLANGE OF THE STRUCTURAL MEMBERS FOR BOTH STRUCTURAL AND AESTHETIC PURPOSES. SPECIFIC EXCEPTIONS SHALL BE COORDINATED IN WRITING WITH THE ARCHITECT/ENGINEER.
9.	CONDUIT INSTALLED WITHIN INACCESSIBLE CONSTRUCTION SHALL BE 3/4" MINIMUM SIZE.
10.	FEEDERS SHOWN ON DRAWINGS ARE SCHEMATIC ONLY. CONDUIT RUNS SHALL COMPLY WITH CONDUIT SPECIFICATIONS AND CONTAIN BENDS THAT ARE NO GREATER THAN 90 DEGREES. CONDUITS INSTALLED ABOVE GRADE SHALL BE RUN PARALLEL TO, OR PERPENDICULAR WITH, BUILDING STEEL AND/OR ARCHITECTURAL LINES.
11.	CONTRACTOR(S) SHALL VERIFY COLOR/FINISH OF WIRING DEVICES, DEVICE FACEPLATES, SURFACE RACEWAY SYSTEMS, AND/OR MULTI-OUTLET ASSEMBLIES WITH ARCHITECT/ENGINEER IF NOT EXPLICITLY SPECIFIED.
12.	ELECTRICAL CONTRACTOR SHALL REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ADDITIONAL LIGHTING FIXTURE INFORMATION AND MOUNTING LOCATIONS.
13.	ELECTRICAL CONTRACTOR SHALL ADJUST LIGHTING FIXTURE LOCATIONS IN MECHANICAL ROOMS TO ACCOMMODATE MECHANICAL EQUIPMENT AND FIELD CONDITIONS.
14.	CONTRACTOR(S) SHALL BE RESPONSIBLE TO REVIEW INTERIOR ELEVATION SHEETS FOR PLACEMENT OF DEVICE BOXES. COORDINATE LOCATIONS SO THAT NO DEVICES ARE INSTALLED BEHIND CASEWORK, MILLWORK, VISUAL DISPLAY BOARDS, MIRRORS, CUSTOM GRAPHICS, SIGNAGE, ETC.
15.	ELECTRICAL CONTRACTOR SHALL REVIEW TOILET EQUIPMENT SHOP DRAWINGS AND ARCHITECTURAL DETAIL ELEVATIONS FOR CORRECT DEVICE BOX ROUGH-IN LOCATION OR HAND DRIVERS.
16.	ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PLUMBING CONTRACTOR AND THE ELECTRIC WATER COOLER (BOTTLE FILLER) SHOP DRAWINGS FOR MOUNTING HEIGHT AND CONNECTION METHOD OF PLUMBING EQUIPMENT POWER CONNECTIONS. READILY ACCESSIBLE GFCI PROTECTION SHALL BE PROVIDED FOR THE BRANCH CIRCUITS SUPPLYING ALL SUCH UNITS PER NEC REQUIREMENTS.
17.	REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR DETAILED INFORMATION REGARDING EQUIPMENT AND CONTROL. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING AND PROVIDING ITEMS AS SPECIFICALLY LISTED AND ASSIGNED ON MECHANICAL EQUIPMENT SCHEDULE SUCH AS DISCONNECT SWITCHES, VARIABLE FREQUENCY DRIVES, STARTERS, TIMERS, SWITCHES, ETC.
18.	ELECTRICAL CONTRACTOR SHALL CONFIRM THE LOCATION OF THE EXHAUST FANS LISTED IN THE MECHANICAL EQUIPMENT SCHEDULES BY REFERRING TO MECHANICAL/HVAC PLANS.
19.	REFER TO ROOF PLANS FOR EXACT LOCATIONS OF ROOF-TOP MECHANICAL EQUIPMENT.
20.	CABINET HEATERS MAY HAVE LINE VOLTAGE THERMOSTATS SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. REFER TO MECHANICAL EQUIPMENT SCHEDULE.
21.	DIVISION 26 CONTRACTOR SHALL PROVIDE CONDUIT SLEEVES WITH APPROPRIATE BUSHINGS FOR CONTROLS AND ELECTRONIC SAFETY/SECURITY CABLING THROUGH WALLS AND FLOORS. SLEEVE SIZES SHALL BE COORDINATED WITH CABLING REQUIREMENTS.
22.	SECTION 27 05 28 CONTRACTOR SHALL PROVIDE CONDUIT SLEEVES WITH APPROPRIATE BUSHINGS FOR COMMUNICATIONS CABLING THROUGH WALLS AND FLOORS. SLEEVE SIZE SHALL BE 2" MIN. UNLESS NOTED OTHERWISE.
23.	PROVIDE DIRECT CONNECTIONS FROM LOCAL RECEPTACLE CIRCUIT TO ACCESS CONTROL SYSTEM AND DOOR HARDWARE POWER SUPPLIES WHERE REQUIRED FOR DOOR LOCK DEVICES, CONTROLLERS, ETC. REFER TO DOOR HARDWARE SCHEDULE AND ACCESS CONTROL SYSTEM SCHEDULE IN RESPECTIVE SPECIFICATIONS FOR QUANTITIES AND LOCATIONS.



NOTE: ALL HEIGHTS ARE AS SHOWN UNLESS NOTED OTHERWISE.

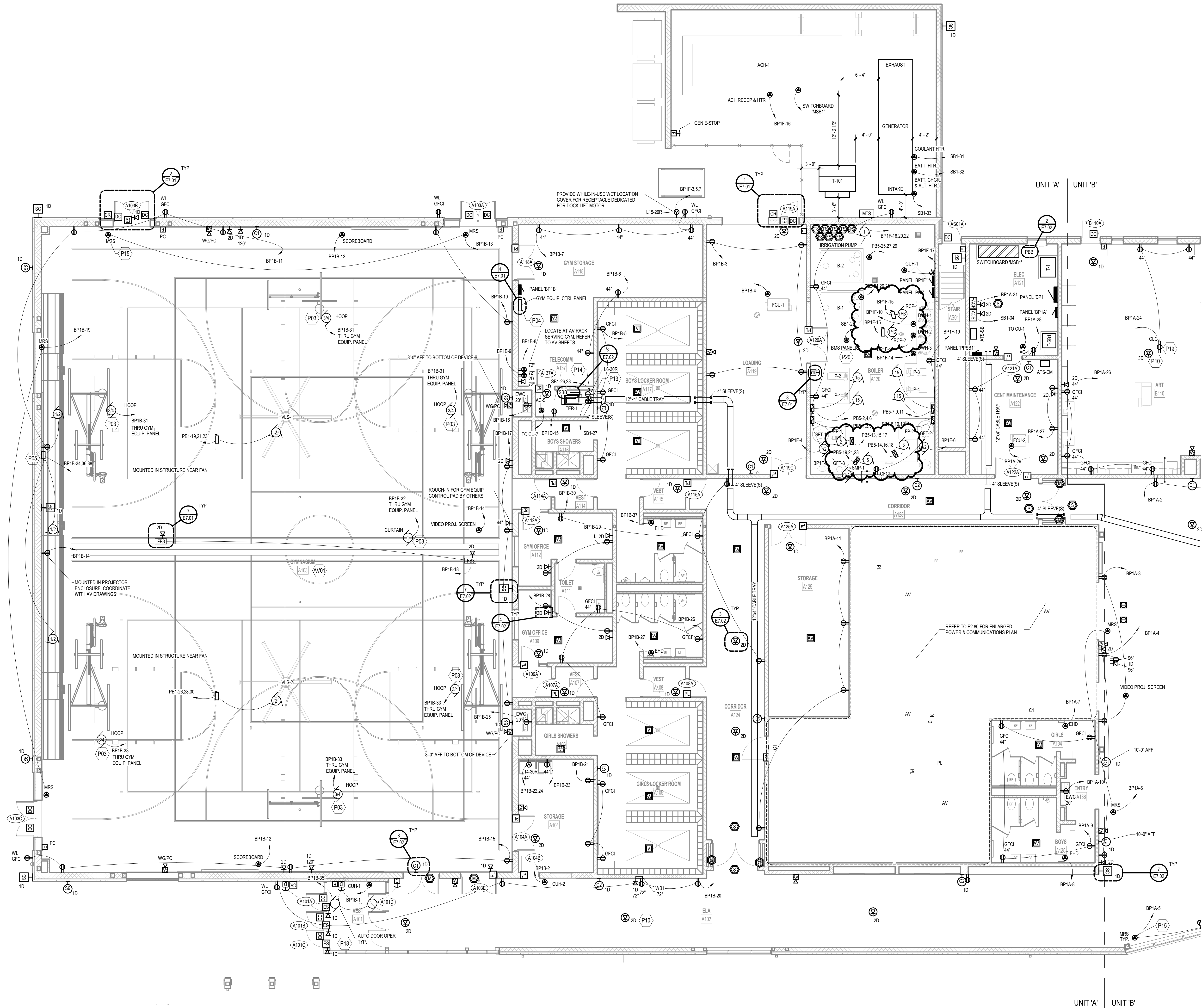
TYPICAL MOUNTING HEIGHTS FOR WALL DEVICES, EQUIPMENT, & FIXTURES
NOT TO SCALE

POWER & COMMUNICATION GENERAL NOTES

- REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
- REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
- REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT WITH BREAKER, LOCKING MECHANISM IN LOCAL PANEL BOARD FOR DAMPERS IN EACH AREA. DAMPERS MAY BE GROUPED ON EACH CIRCUIT, TERMINATED IN BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER WITH CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
- PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES, AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
- PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR ACCESSIBLE LOCATION FOR EACH SMALL < 1/2 HP MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
- REFER TO AV DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

ELECTRICAL KEYNOTES

AV01	REFER TO AV DRAWINGS FOR ADDITIONAL SCOPE. COORDINATE ALL ROUGH-IN LOCATIONS WITH AV DRAWINGS.
P03	E.C. SHALL PROVIDE AND INSTALL 4" SQUARE JUNCTION BOX WITHIN 3'-0" OF WINCH LOCATION FOR TWIST-LOCK RECEPTACLE. TWIST-LOCK RECEPTACLE AND COVER PROVIDED BY EQUIPMENT PROVIDER. (1) HOOK-UP REQUIRED PER DEVICE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.
P04	8-RELAY GYM EQUIPMENT CONTROL PANEL REQUIRED TO SUPPORT (6) HOOP WINCH MOTORS AND (1) LOWER CURTAIN MOTOR. USE (1) RELAY PER DEVICE. POWER EACH PANEL WITH (3) 120V SINGLE PHASE CIRCUITS AS INDICATED IN PANEL SCHEDULE. REFER TO MANUFACTURER INSTRUCTIONS FOR FURTHER DETAILS.
P05	E.C. SHALL PROVIDE AND INSTALL NON-FUSIBLE SAFETY SWITCHES FOR BLEACHER MOTOR. JUNCTION BOX SHALL BE MOUNTED AT 5'-0" AFF. COORDINATE LOCATION WITH EQUIPMENT PROVIDER. REFER TO BLEACHER DETAILS ON ARCHITECTURE SHEETS FOR FURTHER DETAILS.
P10	ALL LOW VOLTAGE CABLEING TO BE IN CONDUIT IN SPACES WITH EXPOSED CEILING. PRIOR TO INSTALL, COORDINATE EXACT LOCATION OF NETWORK ACTIVATIONS WITH OWNER'S TECHNOLOGY CONTRACTOR (FOR ACCESS POINTS, SECURITY CAMERAS, AV EQUIPMENT, ETC.). TERMINATE CABLEING IN SURFACE MOUNT BOX WITH MODULAR CONNECTOR INSIDE JUNCTION BOX. PROVIDE BLANK FACEPLATE FOR UNUSED LOCATIONS. TYPICAL FOR ALL.
P13	RECEPTACLES ON STANDBY POWER SHALL BE YELLOW. TYPICAL FOR ALL.
P14	INSTALL 16-30K RECEPTACLE INSIDE 4-POST RACK FOR UPS. UPS PROVIDED BY OWNER.
P15	MOTORIZED ROLLER SHADES IN THIS SPACE TO BE CONTROLLED BY AV SYSTEM. REFER TO AV DRAWINGS FOR MORE INFORMATION.
P18	ALL ACCESS CONTROL CONDUITS TO NEAREST CABLE TRAY. TERMINATE CABLEING IN JUNCTION BOX RECESSED ABOVE DOOR IN MASONRY WALL OR JUNCTION BOX SURFACE MOUNTED TO STRUCTURE WHERE CEILING IS LESS THAN 20 FEET. TYPICAL FOR ALL ACCESS CONTROL DOORS SHOWN WITH DATA DROPS.
P19	COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNER'S TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.
P20	COORDINATE WITH CONTROLS CONTRACTOR FOR LOCATION OF BMS PANEL.



UNIT 'A' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"

NEW 5TH - 6TH GRADE FACILITY
HUDSONVILLE PUBLIC SCHOOLS
HUDSONVILLE, MICHIGAN

ISSUANCES

10.30.2020	BIDS & CONSTRUCTION
11.18.2020	ADDENDUM 001
11.25.2020	ADDENDUM 004
02.18.2021	BULLETIN 002
04.16.2021	BULLETIN 006
05.11.2021	BULLETIN 007
05.26.2021	BULLETIN 008
06.16.2021	BULLETIN 010
07.01.2021	BULLETIN 011
08.10.2021	BULLETIN 013
08.31.2021	BULLETIN 015
09.28.2021	BULLETIN 016
02.28.2022	BULLETIN 022

DRAWN JFB
REVIEWED AAB

PROJECT NO. 5-5065

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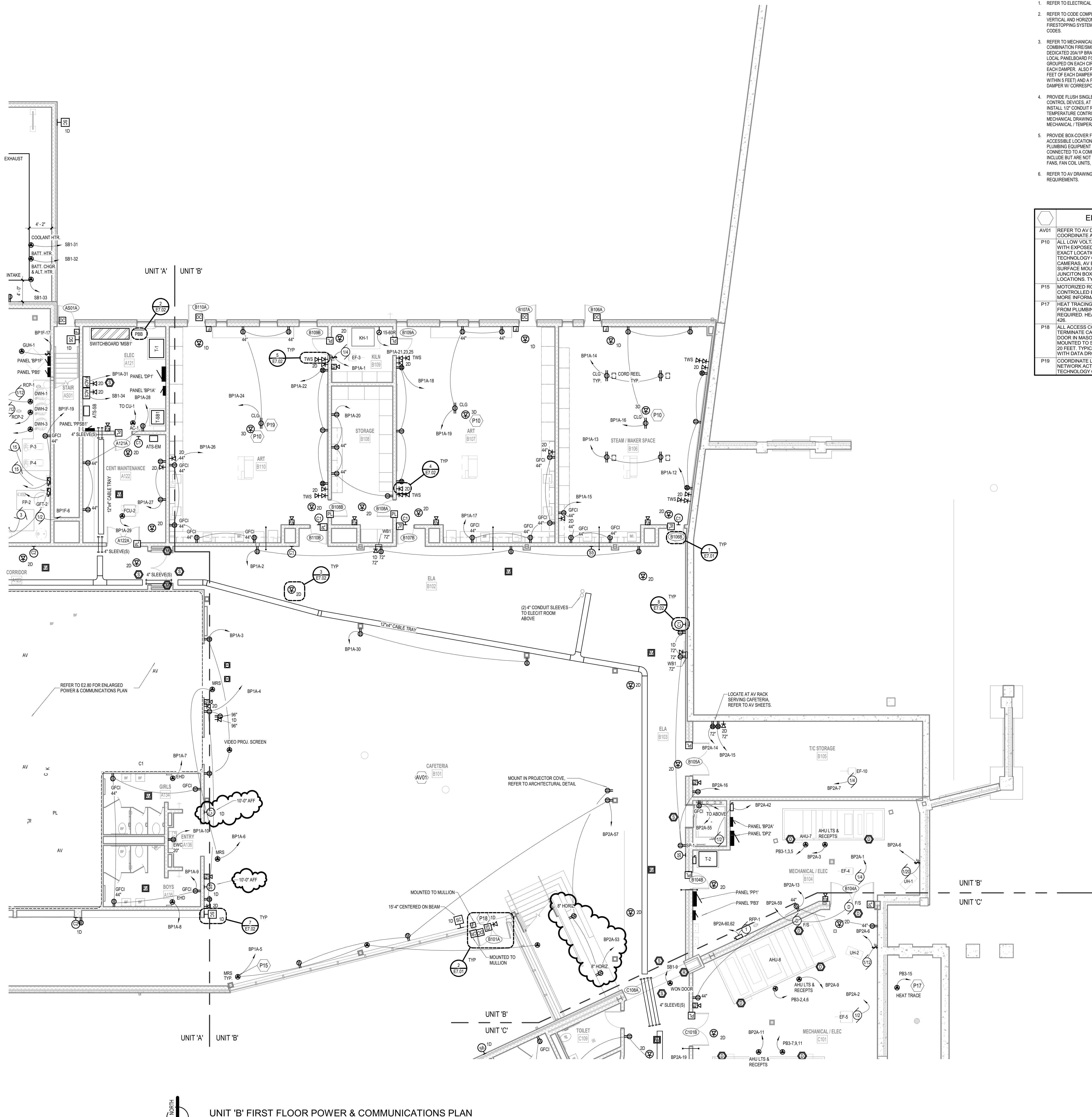
UNIT 'A' FIRST FLOOR POWER & COMMUNICATIONS PLAN

E2.1A

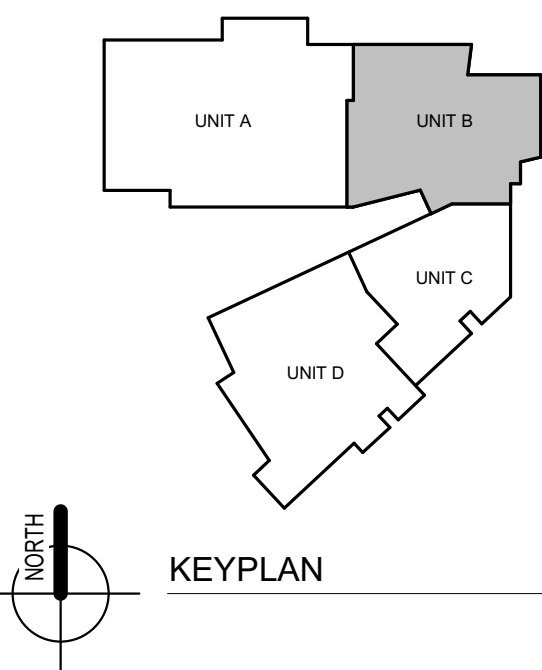
POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM IN LOCAL PANELBOARD FOR DAMPERS) IN EACH AREA DAMPERS MAY BE GROUPED ON EACH CIRCUIT. TERMINATED BY BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE GANG BOXES IN WALLS FOR HVAC, TEMPERATURE CONTROL DEVICES, AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (1/2" HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
6. REFER TO AV DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

ELECTRICAL KEYNOTES	
AV01	REFER TO AV DRAWINGS FOR ADDITIONAL SCOPE. COORDINATE ALL ROUGH-IN LOCATIONS WITH AV DRAWINGS.
P10	ALL LOW VOLTAGE CABLEING TO BE IN CONDUIT IN SPACES WITH EXPOSED CEILINGS. PRIOR TO INSTALL, COORDINATE EXACT LOCATION OF NETWORK ACTIVATIONS WITH OWNERS' TECHNOLOGY CONTRACTOR (FOR ACCESS POINTS, SECURITY CAMERAS, AV EQUIPMENT, ETC.). TERMINATE CABLEING IN SURFACE MOUNT BOX WITH MODULAR CONNECTOR INSIDE JUNCTION BOX. PROVIDE BLANK FACEPLATE FOR UNUSED LOCATIONS. TYPICAL FOR ALL.
P15	MOTORIZED ROLLER SHADES IN THIS SPACE TO BE CONTROLLED BY AV SYSTEM. REFER TO AV DRAWINGS FOR MORE INFORMATION.
P17	HEAT TRACING FOR PLUMBING PIPING PER 22.05.33. LENGTHS FROM PLUMBING PLANS. FIELD VERIFY EXACT LENGTHS REQUIRED. HEAT TRACING SHALL COMPLY WITH NEC ARTICLE 426.
P18	ALL ACCESS CONTROL CONDUITS TO NEAREST CABLE TRAY. TERMINATE CABLEING IN JUNCTION BOX RECESSED ABOVE DOOR IN MASONRY WALL OR JUNCTION BOX SURFACE MOUNTED TO STRUCTURE WHERE CEILINGS ARE LESS THAN 20 FEET. TYPICAL FOR ALL ACCESS CONTROL DOORS SHOWN WITH DATA DROPS.
P19	COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNERS' TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.



UNIT 'B' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"



ISSUANCES	
10.30.2020	BIDS & CONSTRUCTION
11.18.2020	ADDENDUM 001
11.25.2020	ADDENDUM 004
02.18.2021	BULLETIN 002
04.16.2021	BULLETIN 006
05.26.2021	BULLETIN 008
09.28.2021	BULLETIN 016

DRAWN	JFB
REVIEWED	AAB

PROJECT NO. 5-5065

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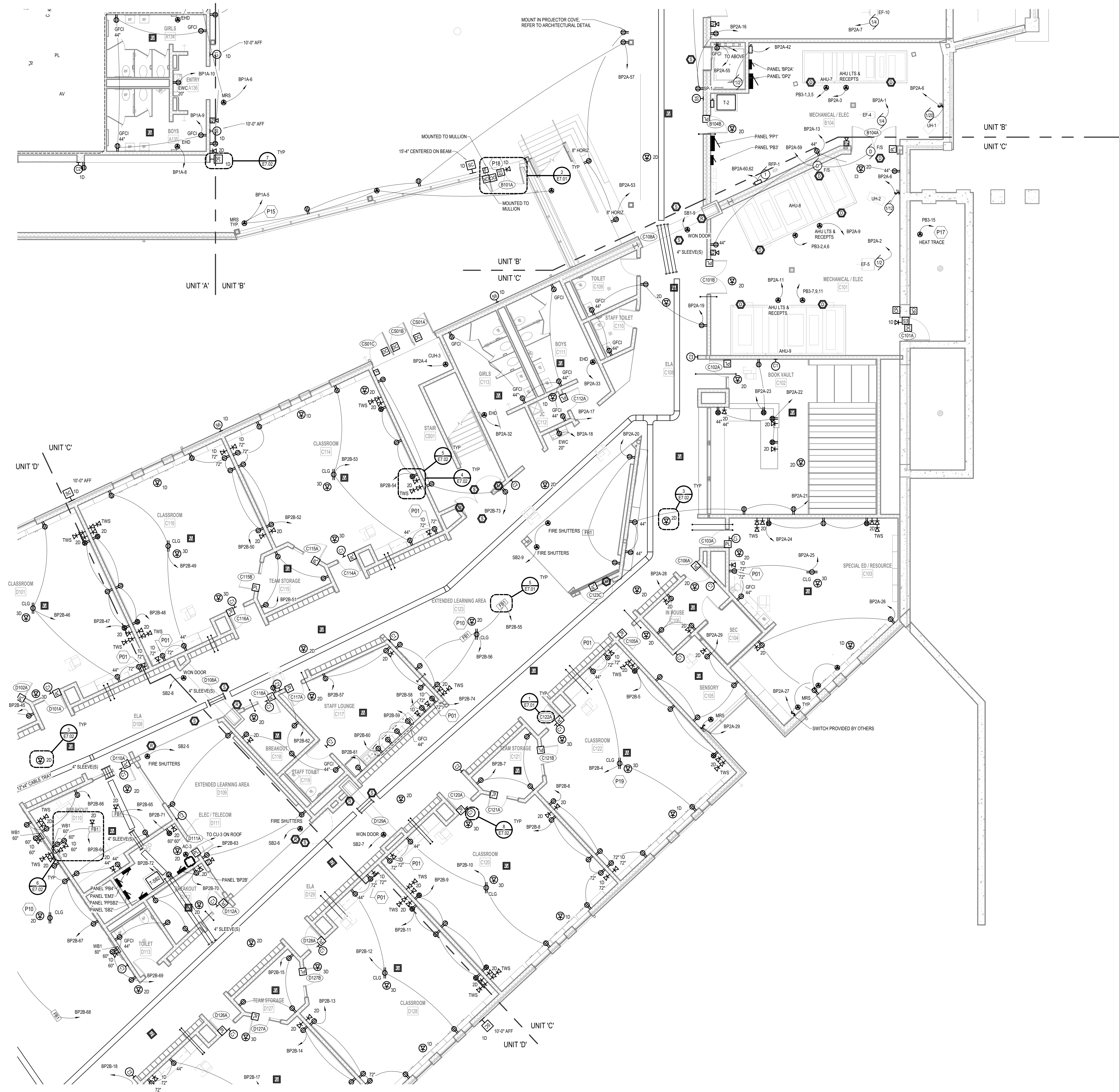
UNIT 'B' FIRST FLOOR POWER & COMMUNICATIONS PLAN

E2.1B

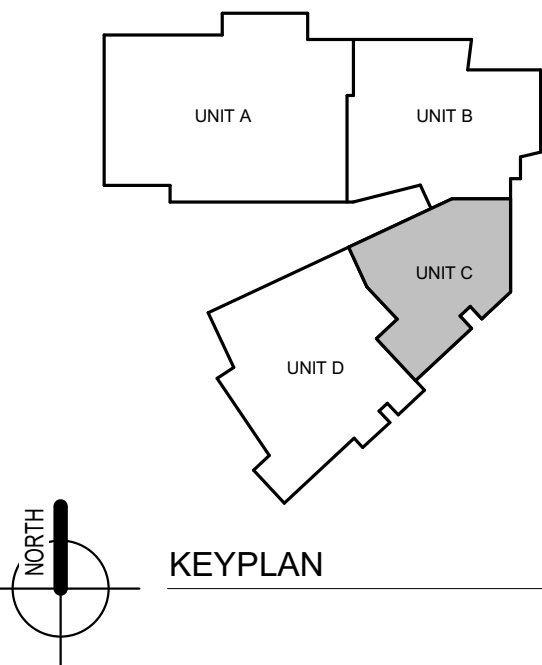
POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FRESMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER) LOCATED MECHANISM IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUNDED ON EACH CIRCUIT). TERMINATE W/ BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (<10 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC'S.
6. REFER TO AV DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

ELECTRICAL KEYNOTES	
P01	DEVICES INSTALLED IN BACK OF CASEWORK FOR AV RACK BY OWNER'S TECHNOLOGY CONSULTANT FOR EDUCATIONAL AV EQUIPMENT. COORDINATE WITH OWNER'S TECHNOLOGY CONTRACTOR FOR PLACEMENT OF DEVICES.
P10	ALL LOW VOLTAGE CABLING TO BE IN CONDUIT IN SPACES WITH EXPOSED CEILING. PRIOR TO INSTALL, COORDINATE EXACT LOCATION OF NETWORK ACTIVATIONS WITH OWNER'S TECHNOLOGY CONTRACTOR (FOR ACCESS POINTS, SECURITY CAMERAS, AV EQUIPMENT, ETC.). TERMINATE CABLING IN SURFACE MOUNT BOX WITH MODULAR CONNECTOR INSIDE JUNCTION BOX. PROVIDE BLANK FACEPLATE FOR UNUSED LOCATIONS. TYPICAL FOR ALL.
P15	MOTORIZED ROLLER SHADERS IN THIS SPACE TO BE CONTROLLED BY AV SYSTEM. REFER TO AV DRAWINGS FOR MORE INFORMATION.
P17	HEAT TRACING FOR PLUMBING PIPING PER 22 05 33. LENGTHS REQUIRED. HEAT TRACING SHALL COMPLY WITH NEC ARTICLE 426.
P18	ALL ACCESS CONTROL CONDUITS TO NEAREST CABLE TRAY, TERMINATE CABLING IN JUNCTION BOX RECESSED ABOVE DOOR IN MASONRY WALL, OR JUNCTION BOX SURFACE MOUNTED TO STRUCTURE WHERE CEILING ARE LESS THAN 20 FEET. TYPICAL FOR ALL ACCESS CONTROL DOORS SHOWN WITH DATA DROPS.
P19	COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNER'S TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.



UNIT 'C' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"

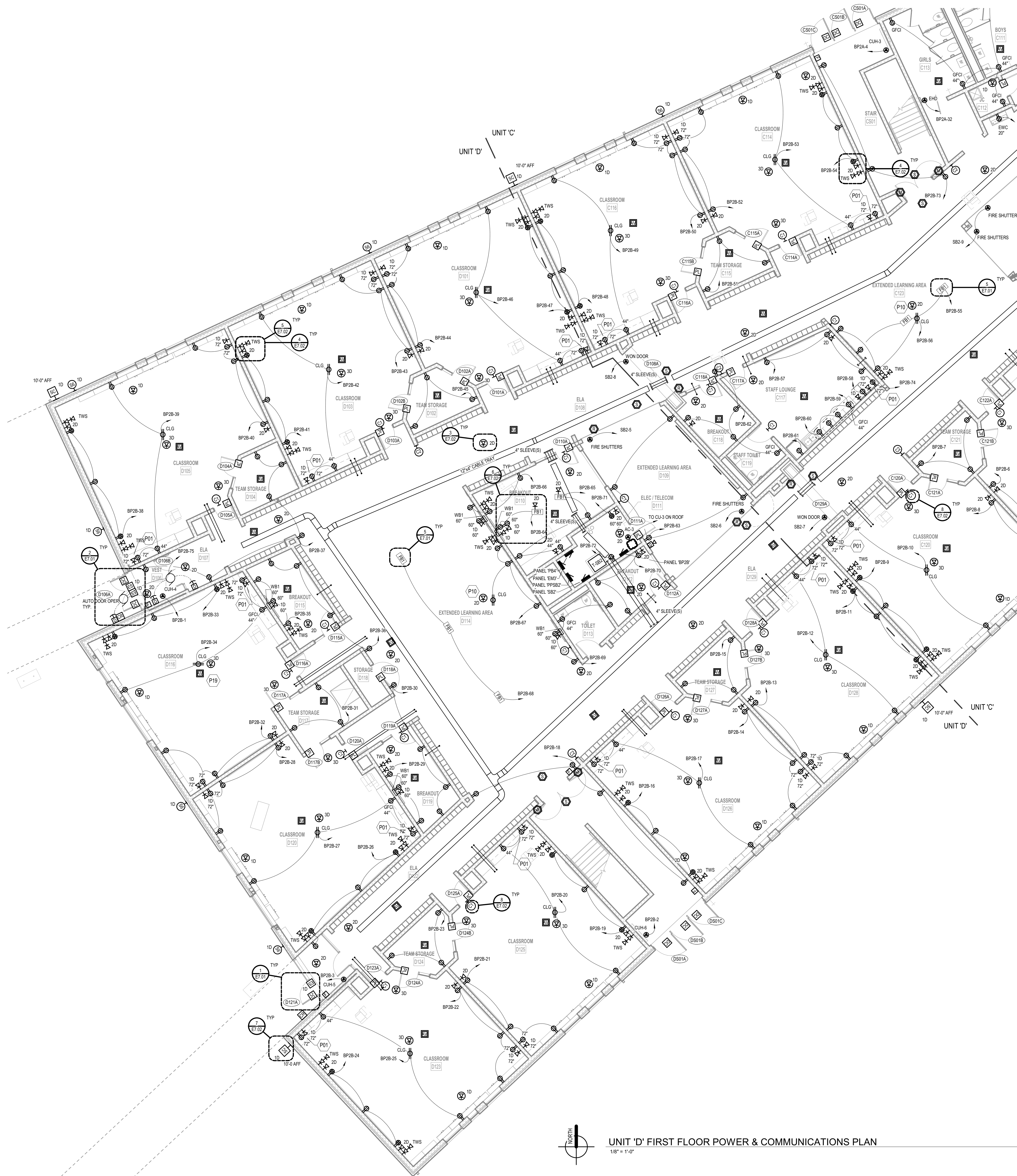


POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0101.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE PRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANELS/BOXES FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUNDED ON EACH CIRCUIT). TERMINATED W/ BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LONG WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
6. REFER TO AV DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

ELECTRICAL KEYNOTES

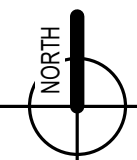
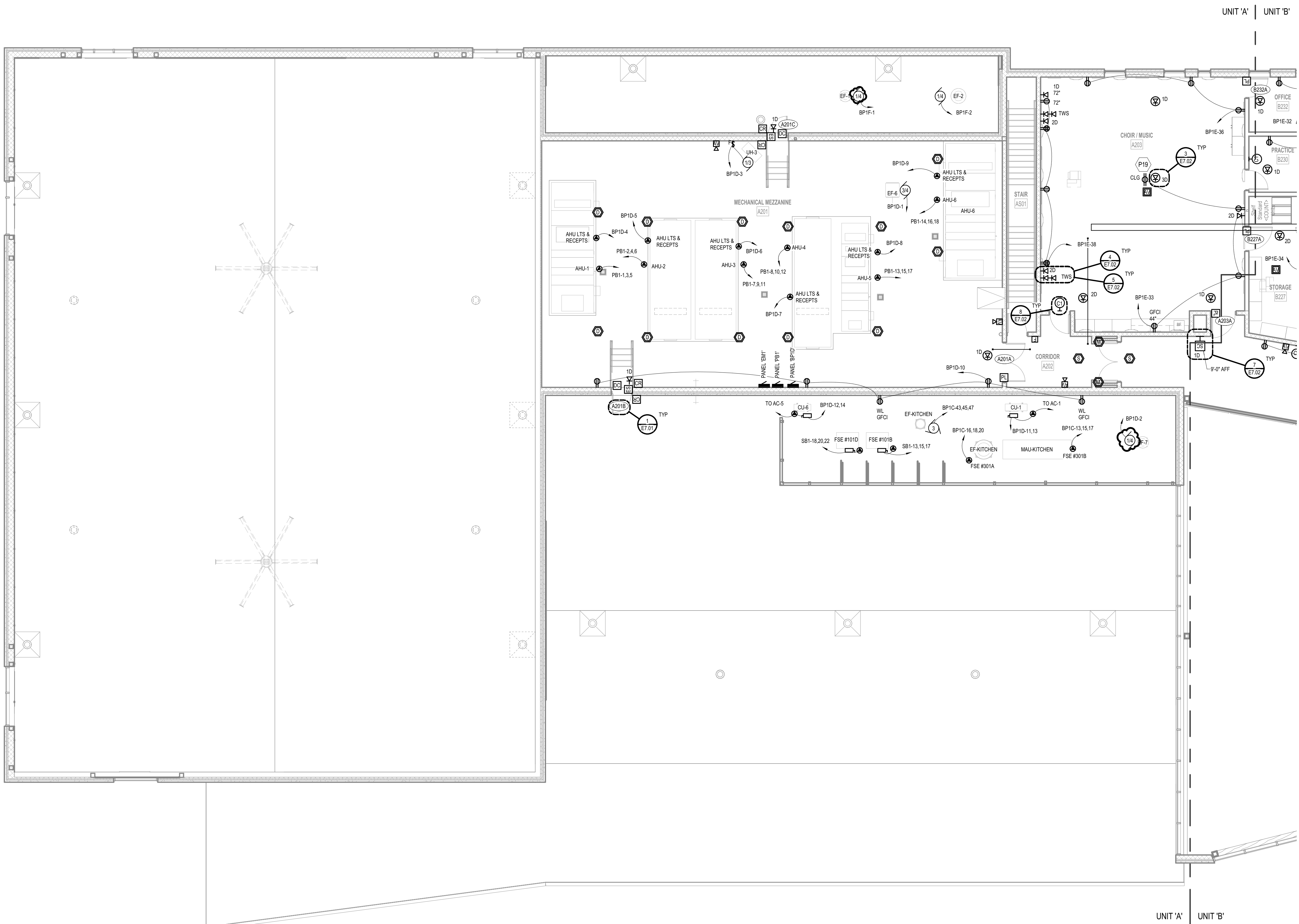
- P01 DEVICES INSTALLED IN BACK OF CASEWORK FOR AV RACK BY OWNERS TECHNOLOGY CONSULTANT FOR EDUCATIONAL AV EQUIPMENT. COORDINATE WITH OWNERS TECHNOLOGY CONTRACTOR FOR PLACEMENT OF DEVICES.
- P10 ALL LOW VOLTAGE CABLEING TO BE IN CONDUIT IN SPACES WITH EXPOSED CEILING. PRIOR TO INSTALL, COORDINATE EXACT LOCATION OF NETWORK ACTIVATIONS WITH OWNERS TECHNOLOGY CONTRACTOR (FOR ACCESS POINTS, SECURITY CAMERAS, AV EQUIPMENT, ETC.). TERMINATE CABLEING IN SURFACE MOUNT BOX WITH MODULAR CONNECTOR INSIDE JUNCTION BOX. PROVIDE BLANK FACEPLATE FOR UNUSED LOCATIONS. TYPICAL FOR ALL.
- P19 COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNERS TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.



POWER & COMMUNICATION GENERAL NOTES

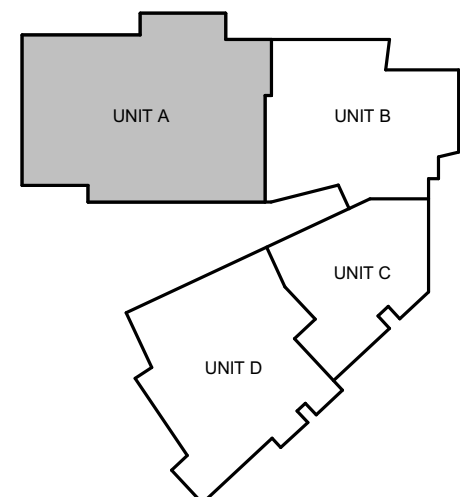
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION PRESURE DAMPERS. PROVIDE 200VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANEL/BOARD FOR DAMPERS. IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT). TERMINATED W/ BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PUMBLING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC'S.
6. REFER TO AV DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

ELECTRICAL KEYNOTES	
P19	COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNER'S TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.



UNIT 'A' SECOND FLOOR POWER & COMMUNICATIONS PLAN

1/8" = 1'-0"



KEYPLAN

ISSUANCES

10.30.2020	BIDS & CONSTRUCTION
11.18.2020	ADDENDUM 001
11.25.2020	ADDENDUM 004
04.16.2021	BULLETIN 006

DRAWN	JFB
REVIEWED	AAB

PROJECT NO. 5-5065

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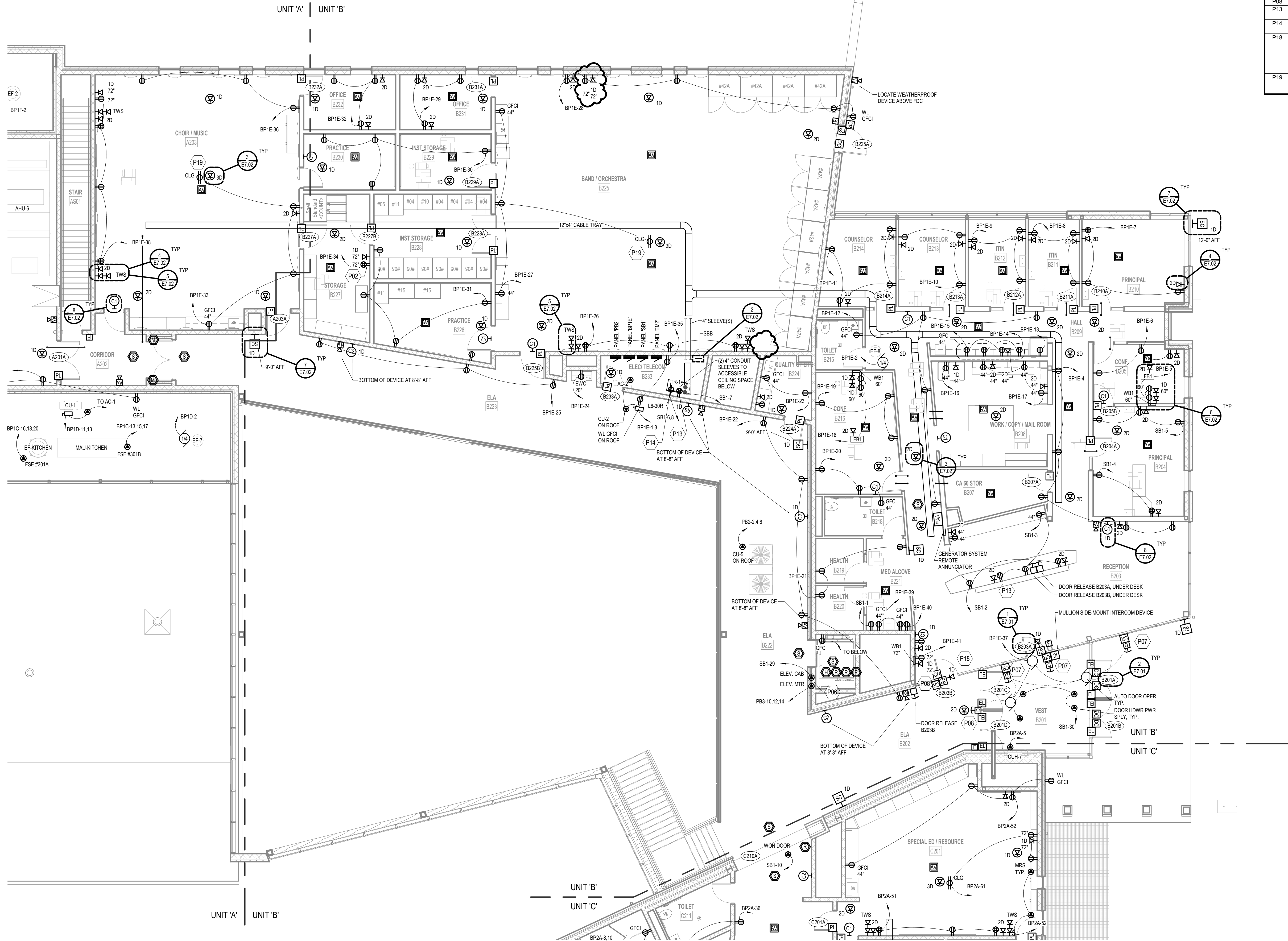
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UNIT 'A' SECOND FLOOR
POWER & COMMUNICATIONS
PLAN

E2.2A

- POWER & COMMUNICATION GENERAL NOTES**
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.1.
 2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
 3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20AMP BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA. DAMPERS MAY BE GROUPED ON EACH CIRCUIT, TERMINATED W/ BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER IN CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
 4. PROVIDE FLUSH SINGLE GANG BOXES IN WALLS FOR HVAC TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT BACKWASH FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
 5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
 6. REFER TO AV DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

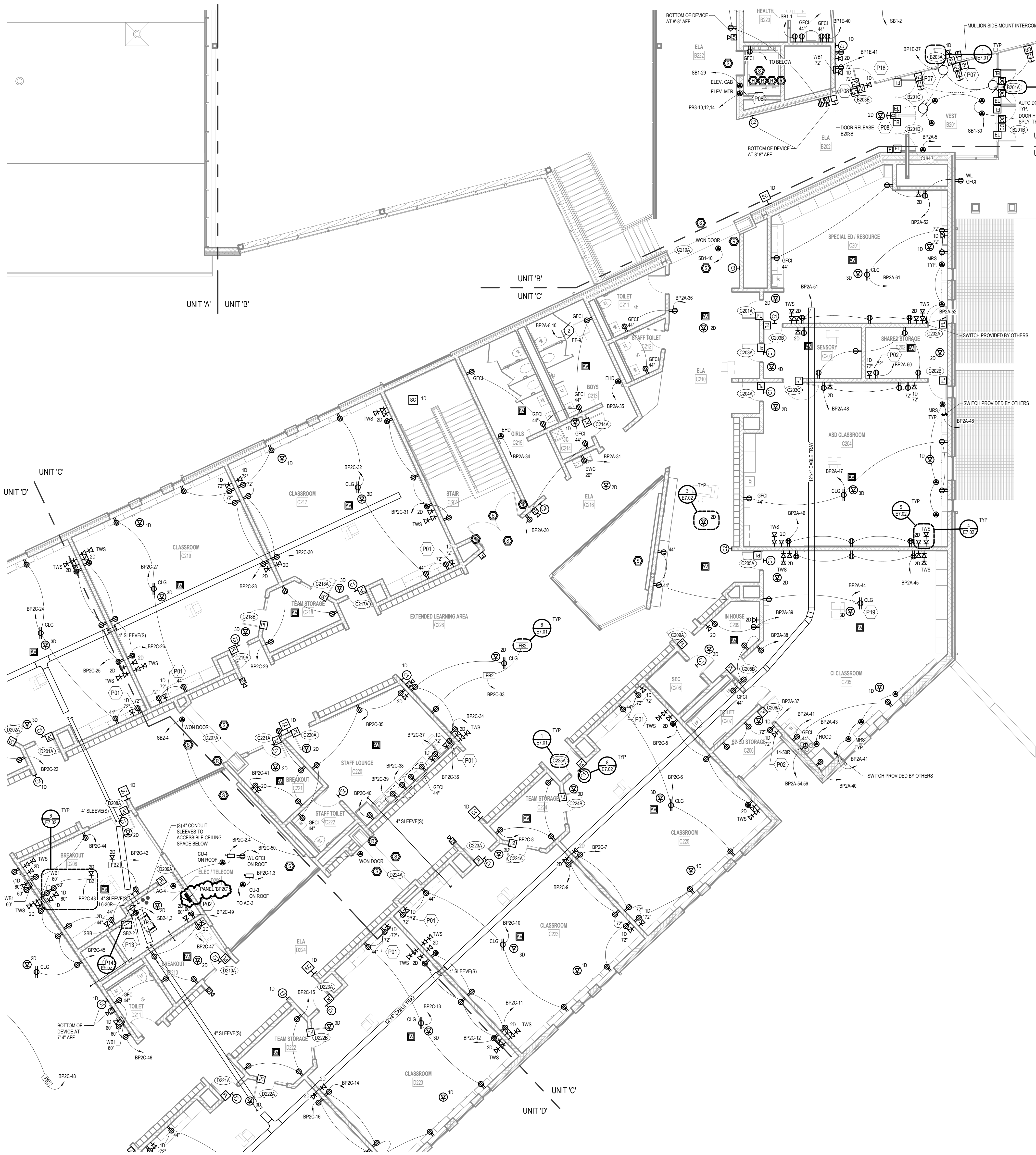
ELECTRICAL KEYNOTES
P02 LOCATION OF AV RACK BY OWNER'S TECHNOLOGY CONSULTANT FOR EDUCATIONAL AV EQUIPMENT. COORDINATE WITH OWNER'S TECHNOLOGY CONTRACTOR FOR PLACEMENT OF DEVICES.
P06 COORDINATE WITH ELEVATOR MANUFACTURER'S REQUIREMENTS FOR DISCONNECTS.
P07 MULLION MOUNT CARD READER AND ADA PUSHBUTTON, ADA PUSH BUTTON SHALL BE MOUNTED AT 40" AFF TO BOTTOM OF BOX. CARD READER SHALL BE MOUNTED DIRECTLY ABOVE ADA PUSHBUTTON.
P08 MULLION MOUNT CARD READER OR ADA PUSHBUTTON.
P13 RECEPTACLES ON STANDBY POWER SHALL BE YELLOW, TYPICAL FOR ALL.
P14 INSTALL 1/4-32R RECEPTACLE INSIDE 4-POST RACK FOR UPS. UPS PROVIDED BY OWNER.
P18 ALL ACCESS CONTROL CONDUITS TO NEAREST CABLE TRAY. TERMINATE CABLES IN JUNCTION BOX RECESSED ABOVE DOOR IN MASONRY WALL OR JUNCTION BOX SURFACE MOUNTED TO STRUCTURE WHERE CEILINGS ARE LESS THAN 20 FEET. TYPICAL FOR ALL ACCESS CONTROL DOORS SHOWN WITH DATA DROPS.
P19 COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNER'S TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.



POWER & COMMUNICATION GENERAL NOTES

- REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.1.
- REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
- REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUNDED ON EACH CIRCUIT). TERMINATED W/ BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER IN CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
- PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
- PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL 1/2 HP MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC'S.
- REFER TO AV DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

ELECTRICAL KEYNOTES	
P01	DEVICES INSTALLED IN BACK OF CASEWORK FOR AV RACK BY OWNERS TECHNOLOGY CONSULTANT FOR EDUCATIONAL AV EQUIPMENT. COORDINATE WITH OWNERS TECHNOLOGY CONTRACTOR FOR PLACEMENT OF DEVICES.
P02	LOCATION OF AV RACK BY OWNERS TECHNOLOGY CONSULTANT FOR EDUCATIONAL AV EQUIPMENT. COORDINATE WITH OWNERS TECHNOLOGY CONTRACTOR FOR PLACEMENT OF DEVICES.
P06	COORDINATE WITH ELEVATOR MANUFACTURERS REQUIREMENTS FOR DISCONNECTS.
P07	MULLION MOUNT CARD READER AND ADA PUSHBUTTON. ADA PUSH-BUTTON SHALL BE MOUNTED AT 40" AFF TO BOTTOM OF BOX. CARD READER SHALL BE MOUNTED DIRECTLY ABOVE ADA PUSH-BUTTON.
P08	MULLION MOUNT CARD READER OR ADA PUSHBUTTON.
P13	RECEPTACLES ON STANDBY POWER SHALL BE YELLOW. TYPICAL FOR ALL.
P14	INSTALL L6-30R RECEPTACLE INSIDE 4-POST RACK FOR UPS. UPS PROVIDED BY OWNERS.
P18	ALL ACCESS CONTROL CONDUITS TO NEAREST CABLE TRAY. TERMINATE CABLEING IN JUNCTION BOX RECESSED ABOVE DOOR IN MASONRY WALL OR JUNCTION BOX SURFACE MOUNTED TO STRUCTURE WHERE CEILINGS ARE LESS THAN 20 FEET. TYPICAL FOR ALL ACCESS CONTROL DOORS SHOWN WITH DATA DROPS.
P19	COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNERS TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.



POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E01.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20AMP BRANCH CIRCUIT (WITH BREAKER/LOCKING MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS. IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT) TERMINATED W/ BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT BACKWASH FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SWALL (1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
6. REFER TO AV DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

ELECTRICAL KEYNOTES	
P01	DEVICES INSTALLED IN BACK OF CASEWORK FOR AV RACK BY OWNERS TECHNOLOGY CONSULTANT FOR EDUCATIONAL AV EQUIPMENT. COORDINATE WITH OWNERS TECHNOLOGY CONTRACTOR FOR PLACEMENT OF DEVICES.
P02	LOCATION OF AV RACK BY OWNERS TECHNOLOGY CONSULTANT FOR EDUCATIONAL AV EQUIPMENT. COORDINATE WITH OWNERS TECHNOLOGY CONTRACTOR FOR PLACEMENT OF DEVICES.
P13	RECEPTACLES ON STANDBY POWER SHALL BE YELLOW. TYPICAL FOR ALL.
P14	INSTALL 1/2" CONDUIT INSIDE 4-POST RACK FOR UPS. UPS PROVIDED BY OWNER.
P19	COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNERS TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.



SECTION 08 71 00 - DOOR HARDWARE
(ADDENDUM 001) (BULLETIN 002)

PART 1 - GENERAL

1.1 SUMMARY

- A. Scope of Work: This Section describes all finish hardware required to complete the work as indicated on the Drawings and specified herein. Provide all trim attachments and fastening specified or required for proper and complete installation.
- B. Related Sections:
 - 1. Section 08 11 13: Hollow Metal Doors and Frames
 - 2. Section 08 14 16: Flush Wood Doors
 - 3. Section 08 43 13: Aluminum Entrances and Storefronts

1.2 SUBMITTALS

- A. Product Data, Shop Drawings, Samples:
 - 1. General: Comply with the provisions of Section 01 33 00.
 - 2. Product Data: Within 15 calendar days after award of the Contract, submit:
 - a. Complete materials list of all items proposed to be furnished and delivered under this Section.
 - 1) Identify each hardware item by manufacturer, the manufacturer's catalog number, and the location of the item in the work.
 - 2) Make the list in form suitable for ready checking by the Architect.
 - b. Manufacturer's specifications, catalog cuts, and other data required to demonstrate compliance with specified requirements.
 - c. Approval of the hardware list by the Architect/Engineer shall not relieve the Contractor from the responsibility for furnishing all required finish hardware.
 - 3. Samples: Within 15 calendar days after being so requested by the Architect/Engineer, deliver to the Architect/Engineer samples of each finish hardware item.
 - 4. Templates: In a timely manner to ensure orderly progress of the work, deliver templates or physical samples of the approved finish hardware items to pertinent manufacturers of interfacing items such as door and frame.

1.3 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Qualifications of Manufacturers: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect/Engineer.
 - 2. Qualification of Suppliers: The supplier shall have a qualified representative readily available to the Architect/Engineer, and/or Owner on short notice for consultation and service during the execution of this work and the warranty period.
 - 3. Qualification of Installers: Use adequate numbers of skilled workmen who are trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of this Section.
- B. Regulatory Requirements & References: Fire Rated Openings: Comply with the requirements of Underwriter's Laboratories, Inc.
- C. Pre-Installation Conference: Prior to the installation of hardware, manufacturer's representatives for locksets, closers, and exit devices shall arrange and hold a jobsite meeting to instruct the installing contractor's personnel on the proper installation of their respective

products. A letter of compliance, indicating when this meeting is held and who is in attendance, shall be sent to the Architect and Owner.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Packing and Shipping: Individually package each units of finish hardware, complete with proper fastening and appurtenances, clearly marked on the outside to indicate the contents and specific locations in the work.
- B. Protection: Use all means necessary to protect materials of this Section before, during, and after delivery to the job site and to protect the work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect/Engineer and at no additional cost to the owner.
- D. Deliveries:
 - 1. Stockpile all items sufficiently in advance to ensure their availability and make all necessary deliveries in a timely manner to ensure orderly progress of the total work.
 - 2. All hardware shall be delivered to a destination as directed by the Construction Manager with sufficient time in advance for proper inspection in order not to delay the scheduled completion date.
 - 3. The Construction Manager shall provide a lockable room with ample shelving for the storage of hardware. Upon receipt of the hardware, the Finish Hardware supplier shall unpack and place on the shelves all hardware in order of item and/or door numbers.

1.5 SEQUENCING AND SCHEDULING

- A. Coordinate all work with job site superintendent and all applicable trades.

1.6 WARRANTY

- A. Provide a written warranty in approved form in compliance with the related requirements of the General Conditions, covering all Finish Hardware furnished under this Section against defects in manufacturing and workmanship for a minimum of two (2) years from the final acceptance of the building.
- B. Any material failing to comply with the above guarantee shall be removed and replaced with satisfactory material at the Finish Hardware supplier's expense, including the necessary labor for removing and replacing.
- C. During the Warranty Period, the Finish Hardware supplier shall, upon request, make prompt adjustments, repairs or replacements as required to any hardware installed under this contract, other than normal maintenance service.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

Product	Specified	Acceptable Alternates
Continuous Hinges	Ives	Select, Pemko
Hinge	Ives	McKinney, Stanley
Electrified Hinge (PoE)	McKinney (Provided by Integrator)	No Substitution
Wire Harness (PoE)	McKinney (Provided by Integrator)	No Substitution
Locks	Yale 5400LN Series	No Substitution
Multi-Point Lockset (Seclusion Room)	Securitech 47PL Series	No Substitution
Electronic Locks	Corbin-Russwin IN220 (Provided by Integrator)	No Substitution
Keys and Cylinders	Yale G Keyway	No Substitution (Owners Key System)
Exit Devices	Yale 7000 Series	No Substitution
Electric Strikes (PoE)	Trine 4000 Series	No Substitution

Door Closers	LCN 4040XP Series	No Substitution
Push/Pull & Kick Plates	Ives	Trimco, Rockwood
Stops	Ives	Trimco, Rockwood
Overhead Stops	Glynn-Johnson	No Substitution
Seals and Thresholds	Zero	NGP, Reese, Pemko
Auto Operators	LCN 4600 Series	No Substitution
Power Supplies	Securitron BPS Series	No Substitution

2.2 MATERIALS

A. General:

1. Proprietary Products: References to specific proprietary products are used to establish minimum standards of utility and quality. Unless otherwise approved by the Architect/Engineer, provide only the specific products. Design is based on the materials specified. Other materials may be considered by the Architect/Engineer in accordance with the provisions of Section 01 33 00.
2. Fasteners:
 - a. Furnish all finish hardware with all necessary screws, bolts, and other fasteners of suitable size and type to anchor the hardware in position for long life under hard use.
 - b. Furnish fastenings where necessary with expansion shields, toggle bolts, sex bolts, and other anchors approved by the Architect/Engineer, according to the materials to which the hardware is to be applied and the recommendations of the hardware manufacturer.
 - c. All fastenings shall harmonize with the hardware as to materials and finish.
3. Finishes of all hardware shall match the finish of the locksets. Take special care to coordinate all of the various manufactured items furnished under this Section, to ensure acceptably uniform finish.
4. Through-bolt door closers on all wood doors.

- B. Keying: All lock shall be master keyed as directed by the Architect and Owner to the Owners Existing Yale key system. Supply 3 keys per lock, 6 master keys for each master key group and 3 grand master keys.
- C. Tools and Manuals: With the delivery of permanent keys, deliver to the Owner one complete set of adjustment tools and one set of maintenance manuals for locksets, latchsets, closers, and panic devices.
- D. Provide Special Product Configurable Code (SPAR05493) for all Yale 7100 Series Exit Devices specified with Corbin-Russwin IN220 Electronic Exit Device Trim. Must be included in purchase orders as well.
- E. Corbin Russwin IN220 electronic lock, McKinney electrified hinge and McKinney wire harness for PoE applications to be provided by Access Control Integrator as listed in hardware sets.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install the materials in strict accordance with the manufacturer's recommendations and schedules.
- B. All doors should swing as far as conditions allow. When mounting door closers, use the mounting that allows doors to swing to the wall or floor bumper. Do not stop the door with the closer arm unless the arm is designed specifically to stop the door. when mounting closers designed with arms to stop the door or overhead door stops, always mount them to allow the door to swing as far as conditions will permit.
- C. Anchor all screws with Loc-Tite to assure permanence of attachment.
- D. All doors and hardware to be left in proper working order and cleaned.

E. Special Hardware Instructions:

1. Wall stops WS33 are to be mounted on the wall up at the top of the door and as far out on the latch edge as conditions allow. The sloped side is to face up, preventing anyone or anything to hang on them.
2. Wall stop & holds WH45 are to be mounted the same as the WS33.

3.2 ADJUSTING AND CLEANING

- A. Final inspections shall be made by the Architect and Finish Hardware Supplier. They shall report any installation adjustments that are to be made to have all hardware in perfect working order. The Finish Hardware Supplier shall verify the keying to the Architect to insure proper location of locksets and cylinders. All closers shall be checked and adjusted for closing.
- B. Prior to final acceptance of the installation, the Finish Hardware Supplier shall make a final inspection to verify that all corrections have been made and that all hardware items are in good working condition.

PART 4 - HARDWARE SCHEDULE

Hardware Group No. 01

For use on Door #(s):

B205A	B216A	B219A	B220A		
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	PASSAGE LATCH	PB 5401LN		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 02

For use on Door #(s):

B230A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	PASSAGE LATCH	PB 5401LN		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	870AA-S		AA	ZER
1	EA	DOOR BOTTOM	364AA-Z49		AA	ZER
1	EA	THRESHOLD	164A		A	ZER

Hardware Group No. 03

For use on Door #(s):

B226A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 5 X 4.5	652	IVE
1	EA	PASSAGE LATCH	PB 5401LN	626	YAL
1	EA	OH STOP	100S	630	GLY
1	EA	GASKETING	870AA-S	AA	ZER
1	EA	DOOR BOTTOM	364AA-Z49	AA	ZER
1	EA	THRESHOLD	164A	A	ZER

Hardware Group No. 04

For use on Door #(s):

C104A	C208A				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	MULTI-POINT LOCK	47PL33		SGI
1	EA	ROLLER LATCH	RL30	626	IVE
1	EA	OH STOP	100S	630	GLY
1	EA	GASKETING	870AA-S	AA	ZER
1	EA	DOOR BOTTOM	364AA-Z49	AA	ZER
1	EA	THRESHOLD	164A	A	ZER

NOTES:

1) DEPRESS LEVER TO PROJECT BOLTS. RELEASING LEVER RETRACTS ALL BOLTS. ROLLER LATCH AT TOP IS TO HOLD DOOR IN CLOSED POSITION AND PREVENT DRIFTING OPEN WHEN NOT IN USE.

Hardware Group No. 05

For use on Door #(s):

A107B	A108B	A114B	A115B		
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	PUSH PLATE	8200 6" X 16"	630	IVE
1	EA	PULL PLATE	8303 10" 4" X 16" F	630	IVE
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 06

For use on Door #(s):

A101E	A101F	D121B			
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PUSH/PULL BAR	9103EZHD-10"-NO		630-316	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

Hardware Group No. 07

For use on Door #(s):

A101D					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PUSH/PULL BAR	9103EZHD-10"-NO		630-316	IVE
1	EA	OH STOP	100SE		630	GLY
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
1	EA	ACTUATOR, JAMB MOUNT	8310-818T	✓	630	LCN
1	EA	FLUSH MOUNT BOX	8310-819F	✓	PLA	LCN
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

BOTH ACTUATOR BUTTONS ARE ENABLED WHEN THE OPERATOR IS TURNED ON. PUSHING EITHER ENABLED ACTUATOR BUTTON WILL CAUSE THE AUTOMATIC OPERATOR TO MOMENTARILY OPEN THE DOOR. FREE EGRESS AT ALL TIMES.

Hardware Group No. 08

For use on Door #(s):

D106B					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY		628	IVE
2	EA	PUSH/PULL BAR	9103EZHD-10"-NO		630-316	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
1	EA	ACTUATOR, WALL MOUNT	8310-853T	✓	630	LCN
1	EA	FLUSH MOUNT BOX	8310-867F	✓	689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

BOTH ACTUATOR BUTTONS ARE ENABLED WHEN THE OPERATOR IS TURNED ON. PUSHING EITHER ENABLED ACTUATOR BUTTON WILL CAUSE THE AUTOMATIC OPERATOR TO MOMENTARILY OPEN THE DOOR. FREE EGRESS AT ALL TIMES.

Hardware Group No. 09

For use on Door #(s):

A127A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		626	IVE
1	EA	PRIVACY LOCK W/INDICATOR	PBR 8802FL IND		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 10

For use on Door #(s):

C207A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		626	IVE
1	EA	PRIVACY LOCK	PB 5402LN		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 11

For use on Door #(s):

A111A	A111B	B215A	B218A	C119A	C222A
D113A	D211A				

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		626	IVE
1	EA	PRIVACY LOCK W/INDICATOR	PBR 8802FL IND		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 12

For use on Door #(s):

C109A	C110A	C211A	C212A		
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		626	IVE
1	EA	PRIVACY LOCK W/INDICATOR	PBR 8802FL IND		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 13

For use on Door #(s):

B224A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	ML20236-PSA-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	MORTISE CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. PRESSING PRIVACY BUTTON ON INSIDE WILL DISABLE READER WHEN OCCUPIED. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 14

For use on Door #(s):

A109A	A112A	A133A	B207A	B211A	B212A
B213A	B214A	B231A	B232A	C105A	C118A
C221A	D115A	D119A			

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 15

For use on Door #(s):

B229A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 16

For use on Door #(s):

B233A	C106A	C203B	C205B	D209A	
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 17

For use on Door #(s):

A119C					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	↗	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	↗	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	↗		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 18

For use on Door #(s):

A125A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	↗	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	↗	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP & HOLDER	100H		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	WALL STOP/HOLDER	WS45(X)		626	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	↗		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 19

For use on Door #(s):

A132A	B108A	B108B	B204A	B210A	B227B
D110A	D112A	D208A	D210A		

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 20

For use on Door #(s):

B227A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 21

For use on Door #(s):

A104A	B228A				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100S		630	GLY
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 22

For use on Door #(s):

A126A	B109A	B109B	C115A	C115B	C121A
C121B	C201A	C206A	C218A	C218B	C224A
C224B	D102A	D102B	D104A	D117A	D117B
D124A	D124B	D127A	D127B	D202A	D202B
D204A	D219A	D219B	D222A	D222B	

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 23

For use on Door #(s):

B104B	C117A	C220A			
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 24

For use on Door #(s):

A120A	C101B				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	↗	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	↗	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	↗		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 25

For use on Door #(s):

A118A	B105A				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	↗	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	↗	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP & HOLDER	100H		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	↗		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 26

For use on Door #(s):

B203A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	PB 5405LN - KEYED TO OWNERS YALE KEY SYSTEM, COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE (POE)	4200 (FAIL-SECURE)	✓	630	TRN
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	DESK MOUNT BUTTON	660-PB	✓	628	SCE
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	INTERCOM SYSTEM BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO THE READER OR PRESSING PUSH BUTTON AT RECEPTION DESK WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS. DOOR TO REMAIN LOCKED UPON LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 27

For use on Door #(s):

B205B	C102A	C103A	C114A	C116A	C120A
C122A	C204A	C205A	C217A	C219A	C223A
C225A	D101A	D103A	D105A	D116A	D118A
D120A	D123A	D125A	D126A	D128A	D201A
D203A	D205A	D206A	D213A	D214A	D214B
D215A	D216A	D218A	D220A	D221A	D223A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 28

For use on Door #(s):

C202A	C202B				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 29

For use on Door #(s):

C112A	C214A				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP/HOLDER	WS45(X)		626	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 30

For use on Door #(s):

A201A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	↗	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	↗	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	↗		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 31

For use on Door #(s):

A137A	C203A	C203C	C209A		
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 32

For use on Door #(s):

A104B					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No.[32A](#)

For use on Door #(s):

D205A	D213A	D216A			
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	↗	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	↗	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	↗		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 33

For use on Door #(s):

A120B					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 34

For use on Door #(s):

A122A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	↗	652	MCK
1	SET	AUTO FLUSH BOLT	FB41P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	↗	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	COORDINATOR	COR X FL		628	IVE
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
2	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	MEETING STILE	383AA		AA	ZER
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	↗		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 35

For use on Door #(s):

B104A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
7	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	AUTO FLUSH BOLT	FB31P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	COORDINATOR	COR X FL		628	IVE
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP RW/PA ST-1630		689	LCN
2	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	MEETING STILE	383AA		AA	ZER
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 36

For use on Door #(s):

C123C					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	✓	689	LCN
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 37

For use on Door #(s):

D111A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 38

For use on Door #(s):

A129A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 39

For use on Door #(s):

B203B					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	INSTITUTIONAL LOCK	PB 5430LN - KEYED TO OWNERS YALE KEY SYSTEM, COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE (POE)	4200 (FAIL-SECURE)	✓	630	TRN
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30		689	LCN
1	EA	ENTRY BUZZER	623GR	✓	626	SCE
1	EA	DESK MOUNT BUTTON	660-PB	✓	628	SCE
		NOTE	CARD READERS BY OTHERS	✓		

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

UNLOCKED HOURS: DOOR NORMALLY CLOSED AND LOCKED AND ENTRY BUZZER ON SCHOOL CORRIDOR SIDE SHALL BE ENABLED BY ACCESS CONTROL SYSTEM. PRESSING ENTRY BUZZER ON SCHOOL CORRIDOR SIDE WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS FROM SCHOOL CORRIDOR INTO OFFICE. OFFICE SIDE ALWAYS LOCKED PREVENTING FREE PASSAGE FROM OFFICE INTO THE SCHOOL. PRESENTING A VALID CREDENTIAL TO THE READER ON SCHOOL OFFICE SIDE, OR PUSH BUTTON AT RECEPTION DESK, WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS FROM OFFICE INTO SCHOOL. DOOR TO REMAIN LOCKED UPON LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM.

LOCKED HOURS: DOOR NORMALLY CLOSED AND LOCKED AND ENTRY BUZZER ON SCHOOL CORRIDOR SIDE SHALL BE DISABLED BY ACCESS CONTROL SYSTEM. THUS LOCKED IN BOTH DIRECTIONS. PRESENTING A VALID CREDENTIAL TO THE READER ON EITHER SIDE OR PUSH BUTTON AT RECEPTION DESK, WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS. DOOR TO REMAIN LOCKED UPON LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM.

Hardware Group No. 40

For use on Door #(s):

A201B	A201C				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		630	IVE
1	EA	INSTITUTIONAL LOCK	PB 5430LN - KEYED TO OWNERS YALE KEY SYSTEM, COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE (PoE)	4200RS (FAIL-SAFE)	✓	630	TRN
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-FA - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READERS BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO EITHER READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN UNLOCKED UPON LOSS OF POWER OR ACTIVATION OF THE FIRE ALARM.

Hardware Group No. 41

For use on Door #(s):

C101A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
4	EA	HINGE	5BB1HW 5 X 4.5 NRP		630	IVE
1	EA	INSTITUTIONAL LOCK	PB 5430LN - KEYED TO OWNERS YALE KEY SYSTEM, COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE (PoE)	4200RS (FAIL-SAFE)	✓	630	TRN
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	RAIN DRIP	142AA		AA	ZER
1	EA	GASKETING	429AA-S		AA	ZER
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-FA - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READERS BY OTHERS	✓		

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO EITHER READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN UNLOCKED UPON LOSS OF POWER OR ACTIVATION OF THE FIRE ALARM.

Hardware Group No. 42

For use on Door #(s):

A203B					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	FIRE EXIT HARDWARE	7150F-ECK1		630	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 43

For use on Door #(s):

AS01B					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	FIRE EXIT HARDWARE	7100F-PB628F-ECK1		630	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 44

For use on Door #(s):

A123A	A202A	CS01D	DS01D		
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
2	EA	FIRE EXIT HARDWARE	7160F-PB628F-LBR-ECK1		630	YAL
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	↗	689	LCN
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

Hardware Group No. 45

For use on Door #(s):

A124A	CS01E	DS01E			
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
2	EA	FIRE EXIT HARDWARE	7160F-PB628F-LBR-ECK1		630	YAL
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	↗	689	LCN
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

Hardware Group No. 46

For use on Door #(s):

A103D					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	FIRE RATED REMOVABLE MULLION	KRM200F-102S		689	YAL
2	EA	FIRE EXIT HARDWARE	7150F-ECK1		630	YAL
1	EA	MORTISE CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100SE		630	GLY
2	EA	FIRE/LIFE CLOSER	4414ME	✓	689	LCN
2	EA	MOUNTING PLATE	4410ME-18G		689	LCN
1	EA	TRANSFORMER	4410ME-3210	✓		LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE LIFE SAFETY ELECTRONIC DOOR CLOSER SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR) AND LOCKDOWN SYSTEM.

DOORS NORMALLY HELD OPEN BY ELECTRONIC DOOR CLOSER. ELECTRONIC DOOR CLOSER IS WIRED TO THE FIRE ALARM AND SECURITY SYSTEM. WHEN SYSTEM IS ACTIVATED, THE ELECTRONIC DOOR CLOSER RELEASES, AND THE DOOR CLOSES AND LOCKS. DOORS CAN ALSO BE MANUALLY RELEASED.

Hardware Group No. 47

For use on Door #(s):

A103E					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	FIRE RATED REMOVABLE MULLION	M200F-102S		689	YAL
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	FIRE EXIT HARDWARE	7150F-ECK1		630	YAL
1	EA	FIRE EXIT HARDWARE	7150F-ECK1-SPAR05493		630	YAL
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100SE		630	GLY
2	EA	FIRE/LIFE CLOSER	4414ME	✓	689	LCN
2	EA	MOUNTING PLATE	4410ME-18G		689	LCN
1	EA	TRANSFORMER	4410ME-3210	✓		LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE LIFE SAFETY ELECTRONIC DOOR CLOSER SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR) AND LOCKDOWN SYSTEM.

DOORS NORMALLY HELD OPEN BY ELECTRONIC DOOR CLOSER. ELECTRONIC DOOR CLOSER IS WIRED TO THE FIRE ALARM AND SECURITY SYSTEM. WHEN SYSTEM IS ACTIVATED, THE ELECTRONIC DOOR CLOSER RELEASES, AND THE DOOR CLOSSES AND LOCKS. DOORS CAN ALSO BE MANUALLY RELEASED.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 48

For use on Door #(s):

A107A	A108A	A114A	A115A	B106B	B107B
B110B					

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	PANIC HARDWARE	7150-ECK1-LESS DOGGING- SPAR05493		630	YAL
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 49

For use on Door #(s):

A203A	B225B				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	PANIC HARDWARE	7150-ECK1-LESS DOGGING- SPAR05493		630	YAL
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 50

For use on Door #(s):

A121A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	PANIC HARDWARE	7150-ECK1-LESS DOGGING- SPAR05493		630	YAL
1	EA	CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 51

For use on Door #(s):

B201D					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY EPT		628	IVE
2	EA	POWER TRANSFER	EPT10	✓	689	VON
1	EA	REMOVABLE MULLION	M200-102S		689	YAL
2	EA	ELEC PANIC HARDWARE	7150-MELR-634F-ECK1-LESS DOGGING	✓	630	YAL
1	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	POWER SUPPLY	PS902 900-2RS - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM.

DEVICES ARE ALSO CAPABLE OF BEING ELECTRONICALLY DOGGED DOWN FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

DOORS TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 52

For use on Door #(s):

B201C					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY EPT		628	IVE
2	EA	POWER TRANSFER	EPT10	✓	689	VON
1	EA	REMOVABLE MULLION	KRM200-102S		689	YAL
1	EA	ELEC PANIC HARDWARE	7150-MELR-634F-ECK1-LESS DOGGING	✓	630	YAL
1	EA	ELEC PANIC HARDWARE	7150-MELR-S-632F-ECK1-LESS DOGGING	✓	630	YAL
1	EA	RIM CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	MORTISE CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	OH STOP	100SE - LEAF W/AUTO OPERATOR		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
2	EA	ACTUATOR, JAMB MOUNT	8310-818T	✓	630	LCN
2	EA	SURFACE MOUNT BOX	8310-819S	✓	PLA	LCN
1	EA	RELAY/DOOR SEQUENCER	8310-845	✓	689	LCN
1	EA	POWER SUPPLY	PS902 900-4RL - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY RETRACT THE PANIC DEVICE LATCH (ALLOWING ACCESS) AND ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR AT THIS TIME WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR. PUSH INTERIOR ACTUATOR AT ANY TIME WILL MOMENTARILY RETRACT THE PANIC DEVICE LATCH AND SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

DEVICES ARE ALSO CAPABLE OF BEING ELECTRONICALLY DOGGED DOWN FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE. PUSHING EITHER AUTO OPERATOR ACTUATOR WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

DOORS TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 53

For use on Door #(s):

B201B					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY EPT		628	IVE
2	EA	POWER TRANSFER	EPT10	✓	689	VON
1	EA	REMOVABLE MULLION	M200-102S		689	YAL
2	EA	ELEC PANIC HARDWARE	7150-MELR-B-634F-ECK1-LESS DOGGING	✓	630	YAL
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	MULLION SEAL	8780N		BK	ZER
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED VIA THE ACCESS CONTROL SYSTEM.

DEVICES ARE ALSO CAPABLE OF BEING ELECTRONICALLY DOGGED DOWN FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE REQUEST TO EXIT FEATURE OF THE DEVICE TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACTS DURING VALID EGRESS. DOOR CONTACTS MONITOR WHETHER THE DOORS ARE OPENED, CLOSED OR HELD OPEN TOO LONG. DOORS TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 54

For use on Door #(s):

B201A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY EPT		628	IVE
2	EA	POWER TRANSFER	EPT10	✓	689	VON
1	EA	REMOVABLE MULLION	KRM200-102S		689	YAL
1	EA	ELEC PANIC HARDWARE	7150-MELR-B-634F-ECK1-LESS DOGGING	✓	630	YAL
1	EA	ELEC PANIC HARDWARE	7150-MELR-B-S-632F-ECK1-LESS DOGGING	✓	630	YAL
1	EA	MORTISE CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	RIM CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	OH STOP	100SE - LEAF W/AUTO OPERATOR		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
2	EA	ACTUATOR, JAMB MOUNT	8310-818T	✓	630	LCN
2	EA	SURFACE MOUNT BOX	8310-819S	✓	PLA	LCN
1	EA	RELAY/DOOR SEQUENCER	8310-845	✓	689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	MULLION SEAL	8780N		BK	ZER
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-4RL - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY RETRACT THE PANIC DEVICE LATCH (ALLOWING ACCESS) AND ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR AT THIS TIME WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR. PUSH INTERIOR ACTUATOR AT ANY TIME WILL MOMENTARILY RETRACT THE PANIC DEVICE LATCH AND SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

DEVICES ARE ALSO CAPABLE OF BEING ELECTRONICALLY DOGGED DOWN FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE. PUSHING EITHER AUTO OPERATOR ACTUATOR WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

THE REQUEST TO EXIT FEATURE OF THE DEVICE TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACTS DURING VALID EGRESS. DOOR CONTACTS MONITOR WHETHER THE DOORS ARE OPENED, CLOSED OR HELD OPEN TOO LONG. DOORS TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 55

For use on Door #(s):

A101A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	7100-632F-ECK1-LESS DOGGING		630	YAL
1	EA	RIM CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	OH STOP	100SE		630	GLY
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
1	EA	WEATHER RING	8310-801		PLA	LCN
1	EA	RELAY/DOOR SEQUENCER	8310-845	✓	689	LCN
1	EA	ACTUATOR, WALL MOUNT	8310-853T	✓	630	LCN
1	EA	ACTUATOR, WALL MOUNT	8310-855 - SHARED W/DOOR A101D	✓	630	LCN
2	EA	FLUSH MOUNT BOX	8310-867F	✓	689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-4RL - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR AT THIS TIME WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR. PUSH INTERIOR ACTUATOR AT ANY TIME WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE AND SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE. PUSHING EITHER AUTO OPERATOR ACTUATOR WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 56

For use on Door #(s):

D106A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY		628	IVE
1	EA	MULLION	FIXED MULLION			
1	EA	PANIC HARDWARE	7100-632F-ECK1-LESS DOGGING		630	YAL
1	EA	PANIC HARDWARE	7100-634F-ECK1-LESS DOGGING		630	YAL
1	EA	RIM CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	OH STOP	100S		630	GLY
1	EA	OH STOP	100SE - LEAF W/AUTO OPERATOR		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
1	EA	WEATHER RING	8310-801		PLA	LCN
1	EA	RELAY/DOOR SEQUENCER	8310-845	✓	689	LCN
1	EA	ACTUATOR, WALL MOUNT	8310-853T	✓	630	LCN
1	EA	ACTUATOR, WALL MOUNT	8310-855 - SHARED W/DOOR D106B	✓	630	LCN
2	EA	FLUSH MOUNT BOX	8310-867F	✓	689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-4RL - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR AT THIS TIME WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR. PUSH INTERIOR ACTUATOR AT ANY TIME WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE AND SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

ELECTRIC STRIKES ARE ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE. PUSHING EITHER AUTO OPERATOR ACTUATOR WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

THE MOTION SENSORS TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACTS DURING VALID EGRESS. DOOR CONTACTS MONITOR WHETHER THE DOORS ARE OPENED, CLOSED OR HELD OPEN TOO LONG. DOORS TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 57

For use on Door #(s):

A101B	A101C				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	7100-634F-ECK1-LESS DOGGING		630	YAL
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA THE ACCESS CONTROL SYSTEM.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 58

For use on Door #(s):

A119A	B225A	D121A			
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	7100-632F-ECK1-LESS DOGGING		630	YAL
1	EA	RIM CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 59

For use on Door #(s):

A103B	B101A				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY		628	IVE
1	EA	MULLION	FIXED MULLION			
1	EA	PANIC HARDWARE	7100-632F-ECK1-LESS DOGGING		630	YAL
1	EA	PANIC HARDWARE	7100-634F-ECK1-LESS DOGGING		630	YAL
1	EA	RIM CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACTS DURING VALID EGRESS. DOOR CONTACTS MONITOR WHETHER THE DOORS ARE OPENED, CLOSED OR HELD OPEN TOO LONG. DOORS TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 60

For use on Door #(s):

AS01A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	7150-ECK1-LESS DOGGING		630	YAL
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG.

Hardware Group No. 61

For use on Door #(s):

B106A	B107A	B110A	CS01A	CS01B	CS01C
DS01A	DS01B	DS01C			

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	7150-ECK1-LESS DOGGING		630	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG.

Hardware Group No. 63

For use on Door #(s):

A103A	A103C				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY		628	IVE
1	EA	REMOVABLE MULLION	KRM200-102S		689	YAL
2	EA	PANIC HARDWARE	7150-ECK1-LESS DOGGING		630	YAL
1	EA	MORTISE CYLINDER	KEYED TO OWNERS YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP HEDA		689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
2	EA	MULLION SEAL	8780N		BK	ZER
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG.

Hardware Group No. 64

For use on Door #(s):

C108A	C210A	D108A	D129A	D207A	D224A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
			HARDWARE BY DOOR MANUFACTURER			

Hardware Group No. 65

For use on Door #(s):

A119B	A128A	A128B	C123A	C123B	D109A
D109B					

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
			HARDWARE BY DOOR MANUFACTURER			

END OF SECTION

SECTION 28 10 00 - ACCESS CONTROL SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. Scope: Work of this Section includes all labor and materials required for implementing a hardware installation of electronic access control system within the building.
 - 1. The family of intelligent controllers and peripheral interface devices must provide an open architecture family of products that enables a choice of host software system vendor without replacement of hardware.
- B. The software for the new control system shall be bid out as a separate project as basis for new facility / campus-wide platform.
- C. Related Documents: The Contract Documents, as defined in Division 1, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.
- D. Related Sections:
 - 1. Section 08 71 00: Door Hardware
 - 2. Division 26: Electrical
 - 3. Section 27 10 00: Structured Communications Cabling System
- E. Upon completion of the project by this Contract, the System cardholder database and schedules will be self-managed by Owner using the separately bid software interface.
- F. Contractor or subcontractor assigned the work of this section shall be a manufacturer authorized dealer and installer.

1.2 REFERENCES

- A. American National Standards Institute (ANSI)
- B. International Fire Code
- C. NFPA 70 National Electric Code
- D. International Organization for Standardization (ISO)
- E. NEMA: Electrical equipment shall comply with applicable portions of NEMA.
- F. FCC: All assemblies shall be in compliance with FCC emission standards.
 - 1. Microprocessor based controller: Part 15, Subpart F, Class A.
 - 2. Proximity Card Reading Sensors: Part 15, Subpart F (field disturbance sensors).
 - 3. Dial-up modems: Part 68.
 - 4. UL-1012 and CSA: All power supplies shall be in compliance with Underwriters Laboratories standard 1012 and CSA standards for power supplies.
 - 5. UL-294: The system shall comply with Underwriter Laboratories standard 294 for Access Control Systems.

1.3 SUBMITTALS

- A. General: Provide the following according to the Conditions of the Contract, Division 1 and Division 26 Specification Sections to the Contracting Officer and/or Owner's Representative.
 - 1. Product Data: Submit manufacturer's data on Access Control System components including, but not limited to, electrical specifications, mechanical specifications, rough-in diagrams, and instructions for installation, operation and maintenance, suitable for inclusion in Operation & Maintenance manuals.
 - 2. Shop Drawings: Provide shop drawings showing equipment locations and arrangements for the Access Control System to include, but not be limited to, central controllers, reader

modules, card reader extenders, proximity card reading sensors, power supplies, switches, door wiring configurations and ancillary equipment. All drawings must be submitted in hard copy and electronic format.

3. One Line Diagram: Submit a one-line diagram of the system configuration proposed. Submittals indicating typical riser diagrams are not acceptable. All drawings must be submitted in hard copy and electronic format.
4. Operations & Maintenance Manual: Submit for prior approval, three (3) copies of manufacturer's manual for programming and operating the system and its related components.

1.4 QUALITY ASSURANCE

- A. Manufacturer: Manufacturer of products defined in this section must have:
 1. Industry experience: Company must have at least 10 years' experience in manufacturing and servicing access management systems.
 2. ISO 9001 Certification: Manufacturing process of company must meet stringent standards of ISO 9001 Certification.
- B. Systems Integrator / Distributor:
 1. Company shall have a minimum of 5 (five) years system design, engineering supervision, and installation experience in the Access Control industry.
 2. Company that is factory trained and authorized to install manufacturer products.
- C. System Checkout:
 1. Pre-testing: All components and assemblies of the control unit are to be pre-tested at the factory prior to shipment.
 2. Burn-in: 720 hours or 30 days at normal operating conditions or equivalency.
 3. On-site testing: Manufacturer trained and authorized Systems Integrator shall functionally test each component in the system after installation to verify proper operation and confirm that the wiring and dressing conform to the wiring documentation.
 4. Service facility: Systems Integrator shall have service facilities within 100 miles of the installation.

1.5 WARRANTY

- A. Access Cards or Keyfobs: No less than 5 (five) years.
- B. System Components: One (1) year from final acceptance of each system component.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Power: All ACS equipment shall operate on 120VAC. Any special power treatment required, such as filtering or spike elimination that may be required for proper operation and protection of the ACS, shall be provided with the system.
- B. Backup Power: ACS equipment shall be supplied from a building's standby (interruptable, 10 seconds maximum dropout) power system. Local UPS or battery backup shall not be required for devices connected to the standby power system.
- C. Hardware: Provide a distributed access control system as required for a complete operating system as described herein and as shown on the Drawings.

2.2 Manufacturer

- A. Provide all system access control software and related hardware as standard catalog product offering of a single manufacturer.
- B. Exception: Controlled devices, such as electric locks, door actuators, sensors, etc., are specified elsewhere.

- C. This specification is based on Mercury Security

2.3 MATERIALS AND COMPONENTS

- A. Access Control Management Software Platform

1. To be bid out in a separate package.

- B. Intelligent System Controller

1. The Linux based intelligent controller must provide decision making, event reporting, and database storage as a hardware platform. Two reader interfaces must provide control for two doors in addition to supporting an additional 62 doors, paired and or alternate reader configurations with peripheral interface devices.
2. The controller must communicate with the host via on-board 10BaseT/100BaseTX Ethernet port and support TLS encryption as a minimum security implementation.
3. The intelligent controller must be capable of elaborate processes and procedures without host intervention. Once configured, the intelligent controller must function independently of the host, and must be capable of controlling access, managing alarms, interfacing with an array of hardware devices, all while providing the decision-making oversight that each system configuration requires.
4. The intelligent controller must provide centralized biometric template management and support a wide range of reader technologies, including OSDP, Wiegand, magnetic stripe and biometric.
5. Two physical barriers must be controlled. Each reader port must accommodate a read head that utilizes OSDP (RS-485), OSDP SC, Wiegand, magnetic stripe, or F2F protocol/electrical signaling standards, one or two wire LED controls, and buzzer control.
6. Controller must support, as a minimum the following open standards, PSIA Area Control, SNMPv3/v2c, OSDP and OSDP SC.
7. The controller must utilize a cryptographic module, like OpenSSL FIPS Object Module RE, that is validated to FIPS 140-2 thus providing a certified implementation of TLS.
8. Features and Functions
 - a. The interface is for use in low voltage, Class 2 Circuits only.
 - b. The installation of this device must comply with all local fire and electrical codes.
 - c. Primary Power: 12 to 24 Vdc \pm 10 %, 500 mA maximum (reader and USB ports not included)
 - d. Reader Ports 600 mA maximum (add 600 mA to primary power current)
 - e. Micro USB Port 5 Vdc, 500 mA maximum (add 270 mA to primary power current)
 - f. Memory and Clock Backup Battery: 3 Volt Lithium, type BR2330 or CR2330
 - g. microSD Card: Format: microSD or microSDHC; 2GB to 8GB
 - h. Host Communication: Ethernet: 10-BaseT/100Base-TX and Micro USB port (2.0) with optional adapter: pluggable model USB2-OTGE100
 - i. Serial I/O Device One each: 2-wire RS-485, 2,400 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit
 - j. Inputs: Eight unsupervised/supervised, standard EOL: 1k/1k ohm, 1%, ¼ watt Two unsupervised dedicated for cabinet tamper and UPS fault monitoring
 - k. Outputs: Four relays, Form-C with dry contacts Normally open contact (NO) contact: 5 A @ 30 Vdc resistive Normally closed contact (NC) contact: 3 A @ 30 Vdc resistive
9. Built-In Reader Interface
 - a. Supports Data1/Data0, Clock/Data and Lenel OSDP-compatible RS-485 readers and keypads

- b. 4 Form-C relay outputs, 5 A at 30 VDC
 - c. Door contact supervision (open/closed) and REX push-button monitor for each door
 - d. Strike control and auxiliary output for each door
 - e. Bicolor reader status LED support plus beeper control, or 2-wire LED support
 - f. On-board regulator allows 12 VDC reader power from 24 VDC power source
 - 10. Product shall be Mercury LP Series
- C. Reader Interface Module
 - 1. Features and Functions
 - a. Power: 12 Vdc \pm 10 % regulated, 300 mA maximum each reader (jumper selectable) (input voltage (VIN) must be greater than 20 Vdc) or 12 to 24 Vdc \pm 10 % (input voltage (VIN) passed through), 300 mA maximum each reader
 - b. Data Inputs: TTL compatible, F/2F or 2-wire RS-485
 - c. RS-485 Mode: 9,600 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit. Maximum cable length: 2000 ft. (609.6 m)
 - d. LED Output: TTL levels, high>3 V, low<0.5 V, 5 mA source/sink maximum
 - e. Buzzer Output: Open collector, 12 Vdc open circuit maximum, 40 mA sink maximum
 - 2. Product shall be Mercury LP Series or MR Series
- D. Input Control Module
 - 1. Features and Functions
 - a. The peripheral interface device shall be used to monitor sixteen (16) inputs.
 - b. The peripheral interface device shall be able to utilize a cryptographic module that can encrypt/decrypt communication with the intelligent controller, supporting AES encryption using a minimum 256 bit key length.
 - c. The peripheral interface device shall utilize a crypto memory chip that provides hardened protection of secrets such keys.
 - d. Primary Power:
 - 1) 12-24Vdc \pm 10%, 350mA maximum
 - 2) 12Vdc at 300mA nominal
 - 3) 24Vdc at 220mA nominal
 - e. Communication: 2-wire RS-485, 4,000 feet using Belden 9841
 - f. Inputs: sixteen (16) general purpose programmable type and two dedicated for tamper and power monitor
 - g. Outputs: two (2) relays – Form-C, 5 Amp, 28Vdc
 - h. Temperature: 0 to 70 degrees Centigrade operational, -55 to 85 degrees Centigrade storage
 - i. Humidity: 10 to 95 percent RHNC
 - j. Offline mode operation
 - 1) Relay Mode
 - a) Programmable for offline conditions
 - 2. Product shall be Mercury MR Series
- E. Output Control Module
 - 1. Features and Functions

- a. The peripheral interface device shall be used to provide sixteen (16) dry contact outputs to auxiliary equipment such as locks or to activate alarms.
 - b. The peripheral interface device shall be able to utilize a cryptographic module that can encrypt/decrypt communication with the intelligent controller, supporting AES encryption using a minimum 256 bit key length.
 - c. The peripheral interface device shall utilize a crypto memory chip that provides hardened protection of secrets such keys.
 - d. Primary Power:
 - 1) 12-24Vdc \pm 10%, 1100 mA maximum
 - 2) 12Vdc at 850mA nominal
 - 3) 24Vdc at 450mA nominal
 - e. Communication: 2-wire RS-485, 4,000 feet using Belden 9841
 - f. Inputs: two (2) dedicated for tamper and power monitor
 - g. Outputs: sixteen (16) relays – Form-C, 5 Amp at 28Vdc
 - h. Temperature: 0 to 70 degrees Centigrade operational, -55 to 85 degrees Centigrade storage
 - i. Humidity: 10 to 95 percent RHNC
 - j. Offline mode operation
 - 1) Relay Mode
 - a) Programmable for offline conditions
2. Product shall be Mercury MR Series
- F. Digital Proximity Card Reader
- 1. Features and Functions
 - a. Compatibility: compatible with industry standard 125 kHz proximity and 13.56 MHz contactless technologies
 - b. Easy migration
 - c. Optional GSA approved PIV support
 - d. Modular design: allows easy removal or addition of keypad in the field
 - e. Read range: up to 8 in. (203 mm), depending on card technology
 - f. Integrated tamper detection
 - g. Tri-state LED (red, green, amber): Visual indicator and audio feedback representing status and activity information
 - h. Accommodates interior, exterior, metal and non-metal installation environments
 - i. Suitable for installation on door frames, mullions, or wall mounting
 - j. Lifetime warranty against defective workmanship and materials
 - 2. Contractor shall be responsible to confirm the mounting style (mullion or single-gang) of the reader prior to installation at each instance.
 - 3. Approved Products
 - a. Allegion aptiQ Multi-Technology Reader models MT11 / MT15
 - b. Assa Abloy HID multiCLASS SE models RP15 / RP40
- G. Access Card Credentials
- 1. Existing 125 kHz, 26-bit proximity access cards in use by Owner.

2. Provide Digital Proximity Access Cards (Card). The card shall be an ISO compliant, single-coil passive proximity card that supports multiple technologies on one card, including: smart card, proximity, bar code, and photo ID. Design shall be capable of having imaging on both sides and hole punch horizontal or vertical for using the card as a badge.
 3. Each card shall have the capability to be programmed to operate universally at different locations.
 - a. Active circuit type cards (those requiring batteries) shall not be acceptable.
 - b. Coordinate ordering of proximity cards with the Owner and/or Owner's Representative to ensure proper site and facility coding, as well as card number series allocation.
 4. Capacities:
 - a. Card shall have up to 84 programmable bits of Wiegand formatted information for universal compatibility with all Wiegand interface reader applications.
 - b. Cards shall have numeric encoded data embedded in an integrated circuit within the card and shall have a permanent identification number printed on it.
 - c. Each card shall be encoded so that it is totally unique and is not duplicated anywhere in the world.
 5. Specifications:
 - a. MIFARE / ISO14443 compliant, 8kbit/1Kbyte, 16sectors
 - b. Slot punched
 - c. Composite PET/PVC construction
 - d. Dimensions: Standard size and thickness of 3.375 in. x 2.125 in. x 0.070 in thick.
 - e. Environmental:
 - 1) Temperature: -50° to 160° F (-45° to 70° C).
 - 2) Humidity: 5% to 95%.
 - f. Regulatory: N/A (Card is totally passive requiring no approval.)
 - g. Power:
 - 1) Source: Passive-powered by digital proximity reader.
 - 2) Consumption: Not detectable.
 - h. Communication: Via low power radio frequency, providing read ranges up to 22 inches depending on the selected Reader.
 6. Approved Products:
 - a. Allegion aptiQ 13.56 MHz smart credential model 9551 (card) / 9651 (keyfob)
 - b. Assa Abloy HID FlexSmart model 1436 (card) / 1434 (keyfob)
- H. Door Position Switches/Contacts
1. Hermetically sealed magnetic reed switch.
 2. Contact & magnet housing shall snap-lock into a 3/4" hole.
 3. Voltage: 100 V AC/DC max.
 4. Current: 0.5 A max.
 5. Power: 7.5 W max.
 6. Loop type: Closed – N/O
 7. Mounting: Recess mounted
 8. Contractor shall use 45-degree condulets to enclose and protect cabling from door contacts/switches. Condulets shall be placed as close to the contact/switch as possible.

9. Approved Products:
 - a. Recessed Magnetic Door Contact
 - b. Surface Magnetic Door Contact (existing doors / retrofits only)
 - c. For overhead doors, provide Overhead Door Floor Contact
- I. Wire and Cable:
 1. General: Stranded copper. Size conductors as indicated but not less than recommended by system manufacturer.
 2. Comply with Section 26 05 19, "Wires and Cables" except as indicated.
 3. Cable for Low-Voltage Control and Signal Circuits: Unshielded, twisted-pair cable, except where manufacturer recommends shielded cable.
 4. Power and Relays: 1 twisted pair, 18 to 16 AWG
 5. I/O Device Port: RS-485 1 twisted pair, shielded, 120 ohm impedance, 24 AWG, 4,000 ft. (1,219 m) max.
 6. Alarm Input: 1 twisted pair, 30 ohms maximum
 7. Reader Interface Locations:
 - a. Install RS-485 serial data grade #24 or #22 AWG, 2 conductor stranded shielded twisted pair cable homerun to system controller for data.
 - b. Reader Port: RS-485 1 twisted pair, shielded, 120 ohm impedance, 24 AWG, 2,000 ft. (610 m) max.
 8. Proximity Card Reader Locations:
 - a. Install #22 AWG, 6 conductor stranded shielded twisted pair cable homerun to reader interface for data.
 - b. Install #18 AWG, 4 conductor stranded shielded twisted pair cable homerun to reader interface for future request-to-exit and door contacts.
 9. Electric Door Strike Locations: Install 2 conductor stranded unshielded twisted pair cable homerun to access control panel only at installed electric strike locations, sized as required to accommodate voltage drop at required distance, not less than #16 AWG.
 10. Ethernet network data cables: per Section 27 10 00.
- J. Raceway:
 1. Comply with Section 26 05 33.13 "Conduit", Section 26 05 33.23 "Surface Raceway Systems", and Section 26 05 33.16 "Junction Boxes".
 2. Cable trays, where provided, shall be used for support of cables.
 3. Refer to general notes and specifications regarding areas where installed cabling must be concealed in an acceptable raceway or conduit (not exposed).
- K. Refer to Part 4 for schedule of components per Door Hardware Set.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to bidding, examine the project for nature, scope and intent of all work to be performed. Submission of a bid or proposal will constitute that examination has been made, and any difficulties foreseen identified and noted.
- B. Any claims for labor, work, materials or equipment for difficulties encountered which should have been foreseen, shall not be recognized; and will be taken care of by the contractor at no additional cost to the Owner.

3.2 DELIVERY

- A. Upon delivery to the sight, Contractor shall inspect all products and materials for any damage. Acceptance of the units constitutes that the inspection has occurred and no damaged or unacceptable products were found, and any damage or unacceptable products would be the responsibility of the contractor.
- B. Begin installation of electronic components only when all wet work is completed in each installation area.
- C. Anchor components securely in place, plumb, level, and accurately aligned. Provide separators and isolators to prevent corrosion and electrolytic deterioration.

3.3 PREPARATION

- A. Furnish any inserts required for building into concrete, masonry, and other work, to support and attach work of this section. Furnish in ample time to comply with schedule of work into which inserts are built.
- B. Verify that power and outlets are in correct locations.
- C. Verify that building structure is properly prepared for mounting, attachment and support of equipment.
- D. Report in writing to the Architect any prevailing conditions that will adversely affect satisfactory execution of Work in this Section.
- E. Care shall be exercised at all times to protect property. Ladders shall not be placed against wallpapered or finished surfaces, equipment or furnishings. Desks or countertops shall not be used in lieu of ladders.
- F. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the Owner.

3.4 INSTALLATION – GENERAL

- A. Prior to installation of systems components and devices, verify all required preparations have properly occurred and that substrates are acceptable for installation.
 - 1. Verify all rough-ins and field dimensions.
 - 2. Report any discrepancies or unsatisfactory conditions.
 - a. Do not begin work until unsatisfactory conditions have been corrected.
 - b. Consultant reserves the right to review proposed methods of construction/installation, reject proposed methods, and have the installation done in a satisfactory method at the Contractor's cost.
 - c. Installation constitutes acceptance of responsibility for performance.
- B. Install work in accordance with manufacturer's recommendations, instructions and final shop drawings.
 - 1. Installer shall be a certified representative of the manufacturer.
- C. Begin installation of electronic components only when the following is met, in each installation area:
 - 1. All wet work is completed.
 - 2. Area is dust free
 - 3. All work is completed in regard to painting
- D. Anchor components securely in place, plumb, level, and accurately aligned. Provide separators and isolators to prevent corrosion and electrolytic deterioration.
- E. Protect installed equipment from damage and soilage.

- F. For card readers that are located in equipment traffic areas, and that are exposed to damage due to collision or impact from forklifts, or manually moved carts, carriers, or other equipment used by the owner, Contractor shall fabricate, provide and install protective bollards, railings, coverings etc. to ensure that all card readers installed are properly protected from such damage. Contractor shall provide shop drawings of planned protection for specific card reader installations to project consultant for approval prior to installation.
- G. Touch up minor scratches and abrasions with manufacturer's touch-up paint.
- H. Furnish and install all fastenings, plates and other incidental items required for complete and operational installation.
- I. Provide required electrical work in accordance with code requirements.
- J. Circuit breakers serving security system components shall be provided with locking devices.
- K. Surface mounted raceway is not permitted in finished spaces unless otherwise noted on drawings.

3.5 WIRING

- A. Clearly identify points of connection for wiring from building power system to work of this Section and requirements for connection to materials and equipment supplied under Division 26.
- B. Install all wiring connecting all system components and controlled and monitored devices.
- C. Install all transformers, relays and other accessories.
- D. Install all cable, and perform all cable splicing and equipment terminations.
- E. Contractor shall use 45-degree condulets to enclose and protect cabling from door contacts/switches. Condulets shall be placed as close to the contact/switch as possible.
- F. Pull continuously between connections where possible.
- G. Install electronic systems wiring and cabling in conduit or raceway, as noted on project drawings and as specified in Division 26.
 - 1. Pulling cables and wires:
 - a. Do not force or pressure in a manner, which will stretch, break or damage jacket.
 - 1) Use an inert anti-friction material to assist in pulling wire.
 - 2) Pull all cables and wires to be installed in a raceway all at one time.
- H. Identify system all system components, wiring, cabling, and terminals with permanent machine-printed labels.
- I. Provide grounding as required by device manufacturer.

3.6 FINAL TESTING AND ACCEPTANCE

- A. The Contractor shall develop a Final Test and Acceptance (FTA) Plan. The plan shall identify each new system component provided in the work, intent of test, method or methods of test and expected results. Each component listed in the plan shall include space for test part signatures, brief comments, time of test and pass/fail check boxes. The FTA plan shall be submitted to the owner's representative 30 days prior to the scheduled final test.
- B. Provide manufacturer's supervision of final testing of each system.
- C. Each system must test free from interference, opens, grounds, and short circuits.

3.7 CLEANING, TOUCH-UP AND PROTECTION

- A. Cleaning and Touchup: Immediately after installation, including the completion of wiring and testing, clean all work and touchup all damaged factory finishes.
- B. Protection: Provide protective covers, fenders, and barriers as necessary to maintain Work of this Section in same condition as installed.

3.8 ACCEPTANCE

- A. System Warranty shall not start until Acceptance. Acceptance shall be withheld until the following activities have been successfully completed:
 - 1. Acceptance of all submittals.
 - 2. Delivery of final documentation.
 - 3. Successful Final Test and Inspection
 - 4. Successful Operational Demonstration Test
 - 5. Successful training and demonstration, including operation of systems using the manuals.
 - 6. Purging of Contractor User privileges and return of all key card media.

PART 4 - SCHEDULE

4.1 HARDWARE SETS

- A. Refer to Door Hardware Schedule and Specification 08 71 00 for electronic hardware and equipment list.
 - 1. Provide multi-tech card reader where indicated in specification and on plans. Coordinate mullion mount and surface mount types.
 - 2. Provide all equipment as noted for Access Controls Integrator, including but not limited to Electronic Lock (PoE), Electrified Hinge (HW), and PoE Wire Harness. Coordinate all requirements with Door Hardware sets.
 - 3. Coordinate Power Supply requirements with Door Hardware Schedule prior to Submittal.
- B. All wiring and terminations shall be provided by this Section.
- C. Locate all reader interfaces and associated power supplies centrally to the area being served, coordinate with existing modules.
- D. Typical Door Set Operation
 - 1. Door(s) shall be normally locked from secure side. Door(s) may be unlocked for entry either by presentation of valid credential to card reader, or by application of an unlock schedule in management software.
 - 2. Where door operators are shown on the plans: Tie card reader, electronic hardware, and automatic door operator via relay such that door operator is disabled when door is in secure/locked state; door operator shall be enabled only when access control system unlocks door hardware, permitting free opening of door.
- E. Door Release
 - 1. Locate door release push buttons as indicated on plans for manual door lock release. Confirm exact location with Owner and Architect/Engineer, and coordinate requirements for concealed rough-in with related trades. Switches shall be wired in parallel such that either switch opens door. Refer to Door Hardware schedule for operation and equipment.
- F. Building Lockdown
 - 1. Lockdown push button to activate the emergency building lockdown sequence. Each switch shall be wired to independent inputs on control modules.
 - 2. Operational Sequence:
 - a. Upon activation of emergency building lockdown sequence, the access control system (using the input/output expansion module and additional relay(s) as required) shall secure electric hardware on all building doors controlled by reader interface modules.
 - b. Initiate the closing of rolling fire doors to prevent passage between spaces on each side.

- c. Open/interrupt the electromagnetic door holder circuit provided by Section 28 31 00 Fire Alarm System, which shall release all magnetically-held doors (fire-rated and non-fire-rated) to the closed and secured position.
 - d. Reset of the emergency building lockdown condition shall be acknowledged and reset by authorized personnel via the Access Control System.
- 3. Push button shall be momentary switch, turn to reset, blue housing, red mushroom push button operator, lift cover with alarm, furnished with custom label plate to indicate function. Label "LOCKDOWN". Device height of 8" or less.
 - a. Wall mount (with horn): STI Model SS24A1LD-EN or approved equal.
 - b. Provide (4) wall mount push buttons for bidding purposes.
- 4. Reception desk pushbutton shall be momentary switch, under desk mounting, furnished with custom label plate to indicate function. Label "LOCKDOWN".
 - a. Honeywell 270R or approved equal.
 - b. Provide (2) desk push buttons for bidding purposes.

END OF SECTION

APPENDIX D: CONSTRUCTION SPECS AND DRAWINGS - 79

ELECTRICAL ABBREVIATIONS			
AFB	ABOVE FINISHED FLOOR	INTLK	INTERLOCK
BKR	BREAKER	JCT	JUNCTION
BOB	BOTTOM OF BOX	JB	JUNCTION BOX
BOS	BOTTOM OF STRUCTURE	KW	KILOWATT
BP	BREAKER PANEL	KWH	KILOWATT HOUR
BUDG	BUILDING	KNOCK	KNOCK OUT
CAP	CAPACITY	LBL	LABEL
CLG	CEILING	LT	LIGHT
CKT	CIRCUIT	LCM	LIGHTING CONTROL
CB	CIRCUIT BREAKER	LC	LIGHTING CONTROL MODULE
C	CONDUIT	LON	LIGHTING CONTROL NARRATIVE
COMM	COMMUNICATIONS	LTK	LIGHTING
CONN	CONNECTION	MMX	MAXIMUM
CONST	CONSTRUCTION	MCC	MOTOR CONTROL CENTER
CONTR	CONTRACT (OR)	MIN	MINIMUM
CLL	CONTRACT LIMIT LINE	NEG	NATIONAL ELECTRICAL CODE
CT	CURRENT TRANSFORMER	NEC	NEGATIVE (-)
E.C.	ELECTRICAL CONTRACTOR	NO	NORMALLY CLOSED
END	ELECTRIC HAND DRIVER	NO	NORMALLY OPEN
ELEC	ELECTRIC (AL)	NA	NOT APPLICABLE
EWC	ELECTRIC WATER COOLER	NC	NOT IN CONTRACT
EM	EMERGENCY	NL	NIGHT LIGHT
ENT	ENTRANCE	OCPO	OVERCURRENT PROTECTIVE DEVICE
EQ	EQUAL	PC	PHOTOCELL PHOTOCONTROL
EQUIP	EQUIPMENT	POS	POSITIVE (+)
EST	ESTIMATE	PWR	POWER
EF	EXHAUST FAN	P & L	POWER & LIGHTING
ETR	EXISTING TO REMAIN	S	SURFACE
EX	EXISTING	S.B.O.	SUPPLIED BY OTHERS
F	FLUSH	SP	SINGLE POLE
FA	FIRE ALARM	SPD	SURGE PROTECTION DEVICE
FSE	FOOD SERVICE EQUIPMENT	SPEAK	SPEAKER
FP	FIRE PROOF / FIRE PROTECTION	SPEC	SPECIFICATION
FLR	FLOOR	SUB	SUBSTITUTE
FLUOR	FLUORESCENT	SWBO	SWITCHBOARD
GEN	GENERATOR	TEL	TELEPHONE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TSTAT	THERMOSTAT
GRD	GROUND	TRMR	TRANSFORMER
HORIZ	HORIZONTAL	UG	UNDERGROUND
HTR	HEATER	UL	UNDERWRITERS LABORATORIES
HTG	HEATING	UH	UNIT HEATER
HV	HEATING / VENTILATING	UNO	UNLESS NOTED OTHERWISE
HVAC	HEATING, VENTILATING, AIR CONDITIONING	VERT	VERTICAL
HQA	HAND - OFF - AUTOMATIC	WI	WITH
HP	HEAT PUMP	W/O	WITHOUT
		WG	WIRE GUARD
		WL	WET LOCATION
		WP	WEATHER PROOF

MAXIMUM CONDUCTOR LENGTHS FOR TYPICAL BRANCH CIRCUITS

FEET ONE-WAY BASED ON SINGLE PHASE,
20A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE		CONDUCTOR SIZE				
#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG	#4 AWG	
120	60	100	150	245	385	
208	100	170	265	425	670	
277	135	230	355	565	890	
480	240	400	615	980		

FEET ONE-WAY BASED ON SINGLE PHASE,
30A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE		CONDUCTOR SIZE				
#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG	#4 AWG	
120	60	100	150	245	385	
208	100	170	265	425	670	
277	135	230	355	565	890	
480	240	400	615	980		

FEET ONE-WAY BASED ON THREE PHASE,
20A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE		CONDUCTOR SIZE				
#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG	#4 AWG	
208	120	200	305	490	775	
480	275	460	710	1,130		

FEET ONE-WAY BASED ON THREE PHASE,
30A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE		CONDUCTOR SIZE				
#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG	#4 AWG	
208	120	200	305	490	775	
480	275	460	710	1,130		

POWER SYMBOL LEGEND	
	THREE PHASE MOTOR CONNECTION, 5 HORSEPOWER (EXAMPLE)
	SINGLE PHASE MOTOR CONNECTION, 1/2 HORSEPOWER (EXAMPLE)
	HVAC CONTROL, DAMPER ACTUATOR CONNECTION
	HVAC SMOKE DAMPER ACTUATOR CONNECTION
	HVAC COMBINATION FIRE/SMOKE DAMPER ACTUATOR CONNECTION
	SAFETY SWITCH DISCONNECTING MEANS, NOT FUSIBLE
	SAFETY SWITCH DISCONNECTING MEANS, FUSIBLE
	COMBINATION MOTOR STARTER AND FUSIBLE DISCONNECTING MEANS
	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECTING MEANS
	MOTOR STARTER
	BOX-COVER FUSIBLE DISCONNECT SWITCH
	MANUAL MOTOR CONTROLLER
	POWER SWITCH, REFER TO LIGHTING SYMBOL LEGEND FOR SIMILAR SWITCH TYPES
	DIRECT ELECTRICAL CONNECTION
	SINGLE NEMA 5-20R RECEPTACLE
	SINGLE NEMA 5-20R RECEPTACLE, CEILING-MOUNTED
	SINGLE NEMA 5-20R RECEPTACLE, FLOOR-MOUNTED
	DUPLEX NEMA 5-20R RECEPTACLE
	"E" NOTATION: REPLACE EXISTING WIRING DEVICE USING EXISTING OUTLET BOX
	"GFCI" NOTATION: GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE
	"S" NOTATION: SURFACE-MOUNTED
	"WL" NOTATION: PROVIDE WEATHER RESISTANT (WR) GFCI RECEPTACLE WITH EXTRA-DUTY WHILE-IN-USE WET LOCATION COVER
	DUPLEX NEMA 5-20R RECEPTACLE, CEILING-MOUNTED
	DUPLEX NEMA 5-20R RECEPTACLE, FLOOR-MOUNTED
	DUPLEX NEMA 5-20R RECEPTACLE, CONNECTED TO STANDBY POWER BRANCH CIRCUIT
	DUPLEX NEMA 5-20R RECEPTACLE, SPLIT-WIRED
	QUADREX (DOUBLE DUPLEX) NEMA 5-20R RECEPTACLE
	QUADREX (DOUBLE DUPLEX) NEMA 5-20R RECEPTACLE, CEILING-MOUNTED
	QUADREX (DOUBLE DUPLEX) NEMA 5-20R RECEPTACLE, FLOOR-MOUNTED
	RECEPTACLE OTHER THAN NEMA 5-20R (MAY BE MULTI-POLE OR MULTI-PHASE), SEE PLAN FOR TYPE
	RECEPTACLE OTHER THAN NEMA 5-20R (MAY BE MULTI-POLE OR MULTI-PHASE), SEE PLAN FOR TYPE, FLOOR-MOUNTED
	SURFACE RACEWAY SYSTEM
	AUTOMATIC TRANSFER SWITCH
	SWITCHBOARD
	PANELBOARD
	TRANSFORMER
	MOTOR CONTROL CENTER
	EMERGENCY STOP STATION, REFER TO DETAIL FOR REQUIREMENTS
	AUTOMATIC DOOR OPERATOR PUSH BUTTON
	ON/OFF PUSH BUTTON
	THREE-FUNCTION PUSH BUTTON
	FLOORBOX, TYPE 1
	JUNCTION BOX
	METER
	THERMOSTAT ROUGH-IN
	RELAY
	ENCLOSED CONTROL CONTACTOR
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

LIGHTING SYMBOL LEGEND	
	SINGLE POLE TOGGLE SWITCH
	DOUBLE POLE TOGGLE SWITCH
	THREE-WAY TOGGLE SWITCH
	FOUR-WAY TOGGLE SWITCH
	SINGLE POLE SWITCH WITH INTEGRAL OCCUPANCY SENSOR
	SINGLE POLE SWITCH WITH INTEGRAL OCCUPANCY SENSOR AND DIMMER
	WALL BOX DIMMER SWITCH
	THREE-WAY WALL BOX DIMMER SWITCH
	ELECTRONIC INTERVAL TIMER SWITCH
	LIGHT SWITCH WITH PILOT LIGHT
	LIGHTING CONTROL SWITCH, REFER TO LIGHTING CONTROL SWITCH SCHEDULE AND SPECIFICATIONS FOR DETAILS
	DOUBLE-THROW (MAINTAINED) LIGHT SWITCH
	KEY-OPERATED SWITCH (SUFFIX DESIGNATION - NONE: SINGLE POLE, 2: DOUBLE-POLE, 3: THREE-WAY, 4: FOUR-WAY)
	LOCKING SWITCH (SUFFIX DESIGNATION - NONE: SINGLE POLE, 2: DOUBLE-POLE, 3: THREE-WAY, 4: FOUR-WAY)
	TOUCHSCREEN PANEL
	CIRCUIT NUMBER FOR LIGHT FIXTURES WITHIN INDICATED SPACE
	WALL-MOUNTED LIGHTING FIXTURE, TYPE 'X'
	RECESSED LIGHTING FIXTURE, TYPE 'X'
	SURFACE-MOUNTED LIGHTING FIXTURE, TYPE 'X'
	TRACK LIGHTING
	SINGLE FACE EXIT SIGN, TYPE 'X' IN SCHEDULE UNLESS OTHERWISE NOTED, SHADING INDICATES FACE ORIENTATION
	DOUBLE FACE EXIT SIGN, TYPE 'X' IN SCHEDULE UNLESS OTHERWISE NOTED, SHADING INDICATES FACE ORIENTATION
	WALL-MOUNTED EXIT SIGN, SHADING INDICATES FACE ORIENTATION
	EMERGENCY LIGHT FIXTURE DESIGNATION
	EMERGENCY LIGHTING AUTOMATIC LOAD CONTROL RELAY
	LIGHTING CONTROL RELAY
	LIGHTING CONTROL ENCLOSED CONTACTOR
	TIME SWITCH
	LIGHTING CONTROL MODULE
	LIGHTING CONTROL PANEL
	EMERGENCY LIGHTING INVERTER, TYPE 1
	WALL-MOUNTED OCCUPANCY SENSOR
	CEILING-MOUNTED OCCUPANCY SENSOR
	WALL-MOUNTED PHOTOCELL FOR ON/OFF CONTROL
	CEILING-MOUNTED PHOTOCELL FOR ON/OFF CONTROL
	WALL-MOUNTED PHOTOSENSOR FOR DAYLIGHT HARVESTING DIMMING CONTROL
	CEILING-MOUNTED PHOTOSENSOR FOR DAYLIGHT HARVESTING DIMMING CONTROL
	POLE-MOUNTED SITE/AREA FIXTURE
	SELF-CONTAINED EMERGENCY LIGHTING UNIT
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

COMMUNICATIONS SYMBOL LEGEND	
	COMMUNICATIONS OUTLET ROUGH-IN
	COMMUNICATIONS OUTLET, CEILING-MOUNTED
	COMMUNICATIONS OUTLET, FLOOR-MOUNTED
	CEILING-MOUNTED VIDEO PROJECTOR
	COMMUNICATIONS EQUIPMENT RACK, FLOOR-MOUNTED 2-POST
	COMMUNICATIONS EQUIPMENT RACK, FLOOR-MOUNTED 4-POST
	COMMUNICATIONS EQUIPMENT RACK, WALL-MOUNTED
	CONDUIT SLEEVE FOR COMMUNICATIONS CABLING, 2" DIA. OR EQUIV. FIRE AREA TYP. UNLESS NOTED OTHERWISE, IN FIRE-RATED OR SMOKE-TIGHT WALLS, PROVIDE CABLE PATHWAY PENETRATION DEVICE(S) PER SECTION 27 05 28
	LOUDSPEAKER, CEILING-MOUNTED, TYPE 1
	LOUDSPEAKER, WALL-MOUNTED, TYPE 1
	INTERCOM SYSTEM CALL STATION BUTTON
	VOLUME CONTROL FOR AUDIO SYSTEM, PAGING, OR INTERCOM LOUDSPEAKERS
	SECONDARY CLOCK, CEILING-MOUNTED, TYPE 1
	SECONDARY CLOCK, WALL-MOUNTED, TYPE 1
	SIGNALING BELL
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

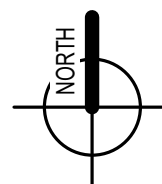
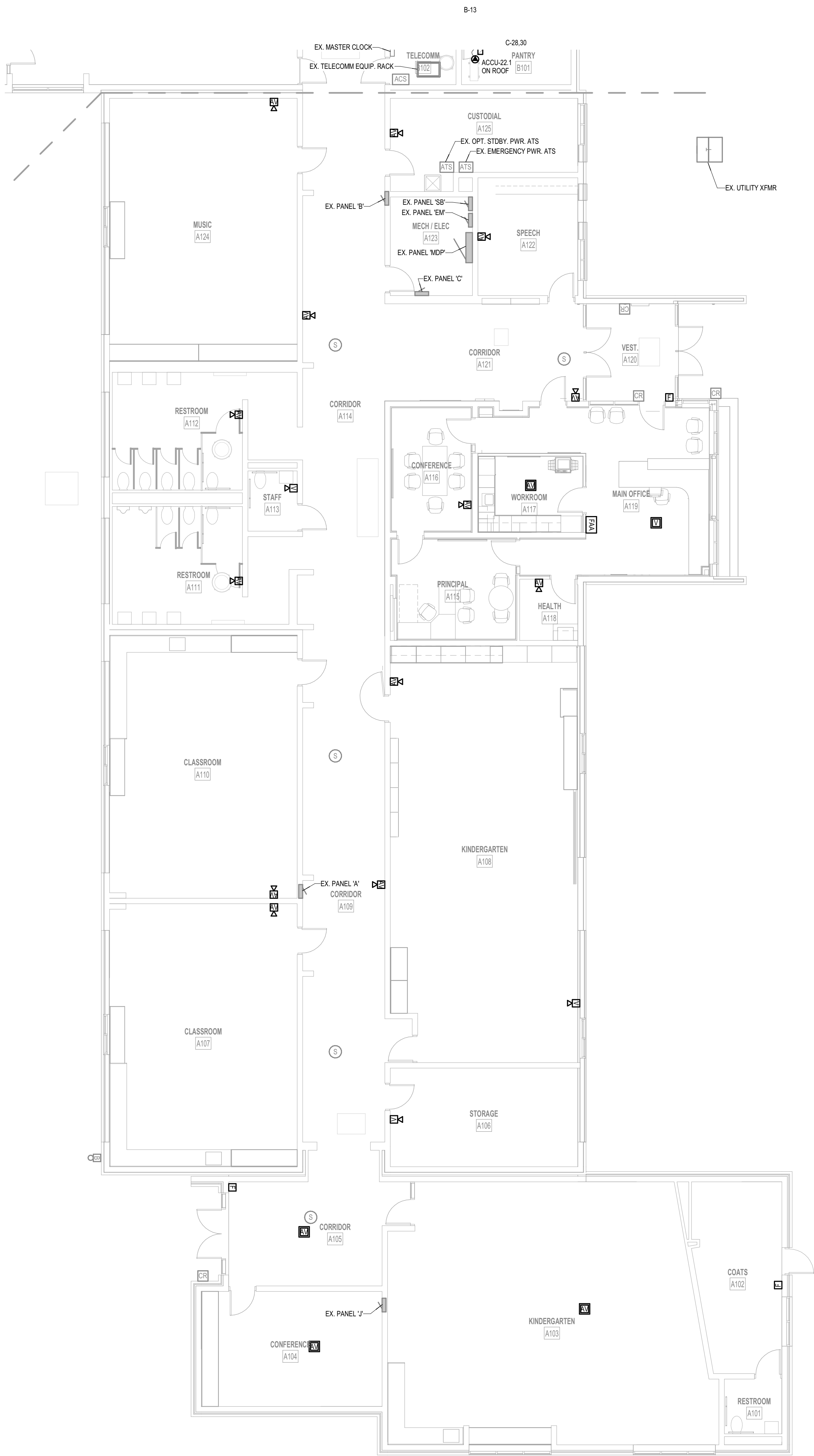
FIRE ALARM SYMBOL LEGEND	
	MANUAL PULL STATION
	AUDIBLE NOTIFICATION APPLIANCE, WALL-MOUNTED
	VISUAL NOTIFICATION APPLIANCE, WALL-MOUNTED
	AUDIBLE/VISUAL NOTIFICATION APPLIANCE, WALL-MOUNTED
	AUDIBLE NOTIFICATION APPLIANCE, CEILING-MOUNTED
	AUDIBLE/VISUAL NOTIFICATION APPLIANCE, CEILING-MOUNTED
	VISUAL NOTIFICATION APPLIANCE, CEILING-MOUNTED
	WHERE "WGPC" IS NOTED, PROVIDE LISTED WIRE GUARD OR PROTECTIVE POLYCARBONATE COVER FOR NOTIFICATION DEVICE
	WHERE "WL" IS NOTED, PROVIDE LISTED WET LOCATION NOTIFICATION DEVICE, SUITABLE FOR INDOOR OR OUTDOOR USE
	SMOKE DETECTOR
	HEAT DETECTOR
	DUCT SMOKE DETECTOR
	FIRE PROTECTION FLOW SWITCH
	FIRE PROTECTION TAMPER SWITCH
	ELECTROMAGNETIC DOOR HOLD-OPEN DEVICE
	ADDRESSABLE RELAY FOR FIRE ALARM CONTROL
	PRESSURE SWITCH
	CARBON MONOXIDE DETECTOR
	NOTIFICATION APPLIANCE CIRCUIT POWER SUPPLY
	FIRE ALARM REMOTE ANNUNCIATOR
	FIRE ALARM CONTROL PANEL
	KEYED TEST SWITCH AND REMOTE INDICATOR FOR DUCT SMOKE DETECTOR
	FIRE PROTECTION OR ALARM BELL
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

ELECTRONIC SAFETY / SECURITY SYMBOL LEGEND	
	DOOR CONTACT
	ELECTRONIC LATCH
	ELECTRONIC STRIKE
	INTRUSION DETECTION KEYPAD
	INTERCOM STATION
	WALL-MOUNTED SURVEILLANCE CAMERA COMMUNICATIONS ROUGH-IN
	CEILING-MOUNTED SURVEILLANCE CAMERA COMMUNICATIONS ROUGH-IN
	WALL-MOUNTED SURVEILLANCE CAMERA, TYPE 1
	CEILING-MOUNTED SURVEILLANCE CAMERA, TYPE 1
	WALL-MOUNTED INFRARED MOTION DETECTOR
	CEILING-MOUNTED INFRARED MOTION DETECTOR
	WALL-MOUNTED ULTRASONIC MOTION DETECTOR
	CEILING-MOUNTED ULTRASONIC MOTION DETECTOR
	CARD READER
	CARD READER, MULLION-MOUNTED
	ACCESS CONTROL DOOR TAG, REFER TO HARDWARE SCHEDULE(S) IN SECTION 08 71 00 AND/OR SECTION 28 10 00 FOR FURTHER DETAILED REQUIREMENTS
	ACCESS CONTROL SYSTEM EQUIPMENT
	INTRUSION DETECTION SYSTEM EQUIPMENT
	POWER SUPPLY UNIT
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

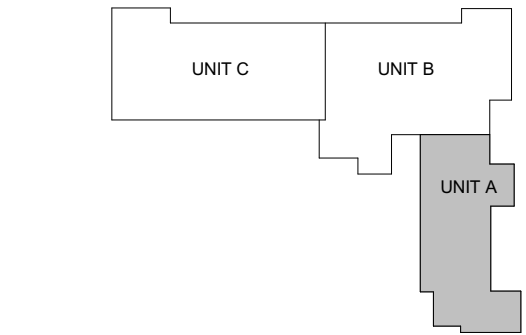
ELECTRICAL GENERAL NOTES	
1.	ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE AS AMENDED AND ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION WHERE THE WORK IS PERFORMED.
2.	ALL "LOW VOLTAGE" CONTROLS, COMMUNICATIONS, AND SAFETY/SECURITY CABLING MAY BE INSTALLED WITHOUT CONDUIT, RACEWAY, OR CABLE TRAY ONLY WHERE CONCEALED ABOVE A SUSPENDED CEILING SYSTEM AND ACCESSIBLE FOR FUTURE MAINTENANCE. OTHERWISE, ALL CABLING (INCLUDING BUT NOT LIMITED TO CABLES ASSOCIATED WITH SYSTEMS SUCH AS ARCHITECTURAL EQUIPMENT, BUILDING ENERGY MANAGEMENT, TEMPERATURE CONTROLS, LIGHTING CONTROLS, COMMUNICATIONS NETWORKS, TELEPHONE, AUDIO/VIDEO, INTERCOM, PAGING, CLOCK, SURVEILLANCE, ACCESS CONTROL, FIRE ALARM, ETC.) SHALL BE INSTALLED IN AN APPROVED SYSTEM, AND/OR CABLE TRAY UNLESS OTHERWISE NOTED. IN EXPOSED STRUCTURE CEILING AREAS, CONCEALED INSTALLATION OF CABLES IN RACEWAYS SHALL BE REQUIRED FOR AESTHETIC PURPOSES AND REPLACEMENT OF WIRING AS REQUIRED FOR FUTURE UPDATES. THIS APPLIES TO ALL TRADES AND WORK CATEGORIES. EXCEPTIONS: A. DEDICATED MECHANICAL AND/OR ELECTRICAL ROOMS ABOVE 6'-0" AFF. B. DEDICATED TELECOMMUNICATIONS ROOMS.
3.	ALL DEVICES SHOWN TO BE INSTALLED ON EXISTING WALLS SHALL BE INSTALLED FLUSH CUT IN BOXES AND FISH WALLS WITH FLEXIBLE CONDUIT AS REQUIRED. IF WALL IS NOT ABLE TO BE FISHED, SURFACE RACEWAY SYSTEMS PER SECTION 28 10 00 SHALL BE PROVIDED BY THE CONTRACTOR. SUCH COSTS SHALL BE INCLUDED IN BID. SURFACE-MOUNTED CONDUIT IS NOT ACCEPTABLE WHERE EXPOSED TO VIEW IN SPACES OTHER THAN DEDICATED MECHANICAL/ELECTRICAL ROOMS.
4.	"LOW VOLTAGE" CONTROLS, COMMUNICATIONS, AND SAFETY/SECURITY CABLING SHALL NOT BE PAINTED. CONTRACTORS INSTALLING CABLING WHERE APPROVED FOR EXPOSED INSTALLATION SHALL INSTALL CABLES AFTER PAINTING HAS BEEN COMPLETED OR PROVIDE TEMPORARY PROTECTION OF CABLES UNTIL PAINTING HAS BEEN COMPLETED. PROVIDE TEMPORARY PROTECTION OF ANY EXISTING CABLING PRIOR TO PAINTING EXISTING AREAS. PAINTED CABLES SHALL BE REPLACED AT THE EXPENSE OF THE NEGLIGENT CONTRACTOR.
5.	METAL CLAD CABLE MAY BE USED FOR FIXTURE WHIPS IN LENGTHS OF 6 FEET OR LESS ABOVE AN ACCESSIBLE SUSPENDED CEILING SYSTEM ONLY. OTHERWISE, METAL CLAD OR OTHER FLEXIBLE CABLE TYPES SHALL NOT BE USED UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER. IT IS THE INTENT OF THESE CONTRACT DOCUMENTS THAT ALL INSTALLED BRANCH CIRCUITS CONSIST OF SEPARATE RACEWAY AND CONDUCTORS ALLOWING REMOVAL AND REPLACEMENT OF WIRING AS REQUIRED FOR FUTURE UPDATES. REFER TO SPECIFICATIONS FOR EXCEPTIONS.
6.	CIRCUIT WIRING FOR ARTICLE 780 EMERGENCY SYSTEMS AND ARTICLE 709 CRITICAL OPERATIONS POWER SYSTEMS SHALL BE INSTALLED IN SEPARATE CONDUITS/RACEWAYS AND BE KEPT ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND EQUIPMENT PER NEC REQUIREMENTS.
7.	ALL FEEDERS AND BRANCH CIRCUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR SIZED ACCORDING TO THE NEC RACEWAYS INCLUDING CONDUITS, BOXES, WIRWAYS, ETC. SHALL NOT BE CONSIDERED AN ACCEPTABLE GROUND.
8.	CONDUITS AND CABLING SHALL NOT BE INSTALLED WITHIN 4" OF ROOF DECK, EXCEPT AS NECESSARY TO SERVE ROOF-MOUNTED ITEMS AND ONLY WHEN THE CONDUIT OR CABLE IS ROUTED VERTICALLY TO SUCH EQUIPMENT FROM BELOW. CLEARANCE SHALL BE PERMITTED TO BE REDUCED TO 1 1/2" WHERE SUPPLEMENTAL METAL FRAMING MEMBERS PROVIDE AN EFFECTIVE BARRIER BETWEEN THE ROOF DECK AND ANY CONDUIT/CABLING.
9.	SUPPLEMENTAL METAL FRAMING SHALL BE PROVIDED FOR SUSPENSION POINTS OF ALL ITEMS LOCATED BETWEEN OVERHEAD STRUCTURAL MEMBERS (JOISTS, TRUSSES, BEAMS, ETC.) IN OPEN-VIEW STRUCTURE CEILING AREAS. METAL FRAMING SHALL SPAN ACROSS THE TOP CHORD OR FLANGE OF THE STRUCTURAL MEMBERS FOR BOTH STRUCTURAL AND AESTHETIC PURPOSES. SPECIFIC EXCEPTIONS SHALL BE COORDINATED IN WRITING WITH THE ARCHITECT/ENGINEER.
10.	CONDUIT INSTALLED WITHIN INACCESSIBLE CONSTRUCTION SHALL BE 3/4" MINIMUM SIZE.
11.	FEEDERS SHOWN ON DRAWINGS ARE SCHEMATIC ONLY. CONDUIT RUNS SHALL COMPLY WITH CONDUIT SPECIFICATIONS AND CONTAIN BENDS THAT ARE NO GREATER THAN 90 DEGREES.

POWER & COMMUNICATION GENERAL NOTES

- REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0101.
- REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
- PROVIDE 120VAC POWER FOR ALL SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS.
 - REFER TO MECHANICAL/HVAC DRAWINGS FOR EXACT LOCATIONS OF DAMPERS.
 - CONNECT TO DEDICATED 20A BRANCH CIRCUIT (WITH BREAKER LOCK-ON ACCESSORY) IN LOCAL PANEL BOARD FOR DAMPERS IN EACH AREA. (DAMPERS MAY BE GROUPED ON EACH CIRCUIT).
 - TERMINATE W/ BOX COVER FUSIBLE DISCONNECT SWITCH AT EACH DAMPER.
 - PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET).
 - PROVIDE FIRE ALARM ADDRESSABLE RELAY(S) FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT(S) PER CODE REQUIREMENTS.
- PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL < 1/2 HP MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
- DESIGNATED CABLEING PATHWAYS (CONDUITS, CABLE TRAYS, PENETRATION SLEEVES, ETC.) SHALL BE RESERVED FOR DIV. 27 COMMUNICATIONS CABLEING AND DIV. 28 SAFETY/SECURITY CABLEING ONLY. OTHER CABLEING TYPES, SUCH AS DIV. 23 CONTROLS, DIV. 26 CONTROLS, AND ARCHITECTURAL EQUIPMENT CABLEING SHALL BE SUPPORTED AND SLEEVED BY OTHER INDEPENDENT PATHWAYS, RANGERS, AND SUPPORTS.
- CONSOLIDATE ALL POWER SUPPLIES REQUIRED FOR ELECTRONIC DOOR HARDWARE (REF. SECTION 08 71 00) TO CENTRAL LOCATION(S) ADJACENT TO DESIGNATED ACCESS CONTROL EQUIPMENT LOCATION(S). CONNECT ALL POWER SUPPLIES TO DEDICATED STANDBY POWER SYSTEM BRANCH CIRCUIT(S) AS DESIGNATED.
- THE FOLLOWING DIV. 27 AND DIV. 28 SYSTEMS WILL BE DOCUMENTED AND BID SEPARATELY BY CONSULTANT IN ASSOCIATION WITH HUDSONVILLE'S TECHNOLOGY DEPT.:
 - NETWORK ELECTRONICS (SWITCHES, ACCESS POINTS, ETC.)
 - VOP TELEPHONE SYSTEMS
 - CLASSROOM AUDIO/VIDEO EQUIPMENT AND INSTRUCTIONAL TECHNOLOGY
 - AUDIO/VIDEO SYSTEM FOR GYMNASIUM
 - ACCESS CONTROL SYSTEM
 - VIDEO SURVEILLANCE SYSTEM



UNIT 'A' POWER PLAN
1/8" = 1'-0"



KEYPLAN

ISSUANCES	
09.22.2021	BIDS & CONSTRUCTION

DRAWN	MCK
REVIEWED	JFB

PROJECT NO.	5-5362
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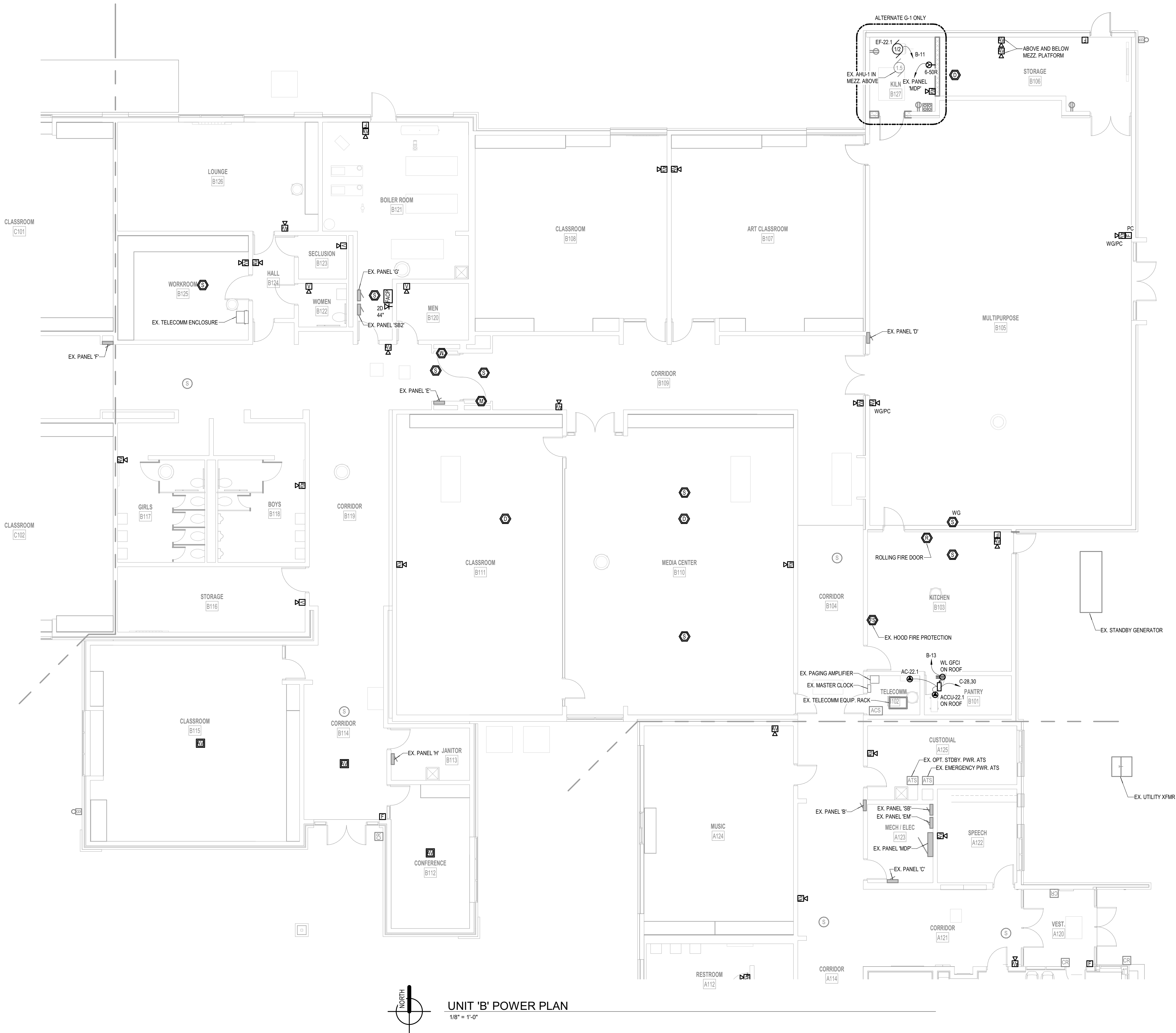
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UNIT 'A' POWER PLAN

POWER & COMMUNICATION GENERAL NOTES

- REFER TO ELECTRICAL GENERAL NOTES ON SHEET E6.01.
- REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
- PROVIDE 120VAC POWER FOR ALL SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS.
 - REFER TO MECHANICAL/HVAC DRAWINGS FOR EXACT LOCATIONS OF DAMPERS.
 - CONNECT TO DEDICATED 20A BRANCH CIRCUIT (WITH BREAKER LOCK ON ACCESSORY IN LOCAL PANEL BOARD FOR DAMPERS) IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT).
 - TERMINATE W/BOX COVER FUSIBLE DISCONNECT SWITCH AT EACH DAMPER.
 - PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET).
 - PROVIDE FIRE ALARM ADDRESSABLE RELAY(S) FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT(S) PER CODE REQUIREMENTS.
- PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE, BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
- DESIGNATE CABLE PATHWAYS (CONDUITS, CABLE TRAYS, PENETRATION SLEEVES, ETC.) SHALL BE RESERVED FOR DIV. 27 COMMUNICATIONS CABLEING AND DIV. 28 SAFETY/SECURITY CABLEING ONLY. OTHER CABLEING TYPES, SUCH AS DIV. 23 CONTROLS, DIV. 26 CONTROLS, AND ARCHITECTURAL EQUIPMENT CABLEING SHALL BE SUPPORTED AND SLEEVED BY OTHER INDEPENDENT PATHWAYS, HANGERS, AND SUPPORTS.
- CONSOLIDATE ALL POWER SUPPLIES REQUIRED FOR ELECTRONIC DOOR HARDWARE (REF. SECTION 06 71 00) TO CENTRAL LOCATIONS ADJACENT TO DESIGNATED ACCESS CONTROL EQUIPMENT LOCATIONS. CONNECT ALL POWER SUPPLIES TO DEDICATED STANDBY POWER SYSTEM BRANCH CIRCUIT(S) AS DESIGNATED.
- THE FOLLOWING DIV. 27 AND DIV. 28 SYSTEMS WILL BE DOCUMENTED AND BID SEPARATELY BY CONSULTANT IN ASSOCIATION WITH HUDSONVILLE P.S. TECHNOLOGY DEPT.
 - NETWORK ELECTRONICS (SWITCHES, ACCESS POINTS, ETC.)
 - VDP TELEPHONE SYSTEMS
 - CLASSROOM AUDIO/VIDEO EQUIPMENT AND INSTRUCTIONAL TECHNOLOGY
 - AUDIO/VIDEO SYSTEM FOR GYMNASIUM
 - ACCESS CONTROL SYSTEM
 - VIDEO SURVEILLANCE SYSTEM



UNIT 'B' POWER PLAN
1/8" = 1'-0"

FOREST GROVE ELEMENTARY GYM ADDITION
HUDSONVILLE PUBLIC SCHOOLS
HUDSONVILLE, MICHIGAN

ISSUANCES
09.22.2021 BIDS & CONSTRUCTION

DRAWN MCK
REVIEWED JFB

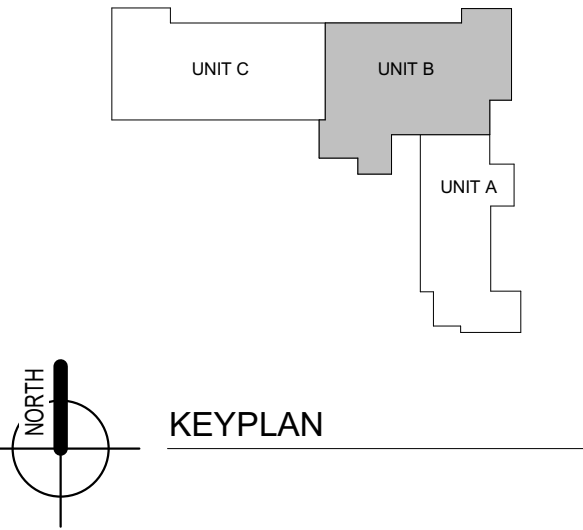
PROJECT NO. 5-5362

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UNIT 'B' POWER PLAN

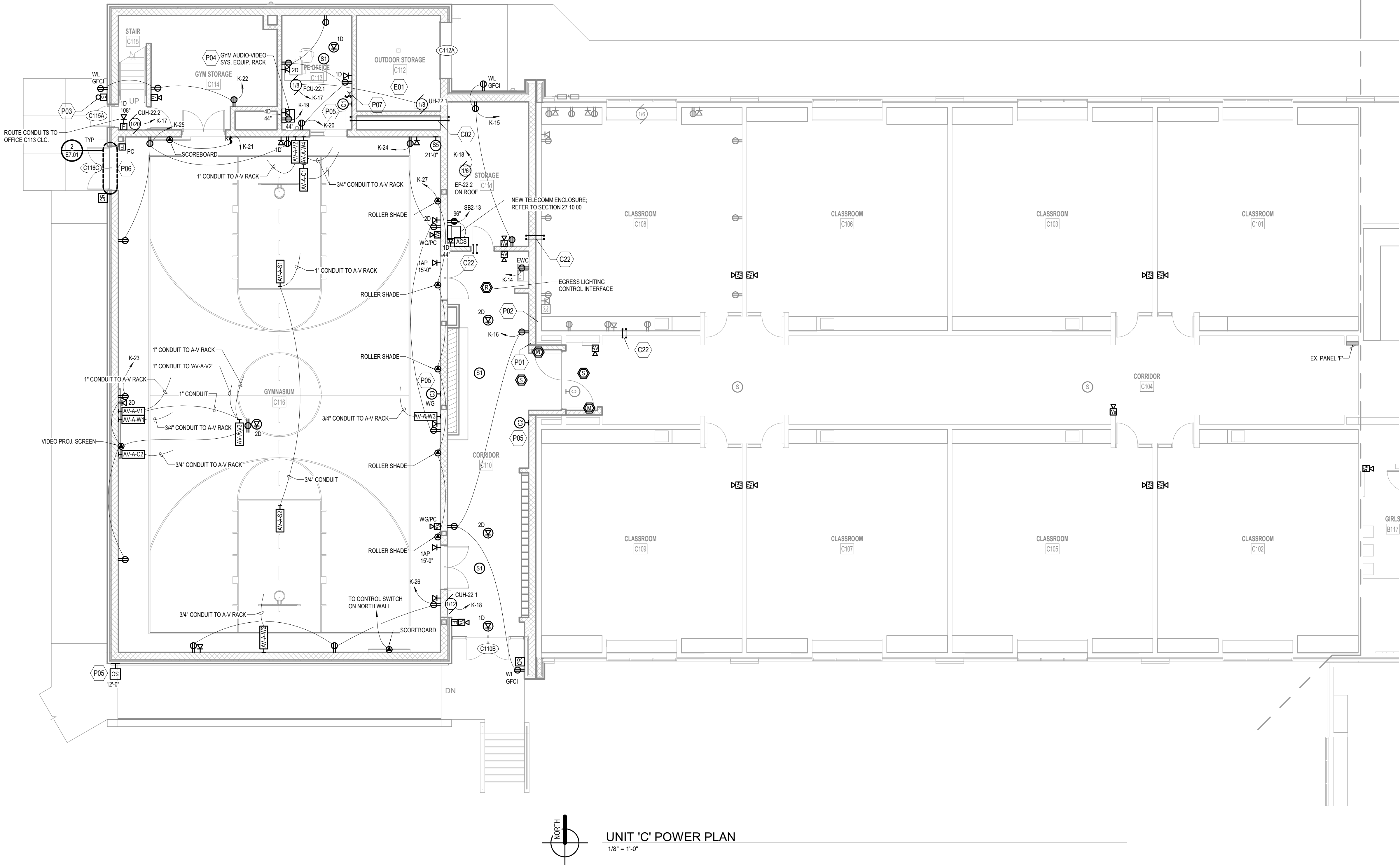
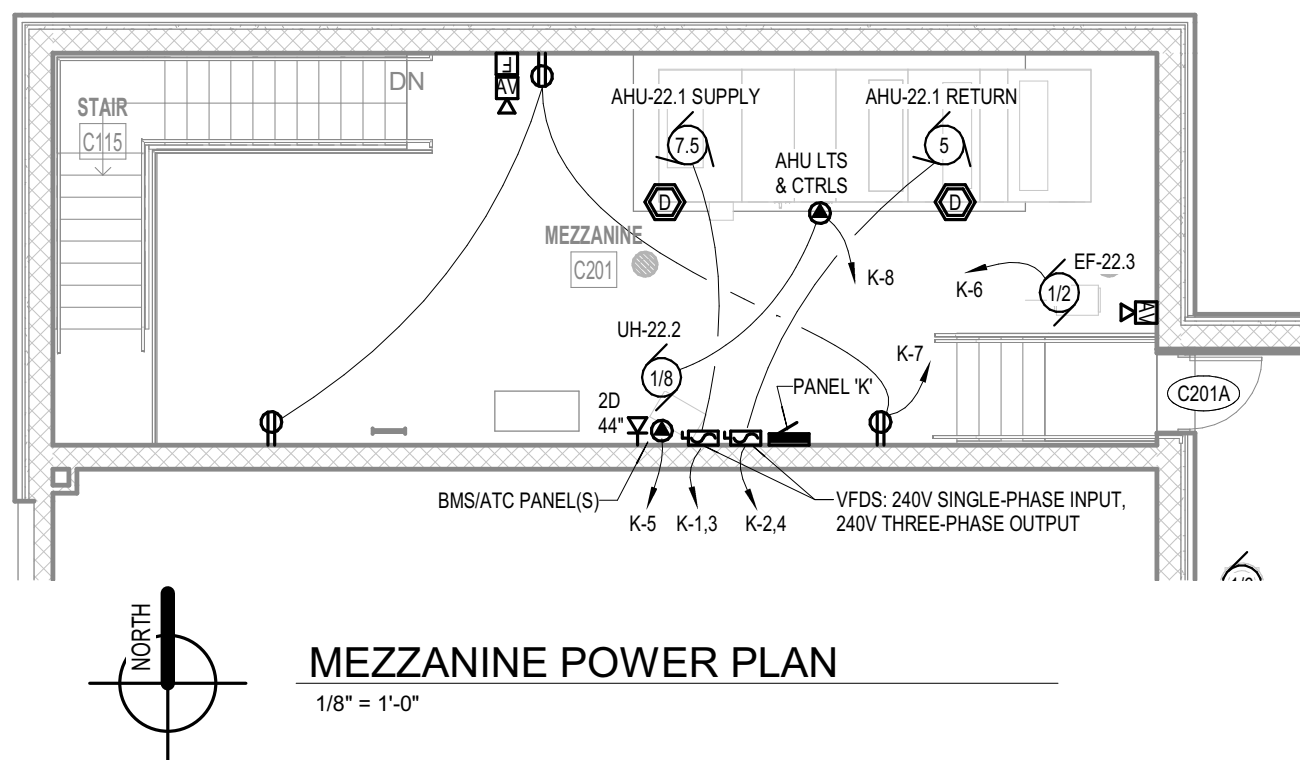
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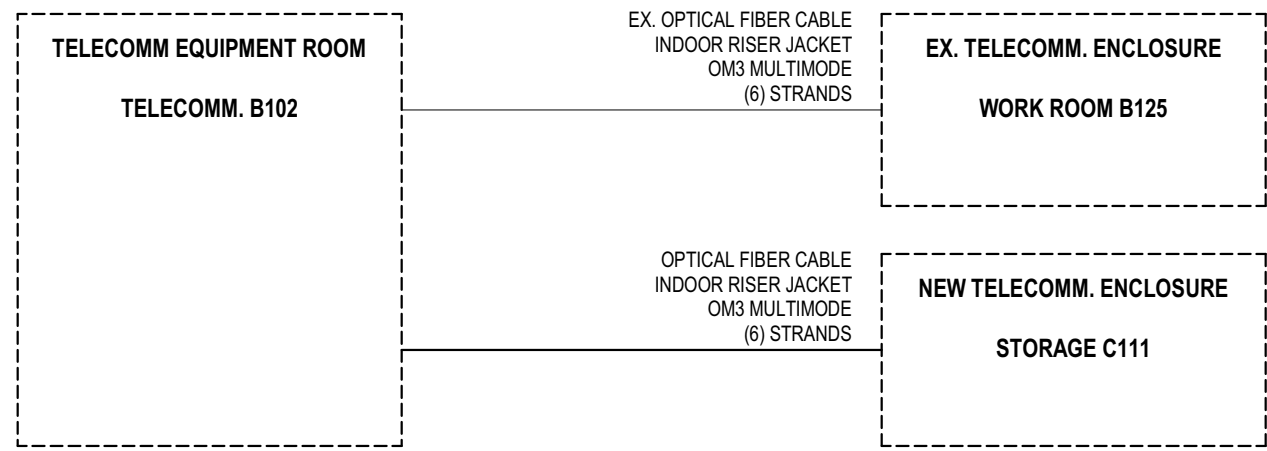
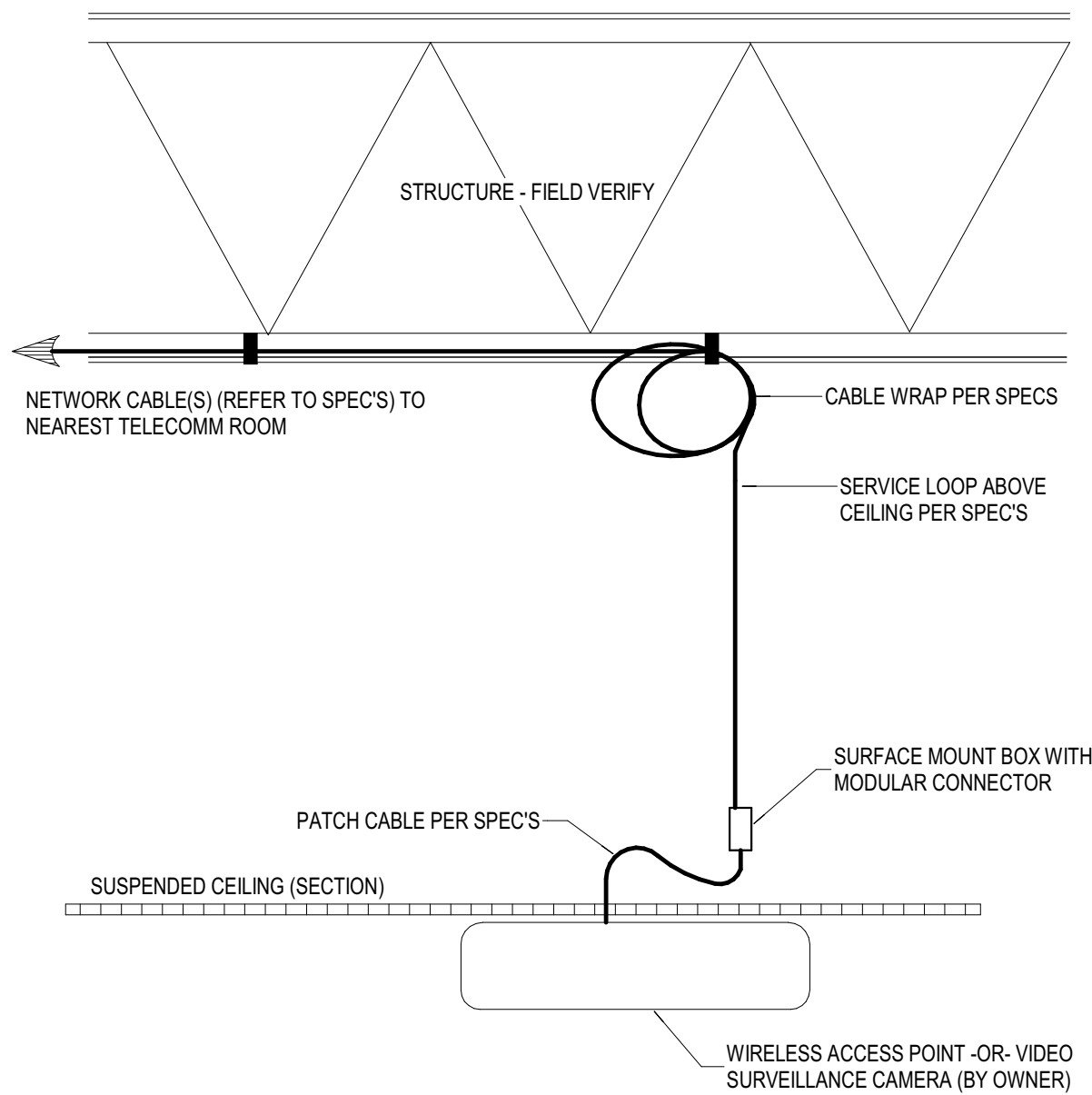
POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E6.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. PROVIDE 120VAC POWER FOR ALL SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS.
 - A. REFER TO MECHANICAL/HVAC DRAWINGS FOR EXACT LOCATIONS OF DAMPERS.
 - B. CONNECT TO DEDICATED 30A BRANCH CIRCUIT (WITH BREAKER LOCK ON ACCESSORY IN LOCAL PANE BOARD FOR DAMPERS) IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT).
 - C. TERMINATE W/ BOX COVER FUSIBLE DISCONNECT SWITCH AT EACH DAMPER.
 - D. PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET.
 - E. PROVIDE FIRE ALARM ADDRESSABLE RELAYS FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNITS PER CODE REQUIREMENTS.
4. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH ON BUILDING INTERIOR IN ACCESSIBLE LOCATION FOR EACH SMALL (<12 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
5. DESIGNATED CABLEING PATHWAYS (CONDUITS, CABLE TRAYS, PENETRATION SLEEVES, ETC.) SHALL BE RESERVED FOR DIV. 27 COMMUNICATIONS CABLEING AND DIV. 28 SAFETY/SECURITY CABLEING ONLY. OTHER CABLEING TYPES, SUCH AS DIV. 23 CONTROLS, DIV. 26 CONTROLS, AND ARCHITECTURAL EQUIPMENT CABLEING SHALL BE SUPPORTED AND SLEEVED BY OTHER INDEPENDENT PATHWAYS, HANGERS, AND SUPPORTS.
6. CONSOLIDATE ALL POWER SUPPLIES REQUIRED FOR ELECTRONIC DOOR HARDWARE (REF. SECTION 06 71 00) TO CENTRAL LOCATIONS ADJACENT TO DESIGNATED ACCESS CONTROL EQUIPMENT LOCATIONS. CONNECT ALL POWER SUPPLIES TO DEDICATED STANDBY POWER SYSTEM BRANCH CIRCUIT(S) AS DESIGNATED.
7. THE FOLLOWING DIV. 27 AND DIV. 28 SYSTEMS WILL BE DOCUMENTED AND BID SEPARATELY BY CONSULTANT IN ASSOCIATION WITH HUDSONVILLE'S S. TECHNOLOGY DEPT.
 - A. NETWORK ELECTRONICS (SWITCHES, ACCESS POINTS, ETC.)
 - B. VDP TELEPHONE SYSTEMS
 - C. CLASSROOM AUDIO-VISUAL EQUIPMENT AND INSTRUCTIONAL TECHNOLOGY
 - D. AUDIO-VISUAL SYSTEM FOR GYMNASIUM
 - E. ACCESS CONTROL SYSTEM
 - F. VIDEO SURVEILLANCE SYSTEM

AUDIO-VIDEO SYSTEMS BOX & CONNECTOR PLATE SCHEDULE						
ITEM ID / TAG	ROUGH-IN OR ITEM SIZE	MOUNTING	LOCATION (HEIGHT TO BOTTOM OF BOX)	BOX & CONDUIT PROVIDED BY	CONNECTOR PLATE & WIRE CABLE PROVIDED BY	SPECIAL NOTES
AV-A-C1	TWO GANG x 3 1/2" DEEP	FLUSH	44" AFF	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	A/V SYSTEM CONTROL TOUCHPANEL
AV-A-C2	SINGLE GANG x 3 1/2" DEEP	FLUSH	15'-6" AFF (VERIFY, SEE DETAILS)	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	PROJECTION SCREEN CONTROL
AV-A-S1	4" SQ. x 2 1/8" DEEP	SURFACE	SIDE OF ROOF JOIST JUST ABOVE BOTTOM CHORD (APPROX. 22'-0" AFF)	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	SPEAKER JUNCTION BOX
AV-A-S2	4" SQ. x 2 1/8" DEEP	SURFACE	SIDE OF ROOF JOIST JUST ABOVE BOTTOM CHORD (APPROX. 22'-0" AFF)	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	SPEAKER JUNCTION BOX
AV-A-V1	4 11/16" SQ. x 2 1/8" DEEP, SINGLE GANG RING	FLUSH	16" AFF	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	VIDEO INPUT(S)
AV-A-V2	4 11/16" SQ. x 2 1/8" DEEP, SINGLE GANG RING	FLUSH	16" AFF	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	VIDEO INPUT(S)
AV-A-V3	4" SQ. x 2 1/8" DEEP	SURFACE	SIDE OF ROOF JOIST JUST ABOVE BOTTOM CHORD (APPROX. 22'-0" AFF)	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	VIDEO PROJECTOR OUTPUT/CONTROL, VERIFY EXACT LOCATION OF PROJ. W/ INSTALLERS
AV-A-W1	4 11/16" SQ. x 2 1/8" DEEP, SINGLE GANG RING	FLUSH	16" AFF	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	AUDIO-VIDEO INPUT(S)
AV-A-W2	4 11/16" SQ. x 2 1/8" DEEP, SINGLE GANG RING	FLUSH	16" AFF	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	AUDIO-VIDEO INPUT(S)
AV-A-W3	4 11/16" SQ. x 2 1/8" DEEP, SINGLE GANG RING	FLUSH	16" AFF	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	AUDIO-VIDEO INPUT(S)
AV-A-W4	4 11/16" SQ. x 2 1/8" DEEP, SINGLE GANG RING	FLUSH	16" AFF	SECTION 27 05 28	N.I.C. (SEPARATE BID PACKAGE)	AUDIO-VIDEO INPUT(S)

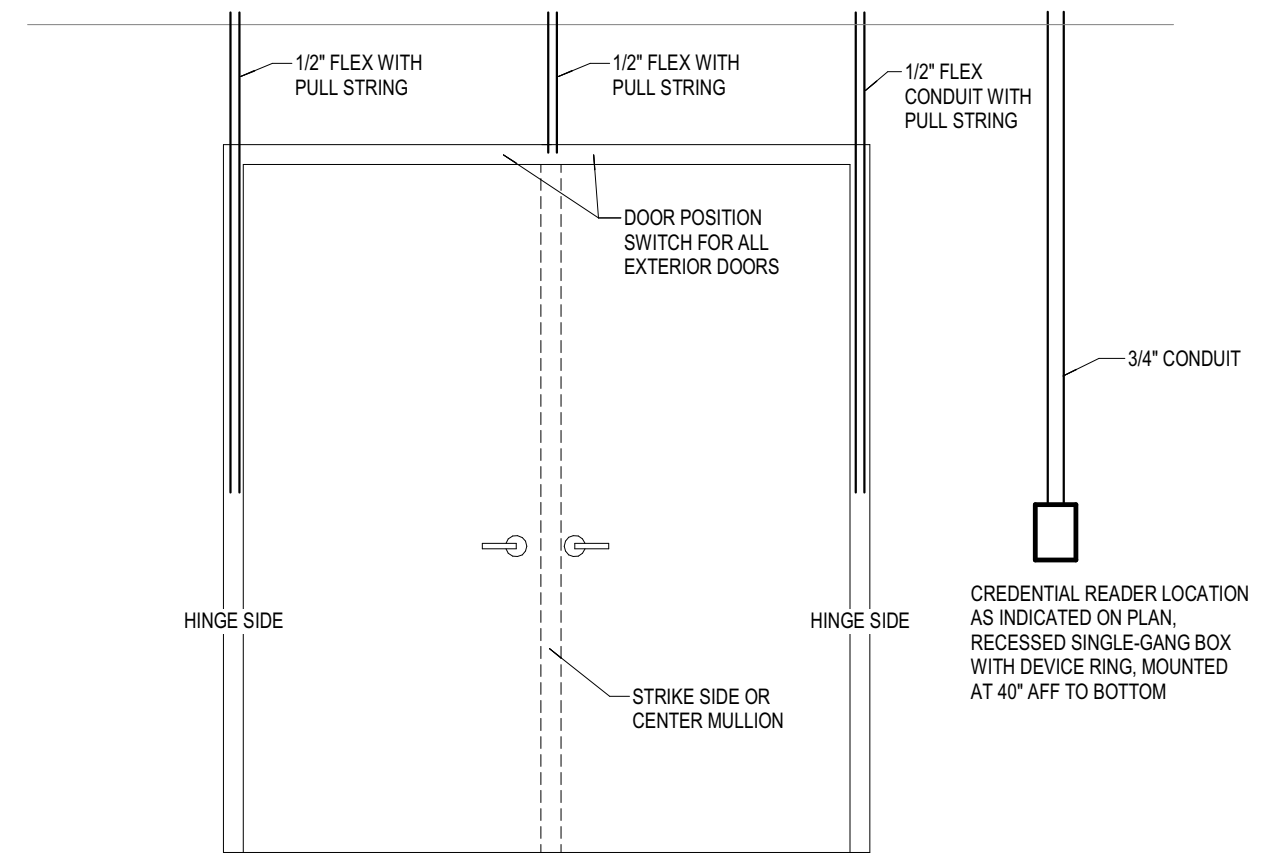


ELECTRICAL KEYNOTES	
C02	(2) 4" CONDUIT SLEEVES FOR DIV. 27 COMMUNICATIONS CABLEING
C22	(2) 6.7 SQ. IN. CABLE PATHWAY PENETRATION DEVICE (FIRE) PER SECTION 27 05 28
E01	ALL ELECTRICAL MATERIALS AND INSTALLATION IN THIS ROOM SHALL COMPLY WITH NEC ARTICLE 500 HAZARDOUS LOCATION REQUIREMENTS FOR CLASS 1, DIVISION 1, GROUP C & D
P01	ESTABLISH NEW CONCRETE ENCASED GROUNDING ELECTRODE IN FOOTING OF NEW ADDITION. INTERCONNECT WITH GROUNDING ELECTRODE SYSTEM AT SERVICE ENTRANCE OR NEAREST SEPARATELY SERVED SYSTEM PER NEC AND SPECIFICATION REQUIREMENTS.
P02	BOND METAL STRUCTURE OF ADDITION TO METAL STRUCTURE OF EXISTING BUILDING PER NEC REQUIREMENTS
P03	REINSTALL EX. SIGNALING BELL SALVAGED FROM BUILDING EXTERIOR. INTERCEPT AND EXTEND EXIST. WIRING FROM PREVIOUS LOCATION AND RECONNECT TO RELOCATED BELL
P04	INSTALL 2" X 6" X 6" X 8" JUNCTION BOX BEHIND AUDIO EQUIP. RACK FOR A/V CONDUITS TO ENTER RACK WHILE RECESSED IN WALL. SURFACE-MOUNTED CONDUITS ARE NOT ACCEPTABLE ABOVE, BELOW, OR ON SIDES RACK. STUB AN ADDITIONAL (2) 1" CONDUITS OUT ABOVE ACCESSIBLE CEILING SPACE FROM BOX.
P05	PROVIDE 10' NETWORK ACTIVATION FOR CONNECTION TO COMMUNICATIONS OR SAFETY/SECURITY DEVICE. TERMINATED INSIDE RECESSED DEVICE BACKBOX
P06	ROUTE ACCESS CONTROL CONDUITS FROM DOOR FRAME THROUGH WALL OVER TO STAIRWELL AND STUB OUT ABOVE 9'-0" AFF.
P07	ROLLER SHADE CONTROL FOR GYMNASIUM KEY-OPERATED SWITCH FURNISHED BY SECTION 12 24 13, WIRED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS



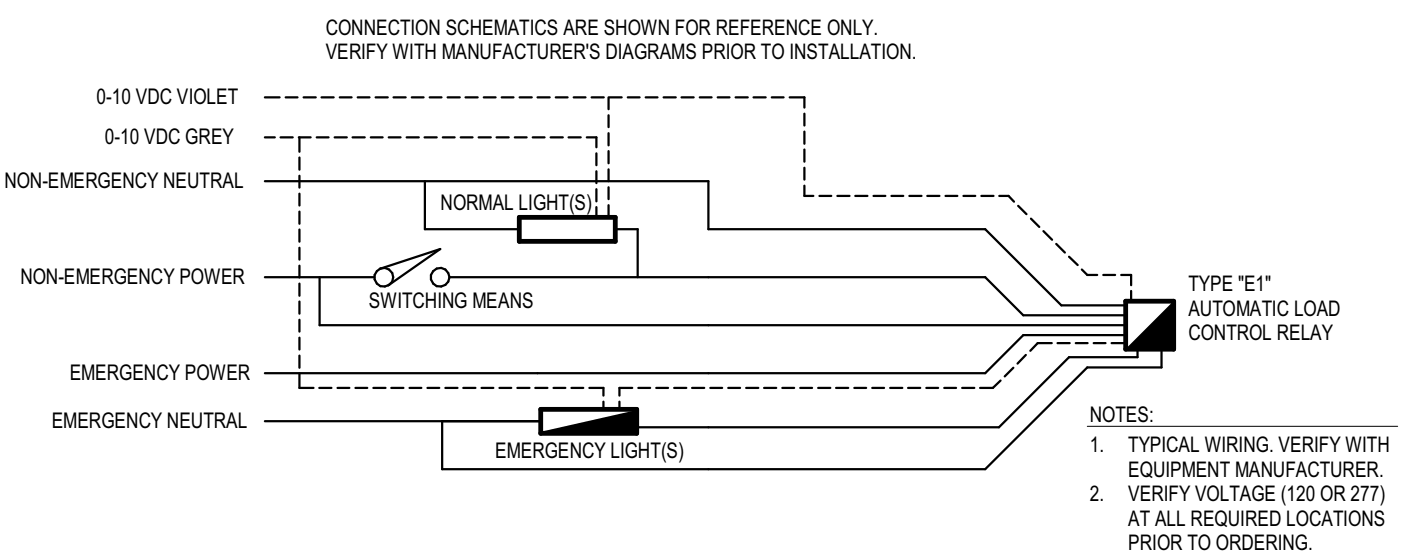
3
E7.01 COMMUNICATIONS CABLING BACKBONE RISER DIAGRAM
NOT TO SCALE

- NOTES:
1. PROVIDE RACEWAYS INTO DOOR FRAME AT:
A. ALL EXTERIOR DOORS
B. ALL INTERIOR DOORS DESIGNATED FOR RECEIVING ELECTRONIC DOOR HARDWARE
 2. REFER TO SECTION 08 71 00 DOOR HARDWARE SPECIFICATION FOR ELECTRONIC DOOR HARDWARE REQUIREMENTS
 3. COORDINATE SPECIFIC REQUIREMENTS WITH OWNERS ACCESS CONTROL CONTRACTOR AND SHOP DRAWINGS PRIOR TO WALL CONSTRUCTION

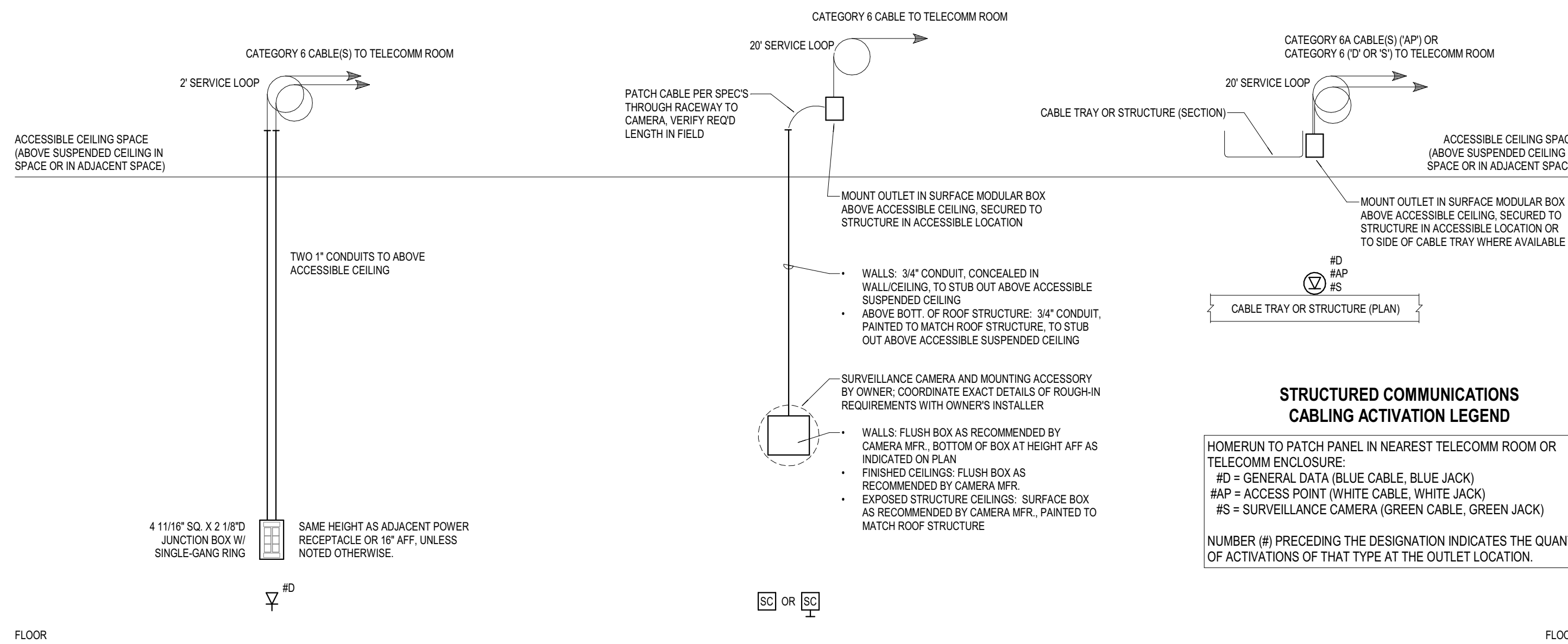


2
E7.01 TYPICAL ROUGH-IN FOR DOORS WITH ELECTRONIC ACCESS CONTROL / MONITORING
NOT TO SCALE

5
E7.01 CEILING MOUNTED COMMUNICATION DEVICE
NOT TO SCALE

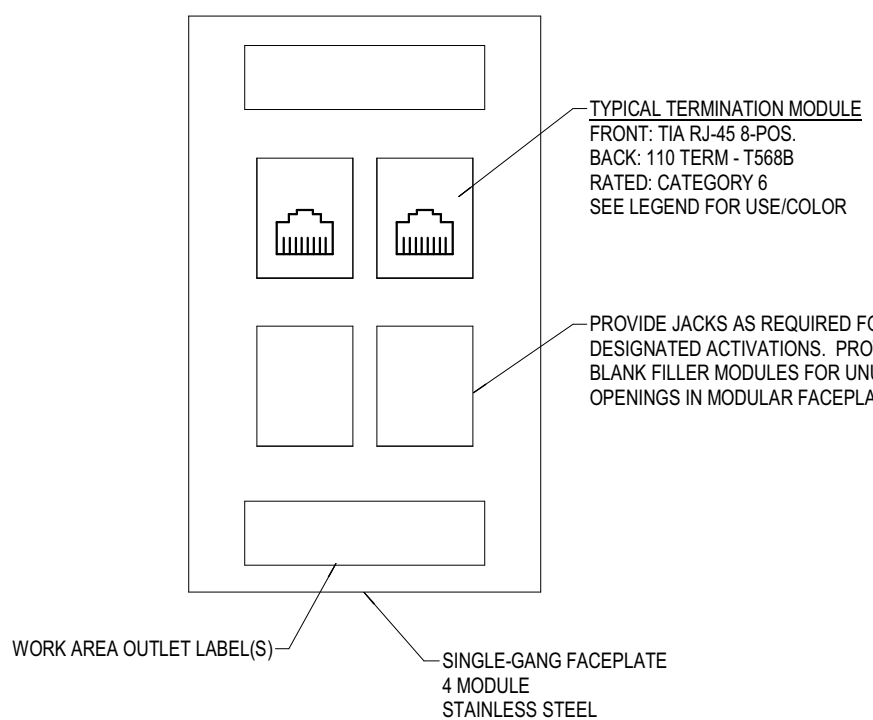


4
E7.01 EMERGENCY LIGHTING AUTOMATIC LOAD CONTROL RELAY
NOT TO SCALE

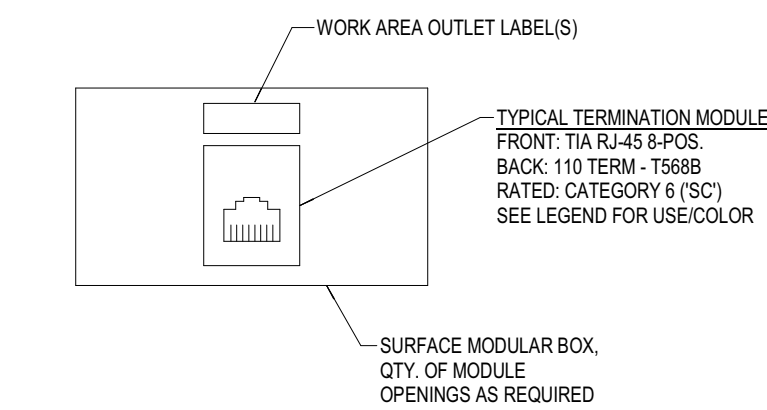


STRUCTURED COMMUNICATIONS
CABLING ACTIVATION LEGEND

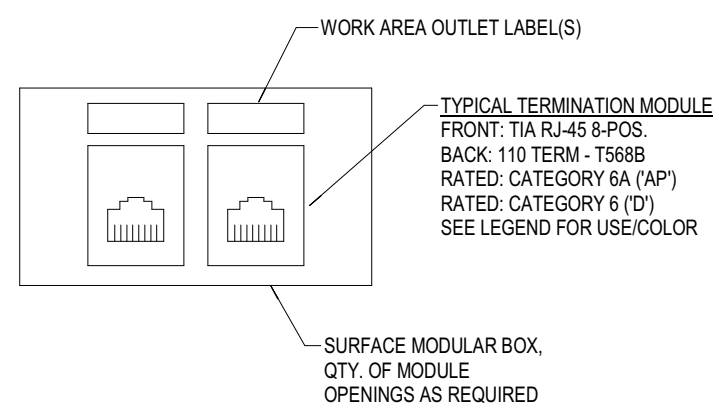
HOMERUN TO PATCH PANEL IN NEAREST TELECOMM ROOM OR TELECOMM ENCLOSURE:
#D = GENERAL DATA (BLUE CABLE, BLUE JACK)
#AP = ACCESS POINT (WHITE CABLE, WHITE JACK)
#S = SURVEILLANCE CAMERA (GREEN CABLE, GREEN JACK)
NUMBER (N) PRECEDING THE DESIGNATION INDICATES THE QUANTITY OF ACTIVATIONS OF THAT TYPE AT THE OUTLET LOCATION.



1
E7.01 TYPICAL COMMUNICATIONS OUTLET DETAILS
NOT TO SCALE



TYPICAL COMMUNICATIONS OUTLET
FOR VIDEO SURVEILLANCE CAMERA



TYPICAL COMMUNICATIONS OUTLET
ABOVE ACCESSIBLE CEILING
(WIRELESS ACCESS POINT, AUDIO-VIDEO SYSTEM EQUIP., ETC.)

ISSUANCES	
09.22.2021	BIDS & CONSTRUCTION

DRAWN	MCK
REVIEWED	JFB

PROJECT NO. 5-5362

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ELECTRICAL DETAILS

E7.01

SECTION 08 71 00 – DOOR HARDWARE
(ADDENDUM 001)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Scope of Work: This Section describes all finish hardware required to complete the work as indicated on the Drawings and specified herein. Provide all trim attachments and fastening specified or required for proper and complete installation.

1.3 RELATED SECTIONS:

- A. Section 08 11 13: Hollow Metal Doors and Frames
- B. Section 08 14 16: Flush Wood Doors
- C. Section 08 41 13: Aluminum Entrances and Storefronts

1.4 COORDINATION

- A. Coordinate all work with job site superintendent and all applicable trades.

1.5 SUBMITTALS

- A. Product Data, Shop Drawings, Samples:
 - 1. General: Comply with the provisions of Section 01 33 00.
 - 2. Product Data: Within 15 calendar days after award of the Contract, submit:
 - a. Complete materials list of all items proposed to be furnished and delivered under this Section.
 - 1) Identify each hardware item by manufacturer, the manufacturer's catalog number, and the location of the item in the work.
 - 2) Make the list in form suitable for ready checking by the Architect.
 - b. Manufacturer's specifications, catalog cuts, and other data required to demonstrate compliance with specified requirements.
 - 3. Approval of the hardware list by the Architect/Engineer shall not relieve the Contractor from the responsibility for furnishing all required finish hardware.
 - 4. Samples: Within 15 calendar days after being so requested by the Architect/Engineer, deliver to the Architect/Engineer samples of each finish hardware item.
 - 5. Templates: In a timely manner to ensure orderly progress of the work, deliver templates or physical samples of the approved finish hardware items to pertinent manufacturers of interfacing items such as door and frame.

1.6 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Qualifications of Manufacturers: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect/Engineer.
 - 2. Qualification of Suppliers: The supplier shall have a qualified representative readily available to the Architect/Engineer, and/or Owner on short notice for consultation and service during the execution of this work and the warranty period.

3. Qualification of Installers: Use adequate numbers of skilled workmen who are trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of this Section.
- B. Regulatory Requirements & References: Fire Rated Openings: Comply with the requirements of Underwriter's Laboratories, Inc.
- C. Pre-Installation Conference: Prior to the installation of hardware, manufacturer's representatives for locksets, closers, and exit devices shall arrange and hold a jobsite meeting to instruct the installing contractor's personnel on the proper installation of their respective products. A letter of compliance, indicating when this meeting is held and who is in attendance, shall be sent to the Architect and Owner.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Packing and Shipping: Individually package each units of finish hardware, complete with proper fastening and appurtenances, clearly marked on the outside to indicate the contents and specific locations in the work.
- B. Protection: Use all means necessary to protect materials of this Section before, during, and after delivery to the job site and to protect the work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect/Engineer and at no additional cost to the owner.
- D. Deliveries:
 1. Stockpile all items sufficiently in advance to ensure their availability and make all necessary deliveries in a timely manner to ensure orderly progress of the total work.
 2. All hardware shall be delivered to a destination as directed by the Construction Manager with sufficient time in advance for proper inspection in order not to delay the scheduled completion date.
 3. The General Contractor / Construction Manager shall provide a lockable room with ample shelving for the storage of hardware. Upon receipt of the hardware, the Finish Hardware supplier shall unpack and place on the shelves all hardware in order of item and/or door numbers.

1.8 WARRANTY

- A. Provide a written warranty in approved form in compliance with the related requirements of the General Conditions, covering all Finish Hardware furnished under this Section against defects in manufacturing and workmanship for a minimum of two (2) years from the final acceptance of the building.
- B. Any material failing to comply with the above guarantee shall be removed and replaced with satisfactory material at the Finish Hardware supplier's expense, including the necessary labor for removing and replacing.
- C. During the Warranty Period, the Finish Hardware supplier shall, upon request, make prompt adjustments, repairs, or replacements as required to any hardware installed under this contract, other than normal maintenance service.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

<u>Product</u>	<u>Specified</u>	<u>Acceptable Alternates</u>
Continuous Hinges	Ives	Select, Pemko
Hinge	Ives	McKinney, Stanley
Power Transfers	Von Duprin EPT Series	No Substitution
Flush Bolts	Ives	Trimco, Rockwood
Coordinator	Ives	Trimco, Rockwood

Locks (Cylindrical)	Yale 5400LN Series	No Substitution
Locks (Mortise)	Yale 8800 Series	No Substitution
Keys and Cylinders	Yale G Keyway	No Substitution (Owners Key System)
Exit Devices	Von Duprin 98 Series (Exterior)	No Substitution
Exit Devices	Von Duprin 98 Series (Interior)	Yale 7150/7000 Series
Door Closers	LCN 4040XP Series	No Substitution
Push/Pull & Kick Plates	Ives	Trimco, Rockwood
Stops	Ives	Trimco, Rockwood
Overhead Stops	Glynn-Johnson	No Substitution
Seals and Thresholds	Zero	NGP, Reese, Pemko
Power Supplies	Von Duprin PS900 Series	No Substitution
Fire/Life Wall Magnet	LCN 7800 Series	Rixson, ABH

2.2 MATERIALS

A. General:

1. Proprietary Products: References to specific proprietary products are used to establish minimum standards of utility and quality. Unless otherwise approved by the Architect/Engineer, provide only the specific products. Design is based on the materials specified. Other materials may be considered by the Architect/Engineer in accordance with the provisions of Section 01 33 00.
2. Fasteners:
 - a. Furnish all finish hardware with all necessary screws, bolts, and other fasteners of suitable size and type to anchor the hardware in position for long life under hard use.
 - b. Furnish fastenings where necessary with expansion shields, toggle bolts, sex bolts, and other anchors approved by the Architect/Engineer, according to the materials to which the hardware is to be applied and the recommendations of the hardware manufacturer.
 - c. All fastenings shall harmonize with the hardware as to materials and finish.
3. Finishes of all hardware shall match the finish of the locksets. Take special care to coordinate all of the various manufactured items furnished under this Section, to ensure acceptably uniform finish.
4. Install closers and door holders in hollow metal doors with sex-bolts and through-bolts for wood doors.

B. Keying: All lock shall be master keyed as directed by the Architect and Owner to the Owners Existing Yale key system. Supply 3 keys per lock, 6 master keys for each master key group and 3 grand master keys.

C. Tools and Manuals: With the delivery of permanent keys, deliver to the Owner one complete set of adjustment tools and one set of maintenance manuals for locksets, latchsets, closers, and panic devices.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install the materials in strict accordance with the manufacturer's recommendations and schedules.
- B. All doors should swing as far as conditions allow. When mounting door closers, use the mounting that allows doors to swing to the wall or floor bumper. Do not stop the door with the closer arm unless the arm is designed specifically to stop the door. when mounting closers

designed with arms to stop the door or overhead door stops, always mount them to allow the door to swing as far as conditions will permit.

- C. Anchor all screws with Loc-Tite to assure permanence of attachment.
- D. All doors and hardware to be left in proper working order and cleaned.
- E. Special Hardware Instructions:
 - 1. Wall stops WS33 are to be mounted on the wall up at the top of the door and as far out on the latch edge as conditions allow. The sloped side is to face up, preventing anyone or anything to hang on them.
 - 2. Wall stop & holds WH45 are to be mounted the same as the WS33.

3.2 ADJUSTING AND CLEANING

- A. Final inspections shall be made by the Architect and Finish Hardware Supplier. They shall report any installation adjustments that are to be made to have all hardware in perfect working order. The Finish Hardware Supplier shall verify the keying to the Architect to insure proper location of locksets and cylinders. All closers shall be checked and adjusted for closing.
- B. Prior to final acceptance of the installation, the Finish Hardware Supplier shall make a final inspection to verify that all corrections have been made and that all hardware items are in good working condition.




PART 4 - HARDWARE SCHEDULE

Hardware Group No. 01

For use on Door #(s):

B107A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	CLASSROOM LOCK	PB 5408LN - KEYED TO EXISTING		626	YAL
1	EA	OH STOP	100S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE

NOTES:





1) MATCH EXISTING LEVER AND FINISH PRIOR TO ORDERING.


Hardware Group No. 02

For use on Door #(s):

C113A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	CLASSROOM LOCK	PB 5408LN - KEYED TO EXISTING		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE






QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	GASKETING	488S		BK	ZER
NOTES: 1) MATCH EXISTING LEVER AND FINISH PRIOR TO ORDERING.						

Hardware Group No. 03

For use on Door #(s):

C114A						
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Each to have:




QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	SET	AUTO FLUSH BOLT	FB31P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	CLASSROOM LOCK	PB 5408LN - KEYED TO EXISTING		626	YAL
1	EA	COORDINATOR	COR X FL		628	IVE
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
2	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER
NOTES: 1) MATCH EXISTING LEVER AND FINISH PRIOR TO ORDERING.						




Hardware Group No. 04

For use on Door #(s):

C111A						
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	PB 5405LN - KEYED TO EXISTING		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN






QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
NOTES: 1) MATCH EXISTING LEVER AND FINISH PRIOR TO ORDERING.						

Hardware Group No. 05

For use on Door #(s):

C114B					
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Each to have:








QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	STOREROOM LOCK	PB 5405LN - KEYED TO EXISTING		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
NOTES: 1) MATCH EXISTING LEVER AND FINISH PRIOR TO ORDERING.						

Hardware Group No. 06

For use on Door #(s):

C201A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		630	IVE
1	EA	STOREROOM LOCK	PBR 8805FL - KEYED TO EXISTING		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	 	BLK	SCE

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
			WEATHERSTRIP BY DOOR/FRAME MANUFACTURER				
NOTES: 1) MATCH EXISTING LEVER AND FINISH PRIOR TO ORDERING. 2) KEYED INSIDE. OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG							

Hardware Group No. 07

For use on Door #(s):

C116A	C116B				
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP			652	IVE
1	EA	FIRE RATED REMOVABLE MULLION	KR9954 STAB			689	VON
2	EA	FIRE EXIT HARDWARE	98-L-F-17			626	VON
2	EA	RIM CYLINDER	KEYED TO EXISTING			626	YAL
1	EA	MORTISE CYLINDER	KEYED TO EXISTING			626	YAL
2	EA	SURFACE CLOSER	4040XP SCUSH			689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS			630	IVE
1	EA	MEETING STILE	8217S			BK	ZER
1	EA	GASKETING	488S			BK	ZER
NOTES: 1) MATCH EXISTING LEVER AND FINISH PRIOR TO ORDERING.							

Hardware Group No. 08

For use on Door #(s):

C110A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
2	EA	CONT. HINGE	224HD			628	IVE
2	EA	FIRE EXIT HARDWARE	9849-EO-F-LBL			626	VON
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE			689	LCN

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS			630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D		✓	689	LCN
1	EA	GASKETING	488S			BK	ZER
1	EA	ASTRAGAL	PROVIDED BY DOOR SUPPLIER				

NOTES:

1) MATCH EXISTING FINISH PRIOR TO ORDERING.

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

Hardware Group No. 09

For use on Door #(s):

C110B					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
2	EA	CONT. HINGE	112HD EPT			628	IVE
2	EA	POWER TRANSFER	EPT10 CON		✓	689	VON
1	EA	REMOVABLE MULLION	KR4954 STAB			689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-98-EO-CON		✓	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-98-NL-OP-110MD-CON		✓	626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING			626	YAL
1	EA	MORTISE CYLINDER	KEYED TO EXISTING			626	YAL
1	EA	DOOR PULL	VR910 DT			630	IVE
1	EA	DOOR PULL	VR910 NL			630	IVE
2	EA	OH STOP	100S			630	GLY
2	EA	SURFACE CLOSER	4040XP EDA			689	LCN
2	EA	DOOR SWEEP	8198AA			AA	ZER
1	EA	THRESHOLD	566A			A	ZER



QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	MULLION SEAL	8780N			BK	ZER
2	EA	WIRE HARNESS	CON-XX/XXP (AS REQ'D) - ELECTRIFIED HARDWARE TO POWER TRANSFER (EVALUATE CONDITIONS AND MODIFY WIRE LENGTH AS REQ'D)		✓		SCH
2	EA	WIRE HARNESS	CON-6W - WIRE EXTENSION FROM POWER TRANSFER TO POWER SUPPLY		✓		SCH
2	EA	DOOR CONTACT	679-05HM		✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER		✓		VON
			CARD READER BY OTHERS		✓		
			WEATHERSTRIP BY DOOR/FRAME MANUFACTURER				

NOTES:

1) MATCH EXISTING EXTERIOR PULLS AND FINISH PRIOR TO ORDERING.

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY RETRACT THE PANIC DEVICE LATCH ALLOWING ACCESS.

DEVICES ARE ALSO CAPABLE OF BEING ELECTRONICALLY DOGGED DOWN FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE REQUEST TO EXIT FEATURE OF THE DEVICE TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACTS DURING VALID EGRESS. DOOR CONTACTS MONITOR WHETHER THE DOORS ARE OPENED, CLOSED OR HELD OPEN TOO LONG. DOORS TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM (IF APPLICABLE). FREE EGRESS AT ALL TIMES.

Hardware Group No. 10

For use on Door #(s):

C116C					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
2	EA	CONT. HINGE	112HD EPT			628	IVE
2	EA	POWER TRANSFER	EPT10 CON		✓	689	VON

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	REMOVABLE MULLION	KR4954 STAB			689	VON
1	EA	ELEC PANIC HARDWARE	LD-RX-98-EO-CON		✓	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-98-NL-OP-110MD-CON		✓	626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING			626	YAL
1	EA	MORTISE CYLINDER	KEYED TO EXISTING			626	YAL
1	EA	DOOR PULL	VR910 DT			630	IVE
1	EA	DOOR PULL	VR910 NL			630	IVE
2	EA	SURFACE CLOSER	4040XP SHCUSH			689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30			689	LCN
2	EA	DOOR SWEEP	8198AA			AA	ZER
1	EA	THRESHOLD	566A			A	ZER
1	EA	MULLION SEAL	8780N			BK	ZER
2	EA	WIRE HARNESS	CON-XX/XXP (AS REQ'D) - ELECTRIFIED HARDWARE TO POWER TRANSFER (EVALUATE CONDITIONS AND MODIFY WIRE LENGTH AS REQ'D)		✓		SCH
2	EA	WIRE HARNESS	CON-6W - WIRE EXTENSION FROM POWER TRANSFER TO POWER SUPPLY		✓		SCH
2	EA	DOOR CONTACT	679-05HM		✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER		✓		VON
			CARD READER BY OTHERS		✓		
			WEATHERSTRIP BY DOOR/FRAME MANUFACTURER				

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
<p>NOTES:</p> <p>1) MATCH EXISTING EXTERIOR PULLS AND FINISH PRIOR TO ORDERING.</p> <p>OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.</p> <p>DOOR NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY RETRACT THE PANIC DEVICE LATCH ALLOWING ACCESS.</p> <p>DEVICE IS ALSO CAPABLE OF BEING ELECTRONICALLY DOGGED DOWN FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.</p> <p>THE REQUEST TO EXIT FEATURE OF THE DEVICE TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACTS DURING VALID EGRESS. DOOR CONTACTS MONITOR WHETHER THE DOORS ARE OPENED, CLOSED OR HELD OPEN TOO LONG. DOORS TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM (IF APPLICABLE). FREE EGRESS AT ALL TIMES.</p>						

Hardware Group No. 11

For use on Door #(s):

B103A						
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112HD		628	IVE
1	EA	PANIC HARDWARE	98-NL-OP-110MD		626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING		626	YAL
1	EA	DOOR PULL	VR910 NL		630	IVE
1	EA	SURFACE CLOSER	4040XP SHCUSH		689	LCN
1	EA	WALL STOP	WS406/407CVX		630	IVE
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM		BLK	SCE
			WEATHERSTRIP BY DOOR/FRAME MANUFACTURER			









<p>NOTES:</p> <p>1) MATCH EXISTING EXTERIOR PULLS AND FINISH PRIOR TO ORDERING.</p> <p>OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.</p> <p>DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG</p>						
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Hardware Group No. 12

For use on Door #(s):

C115A					
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONT. HINGE	112HD			628	IVE
1	EA	PANIC HARDWARE	LD-98-EO			626	VON
1	EA	SURFACE CLOSER	4040XP SCUSH			689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30			689	LCN
1	EA	DOOR SWEEP	8198AA			AA	ZER
1	EA	THRESHOLD	566A			A	ZER
1	EA	DOOR CONTACT	679-05HM			BLK	SCE
			WEATHERSTRIP BY DOOR/FRAME MANUFACTURER				

NOTES:

1) MATCH EXISTING FINISH PRIOR TO ORDERING.

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG.

Hardware Group No. 13

For use on Door #(s):

C112A					
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Each to have:





QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
			HARDWARE BY DOOR MANUFACTURER				

Hardware Group No. **14**

For use on Door #(s):

B127A					
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Each to have:

QT Y		DESCRIPTION	CATALOG NUMBER			FINIS H	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP			652	IVE
1	EA	CLASSROOM LOCK	PB 5408LN - KEYED TO EXISTING			626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH			689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS			630	IVE
1	EA	GASKETING	488S			BK	ZER

NOTES:

1) MATCH EXISTING LEVER AND FINISH PRIOR TO ORDERING.

END OF SECTION

SECTION 28 05 05 – SELECTIVE ELECTRONIC SAFETY AND SECURITY DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes
 - 1. Selective electronic safety and security demolition for remodeling
- B. Related Sections
 - 1. 26 05 00: Common Work Results for Electrical

1.3 COORDINATION

- A. Coordinate all work with job site superintendent and all applicable trades.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for patching and extending work: As specified in individual Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify field measurements and circuiting arrangements are as shown on Drawings.
- B. Verify that abandoned wiring and equipment serve only abandoned facilities.
- C. Demolition Drawings are based on field observation and existing record documents. Report discrepancies to the Architect/Engineer before disturbing existing installation.
- D. Beginning of demolition means installer accepts existing conditions.

3.2 PREPARATION

- A. Disconnect electronic safety and security systems in walls, floors, and ceilings scheduled for removal.
- B. Coordinate system interruptions or outages with Owner and any third-party monitoring services contracted by the Owner.
- C. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.
- D. Existing Access Control System
 - 1. Maintain existing system in service.
 - 2. Disable system only to make switchovers and connections. Obtain permission from the Owner at least 48 hours before partially or completely disabling system. Minimize outage duration.
 - 3. Make temporary connections to maintain service in areas adjacent to work area.
- E. Existing Fire Alarm System
 - 1. Maintain existing system in service until new system is accepted.
 - 2. Disable system only to make switchovers and connections. Notify the Owner, Owner's off-premises monitoring service, and local fire service at least 48 hours before partially or completely disabling system. Minimize outage duration.
 - 3. Make temporary connections to maintain service in areas adjacent to work area.

3.3 DEMOLITION AND EXTENSION OF EXISTING ELECTRONIC SAFETY AND SECURITY WORK

- A. Demolish and extend existing electronic safety and security work as indicated on Drawings.
- B. Remove, relocate, and extend existing installations to accommodate new construction.
- C. Remove abandoned wires and cables to source of supply. This includes but is not limited to power conductors, fire alarm cables, access control cables, intrusion detection cables, video surveillance cables, and control wiring unless noted otherwise.
- D. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces to match existing adjacent finishes.
- E. Disconnect abandoned outlets and remove devices. Remove abandoned outlet boxes if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlet boxes and flush junction boxes that are not removed.
- F. Disconnect abandoned junction boxes, enclosures, racks, and cable supports. Remove abandoned equipment if conduit or cable servicing them is abandoned and removed. Provide blank cover for abandoned outlet boxes that are not removed.
- G. Disconnect and remove related electrical devices and equipment serving electronic safety and security equipment that has been removed.
- H. Repair adjacent construction and finishes damaged during demolition and extension work to match existing.
- I. Maintain access to existing electronic safety and security installations that remain active. Modify installation or provide access panel as appropriate.
- J. Extend existing installations using materials and methods as specified.

3.4 INSTALLATION

- A. Install relocated materials and equipment as indicated in other specification Sections and on the Drawings.

3.5 CLEANING

- A. Clean and repair existing materials and equipment that remain or are to be reused.

END OF SECTION

ELECTRICAL GENERAL NOTES

- ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE AS AMENDED AND ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION WHERE THE WORK IS PERFORMED.
- "LOW VOLTAGE" CONTROLS, COMMUNICATIONS, AND SAFETY/SECURITY CABLING MAY BE INSTALLED WITHOUT CONDUIT, RACEWAY, OR CABLE TRAY ONLY WHERE CONCEALED ABOVE A SUSPENDED CEILING SYSTEM AND ACCESSIBLE FOR FUTURE MAINTENANCE. OTHERWISE, ALL CABLING (INCLUDING BUT NOT LIMITED TO CABLES ASSOCIATED WITH SYSTEMS SUCH AS ARCHITECTURAL EQUIPMENT, BUILDING ENERGY MANAGEMENT, TEMPERATURE CONTROLS, LIGHTING CONTROLS, COMMUNICATIONS NETWORKS, TELEPHONE, AUDIO/VIDEO, INTERCOM, FACINGS, CLOCK, SURVEILLANCE, ACCESS CONTROL, FIRE ALARM, ETC.) SHALL BE INSTALLED IN AN APPROVED CONDUIT, RACEWAY SYSTEM, AND/OR CABLE TRAY UNLESS OTHERWISE NOTED. IN EXPOSED STRUCTURE CEILING AREAS, CONCEALED INSTALLATION OF CABLES IN RACEWAYS SHALL BE REQUIRED FOR AESTHETIC REASONS. REFER TO REFERENCED CEILING PLANS FOR LOCATIONS. THIS APPLIES TO ALL TRADES AND WORK CATEGORIES. EXCEPTIONS:
A. DEDICATED MECHANICAL AND/OR ELECTRICAL ROOMS ABOVE 6'-0" AFF
B. DEDICATED TELECOMMUNICATIONS ROOMS
- "LOW VOLTAGE" CONTROLS, COMMUNICATIONS, AND SAFETY/SECURITY CABLING SHALL NOT BE PAINTED. PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY PROTECTION OF ANY EXISTING CABLING PRIOR TO PAINTING EXISTING AREAS. CONTRACTORS INSTALLING CABLING WHERE APPROVED FOR EXPOSED INSTALLATION SHALL INSTALL CABLES AFTER PAINTING HAS BEEN COMPLETED OR PROVIDE TEMPORARY PROTECTION OF CABLES UNTIL PAINTING HAS BEEN COMPLETED. PAINTED CABLES SHALL BE REPLACED AT THE EXPENSE OF THE NEGLIGENT CONTRACTOR.
- METAL CLAD CABLE MAY BE USED FOR FIXTURE WHIPS IN LENGTHS OF 6 FEET OR LESS ABOVE AN ACCESSIBLE SUSPENDED CEILING SYSTEM ONLY. OTHERWISE, METAL CLAD OR OTHER FLEXIBLE CABLE TYPES SHALL NOT BE USED UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER. IT IS THE INTENT OF THESE CONTRACT DOCUMENTS THAT ALL INSTALLED BRANCH CIRCUITS CONSIST OF SEPARATE RACEWAY AND CONDUITS ALLOWING REMOVAL AND REPLACEMENT OF WIRING AS REQUIRED FOR FUTURE UPGRADES. REFER TO SPECIFICATIONS FOR EXCEPTIONS.
- CIRCUIT WIRING FOR ARTICLE 700 EMERGENCY SYSTEMS AND ARTICLE 708 CRITICAL OPERATIONS POWER SYSTEMS SHALL BE INSTALLED IN SEPARATE CONDUITS/RACEWAYS AND BE KEPT ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND EQUIPMENT PER NEC REQUIREMENTS.
- ALL FEEDERS AND BRANCH CIRCUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUIT SIZED ACCORDING TO THE NEC RACEWAYS INCLUDING CONDUITS, BOXES, WIREWAYS, ETC. SHALL NOT BE CONSIDERED AN ACCEPTABLE GROUND.
- CONDUITS AND CABLING SHALL NOT BE INSTALLED WITHIN 4" OF ROOF DECK, EXCEPT AS NECESSARY TO SERVE ROOF MOUNTED ITEMS AND ONLY WHEN THE CONDUIT OR CABLE IS ROUTED VERTICALLY TO SUCH EQUIPMENT FROM BELOW.
- SUPPLEMENTAL METAL FRAMING SHALL BE PROVIDED FOR SUSPENSION POINTS OF ALL ITEMS LOCATED BETWEEN OVERHEAD STRUCTURAL MEMBERS (COLUMNS, TRUSSES, BEAMS, ETC.) IN DEPENDABLE STRUCTURE CEILING AREAS. METAL FRAMING SHALL SPAN ACROSS THE TOP CHORD OR FLANGE OF THE STRUCTURAL MEMBERS FOR BOTH STRUCTURAL AND AESTHETIC PURPOSES. SPECIFIC EXCEPTIONS SHALL BE COORDINATED IN WRITING WITH THE ARCHITECT/ENGINEER.
- CONDUIT INSTALLED WITHIN INACCESSIBLE CONSTRUCTION SHALL BE 3/4" MINIMUM SIZE.
- FEEDERS SHOWN ON DRAWINGS ARE SCHEMATIC ONLY. CONDUIT RUNS SHALL COMPLY WITH CONDUIT SPECIFICATIONS AND CONTAIN BENDS THAT ARE NO GREATER THAN 90 DEGREES. CONDUITS INSTALLED ABOVE GRADE SHALL BE RUN PARALLEL TO, OR PERPENDICULAR WITH BUILDING STEEL AND/OR ARCHITECTURAL LINES.
- CONTRACTOR(S) SHALL VERIFY COLOR/FINISH OF WIRING DEVICES, DEVICE FACEPLATES, SURFACE RACEWAY SYSTEMS, AND/OR MULTI-OUTLET ASSEMBLIES WITH ARCHITECT/ENGINEER IF NOT EXPLICITLY SPECIFIED.
- ELECTRICAL CONTRACTOR SHALL REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ADDITIONAL LIGHTING FIXTURE INFORMATION AND MOUNTING LOCATIONS.
- ELECTRICAL CONTRACTOR SHALL ADJUST LIGHTING FIXTURE LOCATIONS IN MECHANICAL ROOMS TO ACCOMMODATE MECHANICAL EQUIPMENT AND FIELD CONDITIONS.
- CONTRACTOR(S) SHALL BE RESPONSIBLE TO REVIEW INTERIOR ELEVATION SHEETS FOR PLACEMENT OF DEVICE BOXES. COORDINATE LOCATIONS SO THAT NO DEVICES ARE INSTALLED BEHIND CASEWORK, MILLWORK, VISUAL DISPLAY BOARDS, MIRRORS, CUSTOM GRAPHICS, SIGNAGE, ETC.
- ELECTRICAL CONTRACTOR SHALL REVIEW TOILET EQUIPMENT SHOP DRAWINGS AND ARCHITECTURAL DETAIL/ELEVATIONS FOR CORRECT DEVICE BOX ROUGH-IN LOCATION OF HAND DRYERS.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PLUMBING CONTRACTOR AND THE ELECTRIC WATER COOLER (BOTTLE FILLER) SHOP DRAWINGS FOR MOUNTING HEIGHT AND CONNECTION METHOD OF PLUMBING EQUIPMENT POWER CONNECTIONS. READILY ACCESSIBLE GFCI PROTECTION SHALL BE PROVIDED FOR THE BRANCH CIRCUITS SUPPLYING ALL SUCH UNITS PER NEC REQUIREMENTS.
- ELECTRICAL CONTRACTOR SHALL CONFIRM THE LOCATION OF THE EXHAUST FANS LISTED IN THE MECHANICAL EQUIPMENT SCHEDULES BY REFERRING TO MECHANICAL/HVAC PLANS.
- REFER TO ROOF PLANS FOR EXACT LOCATIONS OF ROOF-TOP MECHANICAL EQUIPMENT.
- CABINET HEATERS MAY HAVE LINE VOLTAGE THERMOSTATS SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. REFER TO MECHANICAL EQUIPMENT SCHEDULE.
- DIVISION 26 CONTRACTOR SHALL PROVIDE CONDUIT SLEEVES WITH APPROPRIATE BUSHINGS FOR CONTROLS AND ELECTRONIC SAFETY/SECURITY CABLING THROUGH WALLS AND FLOORS. SLEEVE SIZES SHALL BE COORDINATED WITH CABLING REQUIREMENTS.
- SECTION 27 05 26 CONTRACTOR SHALL PROVIDE CONDUIT SLEEVES WITH APPROPRIATE BUSHINGS FOR COMMUNICATIONS CABLING THROUGH WALLS AND FLOORS. SLEEVE SIZE SHALL BE 2" MIN. UNLESS NOTED OTHERWISE.
- EXISTING BUILDING SYSTEMS CABLING SHALL BE SLEEVED WHERE CABLES PASS THROUGH ANY NEW WALLS THAT ARE TO BE CONSTRUCTED. PROVIDE SPLIT SLEEVES IF CABLING CANNOT BE DISCONNECTED. FIELD VERIFY QUANTITIES AND LOCATIONS. DO NOT COORDINATE USE OF ALLOWANCES WITH PROJECT ADMINISTRATIVE REQUIREMENTS. NO CABLING SHALL PASS THROUGH OR OVER THE TOP OF NEW WALL CONSTRUCTION WITHOUT THE USE OF A SLEEVE. DIVISION 26 CONTRACTOR SHALL PROVIDE SLEEVES (UNLESS OTHERWISE ASSIGNED) AND COORDINATE WITH ARCHITECTURAL TRADES DURING THE WALL CONSTRUCTION PROCESS.
- PROVIDE DIRECT CONNECTIONS FROM LOCAL RECEPTACLE CIRCUIT TO ACCESS CONTROL SYSTEM AND DOOR HARDWARE POWER SUPPLIES WHERE REQUIRED FOR DOOR LOCK DEVICES, CONTROLLERS, ETC. REFER TO DOOR HARDWARE SCHEDULE AND ACCESS CONTROL SYSTEM SCHEDULE IN RESPECTIVE SPECIFICATIONS FOR QUANTITIES AND LOCATIONS.

FIRE ALARM SYMBOL LEGEND

- MANUAL PULL STATION
- AUDIBLE NOTIFICATION APPLIANCE, WALL-MOUNTED
- VISUAL NOTIFICATION APPLIANCE, WALL-MOUNTED
- AUDIBLE/VISUAL NOTIFICATION APPLIANCE, WALL-MOUNTED
- AUDIBLE NOTIFICATION APPLIANCE, CEILING-MOUNTED
- AUDIBLE/VISUAL NOTIFICATION APPLIANCE, CEILING-MOUNTED
- VISUAL NOTIFICATION APPLIANCE, CEILING-MOUNTED
- WHERE "WGPC" IS NOTED, PROVIDE LISTED WIRE GUARD OR PROTECTIVE POLYCARBONATE COVER FOR NOTIFICATION DEVICE.
- WHERE "WL" IS NOTED, PROVIDE LISTED WET LOCATION NOTIFICATION DEVICE, SUITABLE FOR INDOOR OR OUTDOOR USE.
- SMOKE DETECTOR
- HEAT DETECTOR
- DUCT SMOKE DETECTOR
- SMOKE DAMPER OPERATOR MOTOR
- FIRE PROTECTION FLOW SWITCH
- FIRE PROTECTION TAMPER SWITCH
- ELECTROMAGNETIC DOOR HOLD-OPEN DEVICE
- ADDRESSABLE RELAY FOR FIRE ALARM CONTROL
- PRESSURE SWITCH
- CARBON MONOXIDE DETECTOR
- NOTIFICATION APPLIANCE CONTROL PANEL
- FIRE ALARM REMOTE ANNUNCIATOR
- FIRE ALARM CONTROL PANEL
- KEYED TEST SWITCH AND REMOTE INDICATOR FOR DUCT SMOKE DETECTOR
- FIRE PROTECTION OR ALARM BELL
- NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED

LIGHTING SYMBOL LEGEND

- SINGLE POLE LIGHT SWITCH
- DOUBLE POLE LIGHT SWITCH
- THREE-WAY LIGHT SWITCH
- FOUR-WAY LIGHT SWITCH
- SINGLE POLE LIGHT SWITCH WITH INTEGRAL OCCUPANCY SENSOR
- OCCUPANCY SENSOR DIMMER
- WALL BOX DIMMER SWITCH
- THREE-WAY DIMMER SWITCH
- ELECTRONIC INTERVAL TIMER SWITCH
- LIGHT SWITCH WITH PILOT LIGHT
- LIGHTING CONTROL SWITCH, REFER TO LIGHTING CONTROL SWITCH SCHEDULE AND SPECIFICATIONS FOR DETAILS.
- DOUBLE THROW (MAINTAINED) LIGHT SWITCH
- KEY-OPERATED LIGHT SWITCH - (SUFFIX DESIGNATION) (BLANK: SINGLE POLE, 2: DOUBLE POLE, 3: THREE-WAY, 4: FOUR-WAY)
- LOOKING SWITCH - (SUFFIX DESIGNATION) (BLANK: SINGLE POLE, 2: DOUBLE POLE, 3: THREE-WAY, 4: FOUR-WAY)
- TOUCHSCREEN PANEL
- CIRCUIT NUMBER FOR LIGHT FIXTURES WITHIN INDICATED SPACE
- LPA-X
- WALL-MOUNTED LIGHTING FIXTURE, TYPE 'X'
- RECESSED LIGHTING FIXTURE, TYPE 'X'
- SURFACE MOUNTED LIGHTING FIXTURE, TYPE 'X'
- TRACK LIGHTING
- SINGLE FACE EXIT SIGN, TYPE "X1" IN SCHEDULE UNLESS OTHERWISE NOTED. SHADING INDICATES FACE ORIENTATION
- DOUBLE FACE EXIT SIGN, TYPE "X2" IN SCHEDULE UNLESS OTHERWISE NOTED. SHADING INDICATES FACE ORIENTATION
- WALL-MOUNTED EXIT SIGN
- EMERGENCY LIGHT FIXTURE DESIGNATION
- EMERGENCY LIGHTING AUTOMATIC LOAD CONTROL RELAY
- LIGHTING CONTROL RELAY
- LIGHTING CONTROL ENCLOSED CONTACTOR
- TIME SWITCH
- LIGHTING CONTROL MODULE
- EMERGENCY LIGHTING INVERTER, TYPE 1
- WALL-MOUNTED OCCUPANCY SENSOR
- CEILING-MOUNTED OCCUPANCY SENSOR
- WALL-MOUNTED PHOTOCELL FOR ON/OFF CONTROL
- CEILING-MOUNTED PHOTOCELL FOR ON/OFF CONTROL
- WALL-MOUNTED PHOTOSENSOR FOR DAYLIGHT HARVESTING DIMMING CONTROL
- CEILING-MOUNTED PHOTOSENSOR FOR DAYLIGHT HARVESTING DIMMING CONTROL
- POLE-MOUNTED SITEAREA FIXTURE
- SELF-CONTAINED EMERGENCY LIGHTING UNIT
- NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED

POWER SYMBOL LEGEND

- THREE PHASE MOTOR CONNECTION, 5 HORSE POWER
- SINGLE PHASE MOTOR CONNECTION, 1/2 HORSE POWER
- SAFETY SWITCH DISCONNECTING MEANS, NOT FUSIBLE
- SAFETY SWITCH DISCONNECTING MEANS, FUSIBLE
- COMBINATION MOTOR STARTER AND FUSIBLE DISCONNECTING MEANS
- VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECTING MEANS
- MOTOR STARTER
- BOX COVER FUSIBLE DISCONNECT SWITCH
- MANUAL MOTOR CONTROLLER
- POWER SWITCH, REFER TO LIGHTING SYMBOL LEGEND FOR SIMILAR SWITCH TYPES
- DIRECT ELECTRICAL CONNECTION
- SINGLE RECEPTACLE
- SINGLE RECEPTACLE, FLOOR-MOUNTED
- DUPLEX RECEPTACLE
- WHERE "WL" IS NOTED PROVIDE WET-LOC USE WET LOCATION COVER AND WEATHER RESISTANT GFCI RECEPTACLE
- "E" TAG ON DEVICE INDICATES REPLACEMENT OF DEVICE USING EXISTING ROUGH-IN
- DUPLEX RECEPTACLE, CEILING-MOUNTED
- DUPLEX RECEPTACLE, FLOOR-MOUNTED
- DUPLEX STANDBY POWER RECEPTACLE
- DUPLEX SPLIT WIRED RECEPTACLE
- GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
- QUADRUPLX RECEPTACLE
- QUADRUPLX RECEPTACLE, CEILING-MOUNTED
- QUADRUPLX RECEPTACLE, FLOOR-MOUNTED
- MULTI-PHASE RECEPTACLE, SEE PLAN FOR TYPE
- MULTI-PHASE RECEPTACLE, FLOOR-MOUNTED
- SURFACE RACEWAY SYSTEM
- AUTOMATIC TRANSFER SWITCH
- SWITCHBOARD
- PANELBOARD
- TRANSFORMER
- MOTOR CONTROL CENTER
- EMERGENCY STOP STATION. REFER TO DETAIL FOR REQUIREMENTS.
- ON/OFF PUSH BUTTON
- THREE-FUNCTION PUSH BUTTON
- FLOORBOX, TYPE 1
- JUNCTION BOX
- METER
- EV CHARGER
- THERMOSTAT ROUGH-IN
- RELAY
- ENCLOSED CONTROL CONTACTOR
- NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED

COMMUNICATIONS SYMBOL LEGEND

- COMMUNICATIONS OUTLET ROUGH-IN
- COMMUNICATIONS OUTLET, ONE DATA ACTIVATION
- COMMUNICATIONS OUTLET, CEILING-MOUNTED
- COMMUNICATIONS OUTLET, FLOOR-MOUNTED
- CEILING-MOUNTED VIDEO PROJECTOR
- COMMUNICATIONS EQUIPMENT RACK, FLOOR-MOUNTED
- COMMUNICATIONS EQUIPMENT RACK, WALL-MOUNTED
- CONDUIT SLEEVE FOR COMMUNICATIONS CABLING, 2" TYP. UNLESS NOTED OTHERWISE
- LOUDSPEAKER, CEILING-MOUNTED, TYPE 1 (S1" = ANALOG, S1P" = IP)
- LOUDSPEAKER, WALL-MOUNTED, TYPE 1 (S1" = ANALOG, S1P" = IP)
- INTERCOM SYSTEM CALL STATION BUTTON
- VOLUME CONTROL FOR AUDIO SYSTEM, PAGING, OR INTERCOM LOUDSPEAKERS
- SECONDARY CLOCK, CEILING-MOUNTED, TYPE 1
- SECONDARY CLOCK, WALL-MOUNTED, TYPE 1
- SCOREBOARD TIMER
- SIGNALING BELL
- NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED

ELECTRONIC SAFETY / SECURITY SYMBOL LEGEND

- DOOR CONTACT
- ELECTRONIC LATCH
- ELECTRONIC STRIKE
- PAE ELECTRONIC LOCK
- ELECTRONIC GATE LOCK
- INTRUSION DETECTION KEYPAD
- INTERCOM STATION
- WALL-MOUNTED SURVEILLANCE CAMERA COMMUNICATIONS ROUGH-IN
- CEILING-MOUNTED SURVEILLANCE CAMERA COMMUNICATIONS ROUGH-IN
- WALL-MOUNTED SURVEILLANCE CAMERA, TYPE 1
- CEILING-MOUNTED SURVEILLANCE CAMERA, TYPE 1
- WALL-MOUNTED INFRARED MOTION DETECTOR
- CEILING-MOUNTED INFRARED MOTION DETECTOR
- WALL-MOUNTED ULTRASONIC MOTION DETECTOR
- CEILING-MOUNTED ULTRASONIC MOTION DETECTOR
- CARD READER
- ACCESS CONTROL DOOR TAG. REFER TO HARDWARE SCHEDULE(S) IN SPECIFICATION 08 71 00 AND/OR 28 13 00 FOR DETAILS.
- ACCESS CONTROL SYSTEM EQUIPMENT
- INTRUSION DETECTION SYSTEM EQUIPMENT
- POWER SUPPLY UNIT
- NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED

ELECTRICAL ABBREVIATIONS

AFB	ABOVE FINISHED FLOOR	INTLK	INTERLOCK
BKR	BREAKER	JCT	JUNCTION
BOB	BOTTOM OF BOX	JB	JUNCTION BOX
BOS	BOTTOM OF STRUCTURE	KW	KILOWATT
BP	BREAKER PANEL	KWH	KILOWATT HOUR
BUD	BUILDING	KO	KNOCK OUT
CAP	CAPACITY	LBL	LABEL
CLG	CEILING	LT	LIGHT
CKT	CIRCUIT	LC	LIGHT CONTROL
CB	CIRCUIT BREAKER	LCM	LIGHTING CONTROL MODULE
C	CONDUIT	LON	LIGHTING CONTROL NARRATIVE
COM	COMMUNICATIONS	LIG	LIGHTING
CONN	CONNECTION	MAX	MAXIMUM
CONST	CONSTRUCTION	MCC	MOTOR CONTROL CENTER
CONTR	CONTRACT (OR)	MIN	MINIMUM
CLL	CONTRACT LIMIT LINE	NEC	NATIONAL ELECTRIC CODE
CT	CURRENT TRANSFORMER	NEG	NEGATIVE (-)
E.C.	ELECTRICAL CONTRACTOR	NC	NORMALLY CLOSED
EDM	ELECTRIC HAND DRYER	NO	NORMALLY OPEN
ELEC	ELECTRIC (AL)	NA	NOT APPLICABLE
EWG	ELECTRIC WATER COOLER	NC	NOT IN CONTRACT
EM	EMERGENCY	NL	NIGHT LIGHT
ENT	ENTRANCE	PC	PHOTO CELL
EQ	EQUAL	POS	POSITIVE (+)
EQUIP	EQUIPMENT	PWR	POWER
EST	ESTIMATE	P&L	POWER & LIGHTING
EF	EXHAUST FAN	S	SURFACE
ETR	EXISTING TO REMAIN	S.B.O.	SUPPLIED BY OTHERS
EX	EXISTING	SPR	SPEAKER
F	FLUSH	SPES	SPECIFICATION
FA	FIRE ALARM	SUB	SUBSTITUTE
FSE	FOOD SERVICE EQUIPMENT	SWBD	SWITCHBOARD
FP	FIRE PROOF / FIRE PROTECTION	TEL	TELEPHONE
FLR	FLOOR	TSMT	THERMOSTAT
FLUOR	FLUORESCENT	XFRM	TRANSFORMER
GEN	GENERATOR	UG	UNDERGROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UL	UNDERWRITERS LABORATORIES
GRD	GROUND	UH	UNIT HEATER
HORIZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
HTR	HEATER	VERT	VERTICAL
HTG	HEATING	WI	WITH
HV	HEATING / VENTILATING	W/O	WITHOUT
HVAC	HEATING, VENTILATING, AIR CONDITIONING	WL	WET LOCATION
HOA	HAND-OFF-AUTOMATIC	WP	WEATHER PROOF
HP	HEAT PUMP		

MAXIMUM CONDUCTOR LENGTHS FOR TYPICAL BRANCH CIRCUITS

FEET ONE-WAY BASED ON SINGLE PHASE,
20A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE	CONDUCTOR SIZE				
	#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG
120	60	100	150	245	385
208	100	170	265	425	670
277	135	230	355	565	890
480	240	400	615	980	

FEET ONE-WAY BASED ON SINGLE PHASE,
30A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

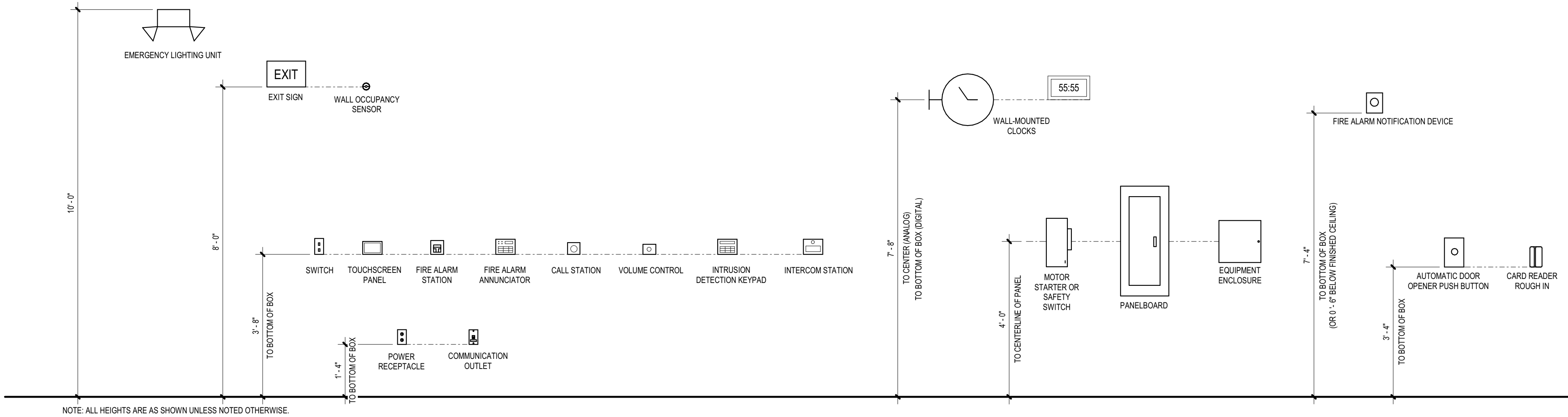
CIRCUIT VOLTAGE	CONDUCTOR SIZE				
	#10 AWG	#8 AWG	#6 AWG	#4 AWG	#2 AWG
120	60	100	150	245	
208	100	170	265	425	
277	135	230	355	565	
480	240	400	615	980	

FEET ONE-WAY BASED ON THREE PHASE,
20A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

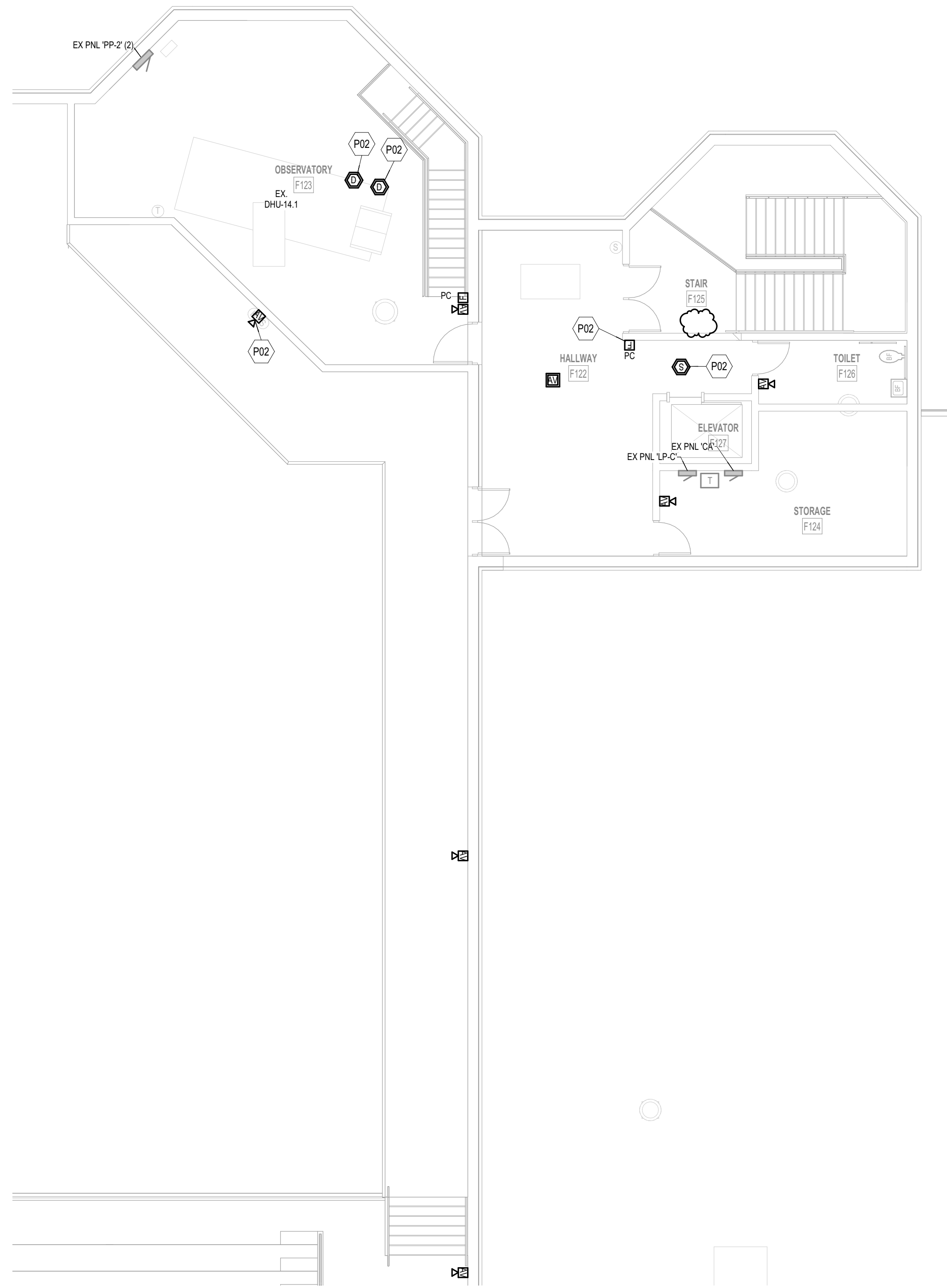
CIRCUIT VOLTAGE	CONDUCTOR SIZE				
	#12 AWG	#10 AWG	#8 AWG	#6 AWG	#4 AWG
208	120	200	305	490	775
480	275	460	710	1,130	

FEET ONE-WAY BASED ON THREE PHASE,
30A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

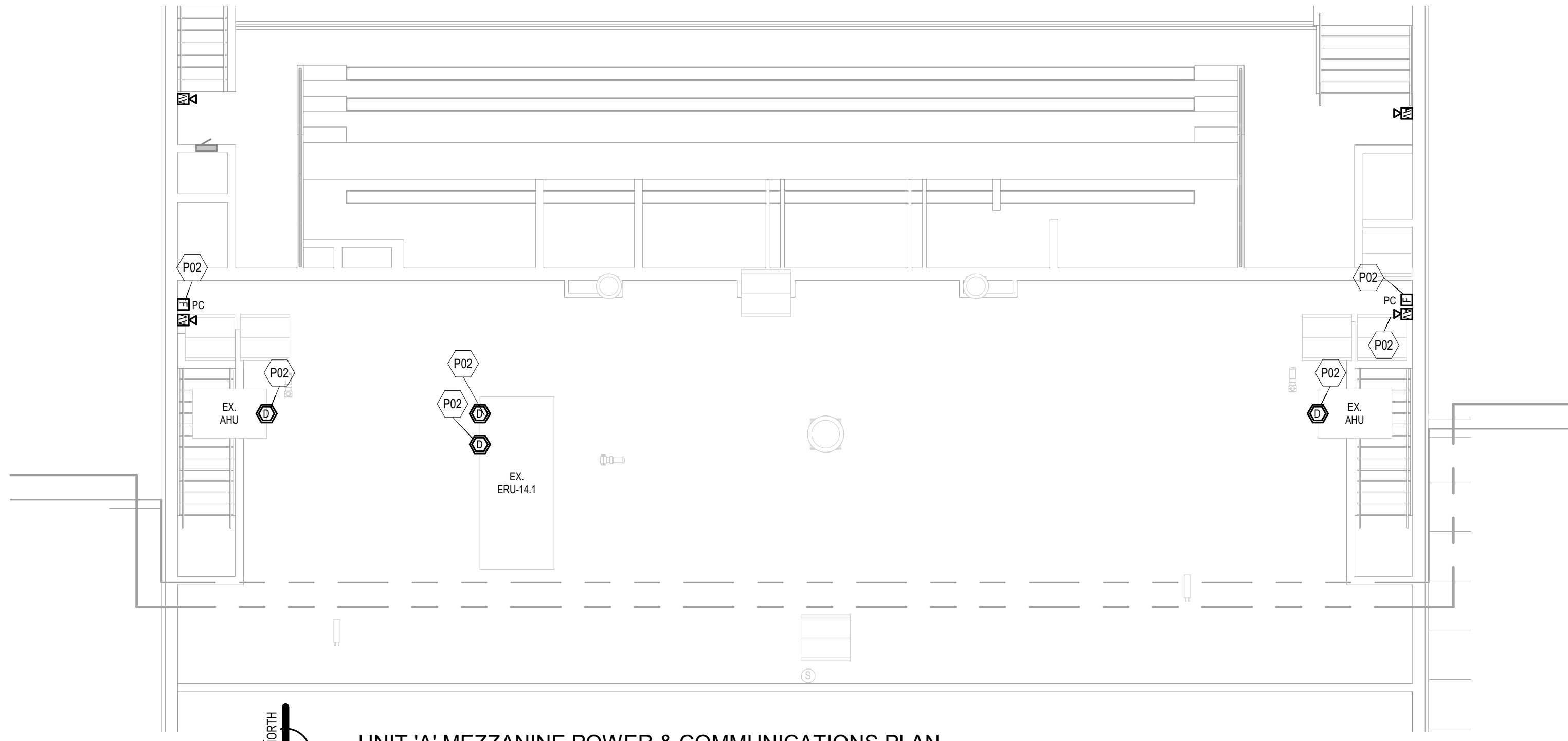
CIRCUIT VOLTAGE	CONDUCTOR SIZE				
	#10 AWG	#8 AWG	#6 AWG	#4 AWG	#2 AWG
208	120	200	305	490	
480	275	460	710	1,130	



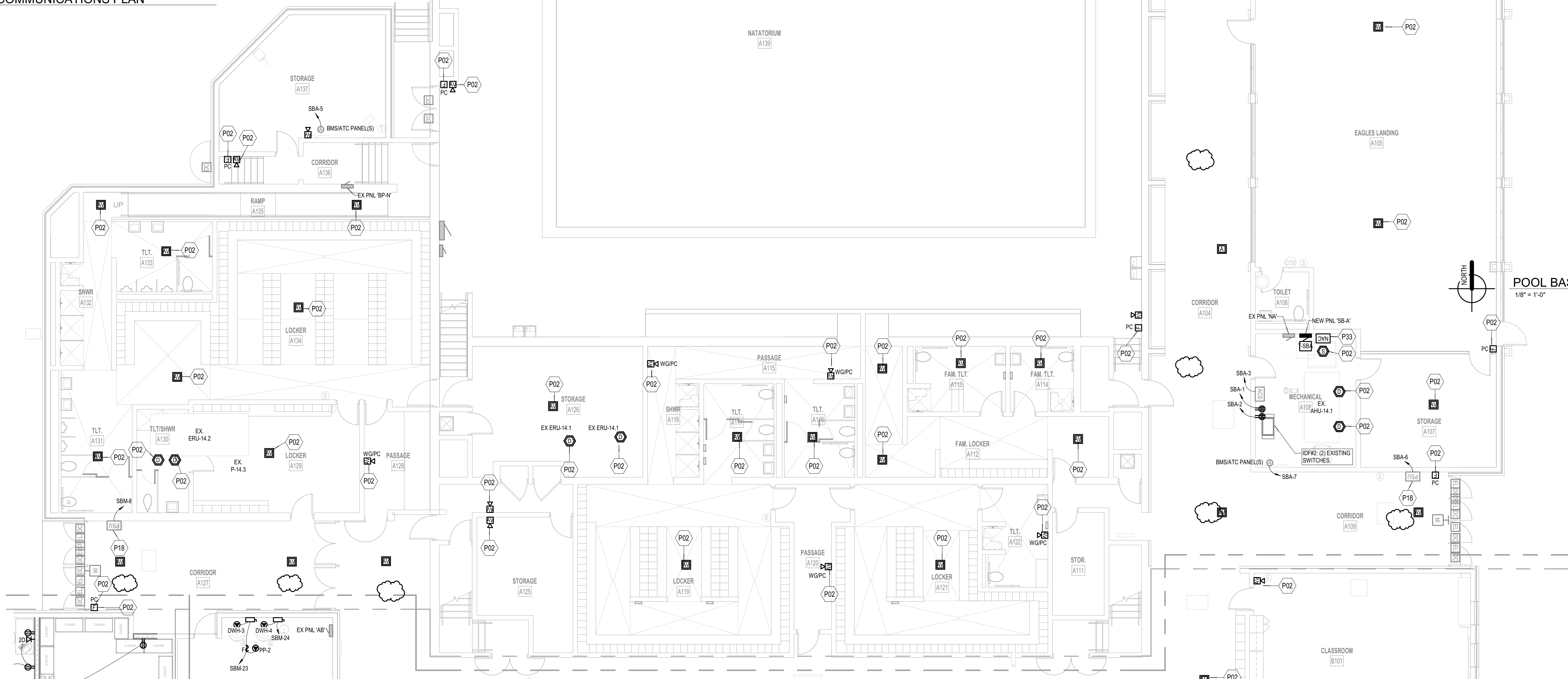
TYPICAL MOUNTING HEIGHTS FOR WALL DEVICES, EQUIPMENT, & FIXTURES
NOT TO SCALE



POOL MEZZANINE POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"



UNIT 'A' MEZZANINE POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"

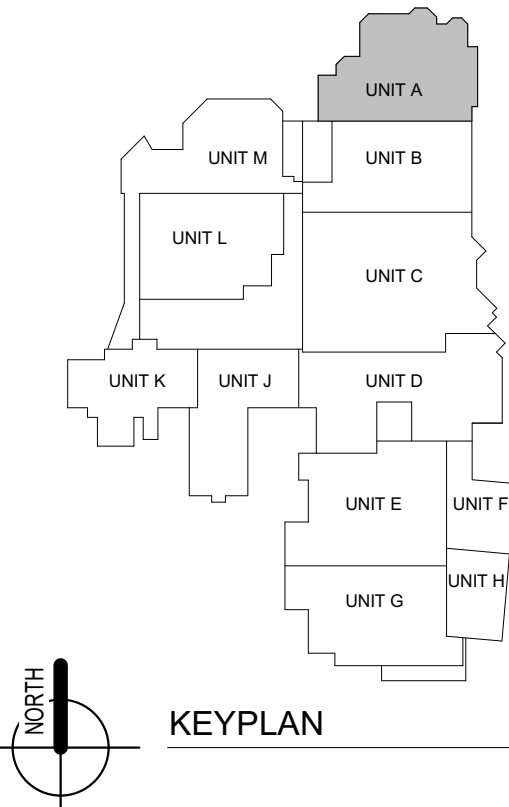


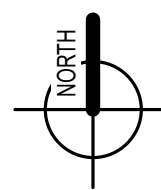
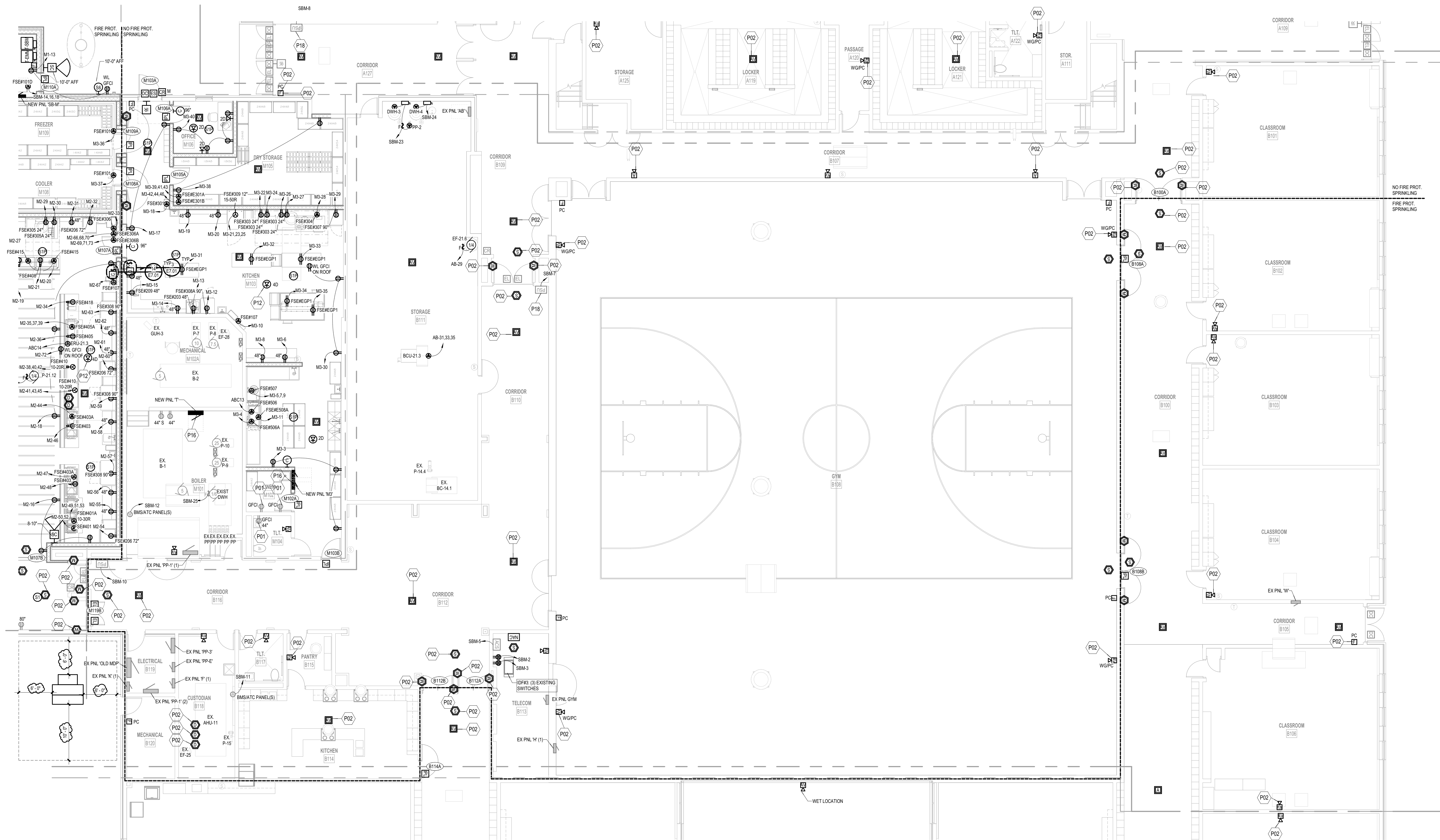
UNIT 'A' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"

POOL BASEMENT POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"

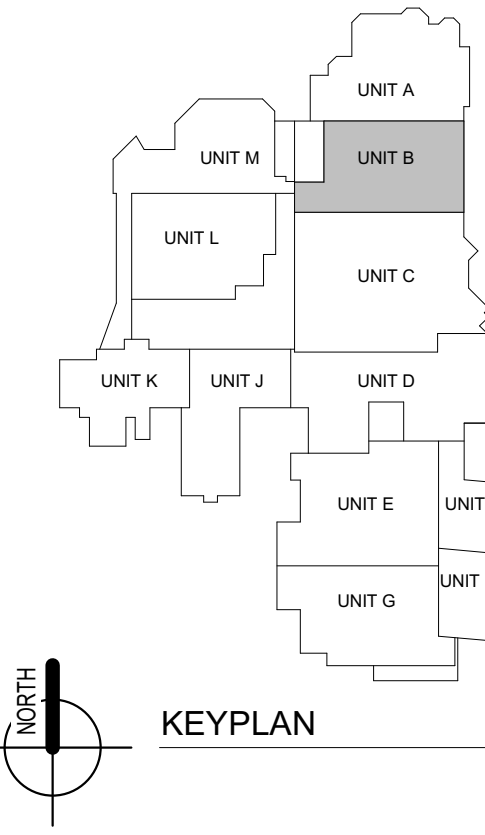
POWER & COMMUNICATION GENERAL NOTES	
1.	REFER TO ELECTRICAL GENERAL NOTES ON SHEET E5.01.
2.	REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3.	REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FRESMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/10 BRANCH CIRCUIT WITH BREAKER/LOCKING MECHANISM IN LOCAL PANELBOARD FOR DAMPERS) IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT). TERMINATED W/ BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4.	PROVIDE FUSIBLE SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTORS SHOP DRAWINGS.
5.	PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION FOR EACH SMALL < 1/2 HP MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES
P02 INSTALL IN EXISTING DEVICE BOX LOCATION.
P18 REWORK AND EXTEND EXISTING ACCESS CONTROL DOOR POWER SUPPLY CIRCUIT TO INDICATED STANDBY GENERATOR PANELBOARD. VERIFY IN FIELD EXISTING DOOR POWER SUPPLY LOCATION.
P33 RECONNECT EXISTING NAC PANEL CIRCUIT TO NEW NAC PANEL.





UNIT 'B' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"



ELECTRICAL KEYNOTES	
P01	REPLACE EXISTING RECEPTACLE AND WALL PLATE. MATCH TO NEW RECEPTACLES AND WALL PLATES.
P02	INSTALL IN EXISTING DEVICE BOX LOCATION.
P12	PROVIDE (4) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM. FROM SURFACE MOUNT BOX, PROVIDE (2) PATCH CORDS TO ACCESS POINT.
P16	REWORK AND EXTEND EXISTING TO REMAIN CIRCUITS TO NEW PANELBOARD LOCATION.
P18	REWORK AND EXTEND EXISTING ACCESS CONTROL DOOR (POWER SUPPLY CIRCUIT TO INDICATED STANDBY GENERATOR PANELBOARD. VERIFY IN FIELD EXISTING DOOR POWER SUPPLY LOCATION.

- POWER & COMMUNICATION GENERAL NOTES
- REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0-01.
 - REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
 - REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCK PANELBOARD FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT). TERMINATED W/ BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
 - PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC/ TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPIABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL/ TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
 - PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LONG WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ISSUANCES	
11.10.2020	BIDS & CONSTRUCTION
12.09.2020	ADDENDUM 003
02.05.2021	BULLETIN 001
04.07.2021	BULLETIN 003
05.14.2021	BULLETIN 005
06.01.2021	BULLETIN 006

DRAWN	LCT
REVIEWED	MCK

PROJECT NO. 5-5006E

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HS - UNIT 'B' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

E2.1B
HIGH SCHOOL

ISSUANCES

11.10.2020 BIDS & CONSTRUCTION
12.09.2020 ADDENDUM 003
02.05.2021 BULLETIN 001
05.14.2021 BULLETIN 005

DRAWN LCT
REVIEWED MCK

PROJECT NO. 5-5066

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HS - UNIT 'C' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

E2.1C
HIGH SCHOOL

POWER & COMMUNICATION GENERAL NOTES

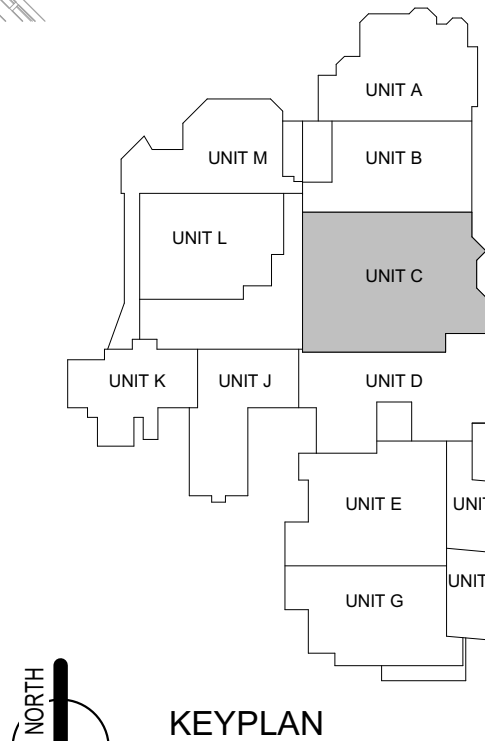
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION PRESSURE DAMPERS. PROVIDE 120VAC POWER FROM DESIGNATED 20 AMP BRANCH CIRCUIT (WITH BREAKER/LOCKING MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT). TERMINATE IN BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER IN CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FUSIBLE SINGLE GANG BOXES IN WALLS FOR HVAC/TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL/TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 12 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES

- | | |
|-----|---|
| P01 | REPLACE EXISTING RECEPTACLE AND WALL PLATE. MATCH TO NEW RECEPTABLES AND WALL PLATES. |
| P02 | INSTALL IN EXISTING SERVICE BOX LOCATION. |
| P03 | REPLACE EXISTING DATA OUTLET FACEPLATE, INSERTS, AND JACKS. MATCH TO NEW DATA OUTLETS, INSERTS, AND JACKS. |
| P04 | FURNISH AND INSTALL GFCI BREAKER FOR CIRCUIT. |
| P07 | PROVIDE CEILING MOUNTED RECEPTACLE ABOVE PROJECTOR. PROJECTOR AND PROJECTOR MOUNTING PLATE PROVIDED AND INSTALLED BY OTHERS. COORDINATE LOCATION WITH PROJECTOR BEFORE INSTALLATION. |
| P11 | PROVIDE (6) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM. FROM SURFACE MOUNT BOX ABOVE CEILING, PROVIDE (2) PATCH CORDS TO ACCESS POINT AND PROVIDE (2) PATCH CORDS TO PROJECTOR. |
| P16 | REWORK AND EXTEND EXISTING TO REMAIN CIRCUITS TO NEW PANELBOARD LOCATION. |
| P18 | REWORK AND EXTEND EXISTING ACCESS CONTROL DOOR POWER SUPPLY CIRCUIT TO INDICATED STANDBY GENERATOR PANELBOARD. VERIFY IN FIELD EXISTING DOOR POWER SUPPLY LOCATION. |
| P21 | FISH CABLEING THROUGH WALL AS POSSIBLE. |
| P31 | ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ROUGHING AND/OR COMMUNICATIONS PATHWAYS FOR CLASSROOM AV SYSTEM SPEAKERS (SHOWN AS 'S'). CABLEING IN EXPOSED CEILING LOCATIONS SHALL BE CONCEALED IN CONDUIT. COORDINATE EXACT SPEAKER LOCATION WITH OWNER BEFORE INSTALLATION. CLASSROOM AV SPEAKERS FURNISHED AND INSTALLED BY OWNER. COORDINATE BOX AND CONDUIT SIZING WITH CLASSROOM AUDIO SYSTEM WITH OWNER. |
| P33 | RECONNECT EXISTING NAC PANEL CIRCUIT TO NEW NAC PANEL. |

UNIT 'C' FIRST FLOOR POWER & COMMUNICATIONS PLAN

1/8" = 1'-0"



KEYPLAN

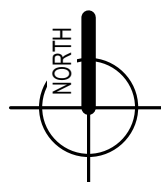
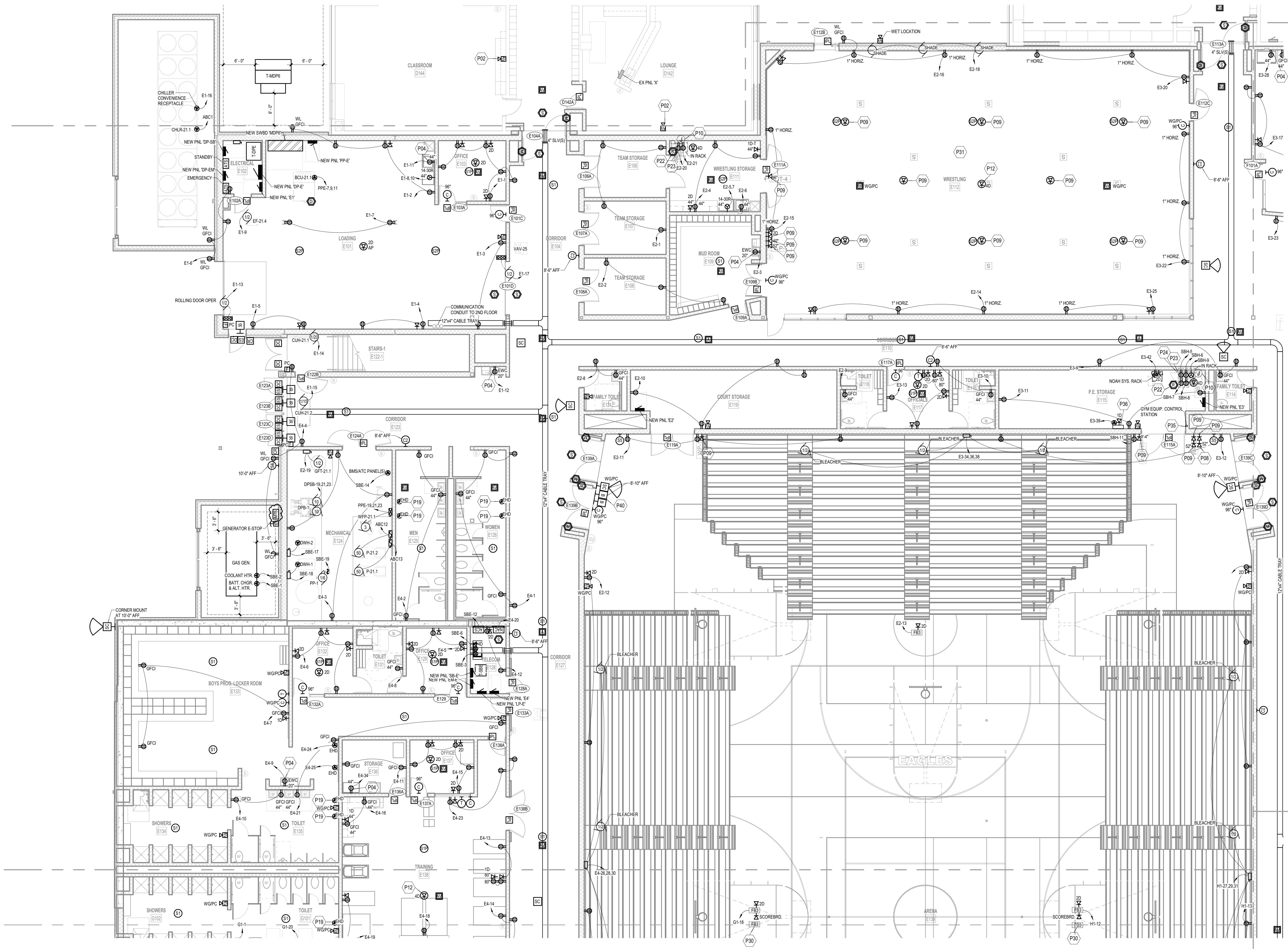
AUDITORIUM MEZZ. POWER & COMMUNICATIONS PLAN

1/8" = 1'-0"

POWER & COMMUNICATION GENERAL NOTES

2. REFER TO ELECTRICAL GENERAL NOTES ON SHEET 01.1
3. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
4. PROVIDE MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM THE MAIN ELECTRICAL PANEL OR FROM THE MAIN ELECTRICAL PANEL (LOCAL PANELBOARD FOR DAMPERS) IN EACH AREA (DAMPERS MAY BE GROUNDED ON EACH CIRCUIT). TERMINATED BY A GROUNDED FUSIBLE SWITCH AT THE MAIN ELECTRICAL PANEL. PROVIDE 1/2" MIN. THICK 15 MIN. RATED DAMPER W/ EACH DAMPER UNLESS COVERED BY ANOTHER QUIT DETECTOR OR SMOKE DETECTOR. A FIRE RATED DAMPER SHALL BE PROVIDED TO COORDINATE WITH MECHANICAL TEMPERATURE CONTROL CONTRACTOR'S SHOP REQUIREMENTS.
5. PROVIDE FUSIBLE SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES, AT LEAST ONE PER OCCUPANCY ROOM OR SPACE. PROVIDE 1/2" MIN. THICK 15 MIN. RATED DAMPER W/ EACH DAMPER UNLESS COVERED BY ANOTHER QUIT DETECTOR OR SMOKE DETECTOR. A FIRE RATED DAMPER SHALL BE PROVIDED TO COORDINATE WITH MECHANICAL / TEMPERATURE CONTROL CONTRACTOR'S SHOP REQUIREMENTS.
6. PROVIDE BOX COVER FUSIBLE DISMALLOW CLOSING ON BUILDING INTERIOR ACCESSIBLE LOCATION FOR EACH SMALL (1/2 HP) MECHANICAL AND/OR ELECTRICAL UNIT. PROVIDE 1/2" MIN. THICK 15 MIN. RATED DAMPER W/ EACH DAMPER UNLESS COVERED BY ANOTHER QUIT DETECTOR OR SMOKE DETECTOR. A FIRE RATED DAMPER SHALL BE PROVIDED TO COORDINATE WITH MECHANICAL / TEMPERATURE CONTROL CONTRACTOR'S SHOP REQUIREMENTS.

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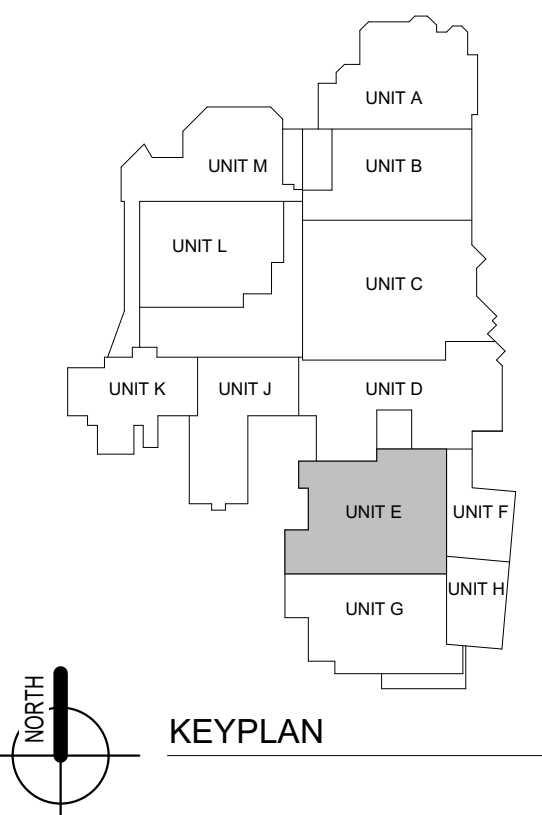
UNIT 'E' FIRST FLOOR POWER & COMMUNICATIONS PLAN

1/8" = 1'-0"

POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120V AC POWER FROM DEDICATED 20-AMP BRANCH CIRCUIT WITH BREAKER LOCATED WITHIN 5 FEET OF EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (1-10 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES	
P02	INSTALL IN EXISTING DEVICE BOX LOCATION.
P04	FURNISH AND INSTALL GFCI BREAKER FOR CIRCUIT.
P08	E.C. SHALL FURNISH AND INSTALL ROUGH-IN FOR AV TOUCHSCREEN. REFER TO AV DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM. AV WALLPLATE AND CABLEING FURNISHED AND INSTALLED BY OTHERS.
P09	E.C. SHALL FURNISH AND INSTALL ROUGH-IN FOR AV WALLPLATE. REFER TO AV DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM. AV WALLPLATE AND CABLEING FURNISHED AND INSTALLED BY OTHERS.
P10	E.C. SHALL INSTALL SURFACE JUNCTION BOX FOR AV RACK LOCATION. REFER TO AV DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM.
P12	PROVIDE (1) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM. FROM SURFACE MOUNT BOX, PROVIDE (2) PATCH CORDS TO ACCESS POINT.
P19	FURNISH AND INSTALL ROUGH-IN FOR FUTURE ELECTRIC HAND DRYER. REFER TO ARCHITECTURAL PLANS FOR ELECTRIC HAND DRYER ROUGH-IN LOCATION AND STANDARD MOUNTING HEIGHT.
P22	PROVIDE FIRE ALARM CONTACT CLOSURE INTERFACE TO INTERFACE WITH AV SYSTEM. AV SYSTEM SHALL TURN OFF DURING FIRE ALARM.
P23	PROVIDE OVERRIDE SIGNAL TO AV SYSTEM FROM INTERCOM SYSTEM. AV SYSTEM SHALL MUTE WHEN INTERCOM SYSTEM IS BROADCASTING MESSAGE.
P24	PROVIDE AUDIO INTEGRATION WITH PA SYSTEM TO BROADCAST INTERCOM AUDIO OVER AV SYSTEM SPEAKERS.
P30	E.C. SHALL FURNISH AND INSTALL FLOORBOX FOR POWER, DATA AND AV. REFER TO AV DRAWINGS FOR CONDUIT AND FLOORBOX SIZING, LOCATION, AND RISER DIAGRAM. AV WALLPLATES AND CABLEING FURNISHED AND INSTALLED BY OTHERS.
P31	ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ROUGH-IN AND/OR COMMUNICATIONS PATHWAYS FOR CLASSROOM AV SYSTEM SPEAKERS (SHOWN AS 'S'). CABLEING IN EXPOSED CEILING LOCATIONS SHALL BE CONCEALED IN CONDUIT. COORDINATE EXACT SPEAKER LOCATION WITH OWNER BEFORE INSTALLATION. CLASSROOM AV SPEAKERS FURNISHED AND INSTALLED BY OWNER. COORDINATE BOX AND CONDUIT SIZING WITH CLASSROOM AUDIO SYSTEM WITH OWNER.
P35	E.C. SHALL PROVIDE AND INSTALL STANDARD 4"x4"x2-1/2" JUNCTION BOX FOR GYM EQUIPMENT CONTROL TOUCHPAD. REFER TO SPECIFICATION 11.06.23 AND MANUFACTURER INSTRUCTIONS FOR FURTHER DETAILS. COORDINATE LOCATION OF TOUCHPAD WITH OWNER BEFORE INSTALLATION.
P36	20-RELAY GYM EQUIPMENT CONTROL PANELS REQUIRED TO SUPPORT (a) BACKSTOP MOTORS AND (b) WINCH MOTORS. USE (1) RELAY PER DEVICE, POWER PANEL RELAY CONTROLLER WITH (1) 120V SINGLE PHASE CIRCUITS AS INDICATED IN PANEL SCHEDULE. USE (1) AUXILIARY CONTACTS FOR SCOREBOARD HOIST DRY CONTACTS. SCOREBOARD POWERED BY SEPARATE SCOREBOARD CONTROL PANELS. REFER TO MANUFACTURER INSTRUCTIONS FOR FURTHER DETAILS.
P40	PROVIDE ROUGH-IN FOR BEACON LOCATIONS. SECURITY SYSTEM BEACONS PROVIDED BY OTHERS.



KEYPLAN



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HUDSONVILLE, MICHIGAN

ISSUANCES

11.10.2020 BIDS & CONST. RCTN
12.01.2020 ADDENDUM 002
12.09.2020 ADDENDUM 003
02.05.2021 BULLETIN 001
04.07.2021 BULLETIN 003
06.01.2021 BULLETIN 006
07.13.2021 BULLETIN 008
09.15.2021 BULLETIN 010

DRAWN LCT
REVIEWED MCK

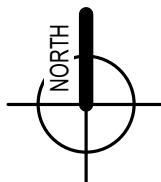
PROJECT NO. 5-50066

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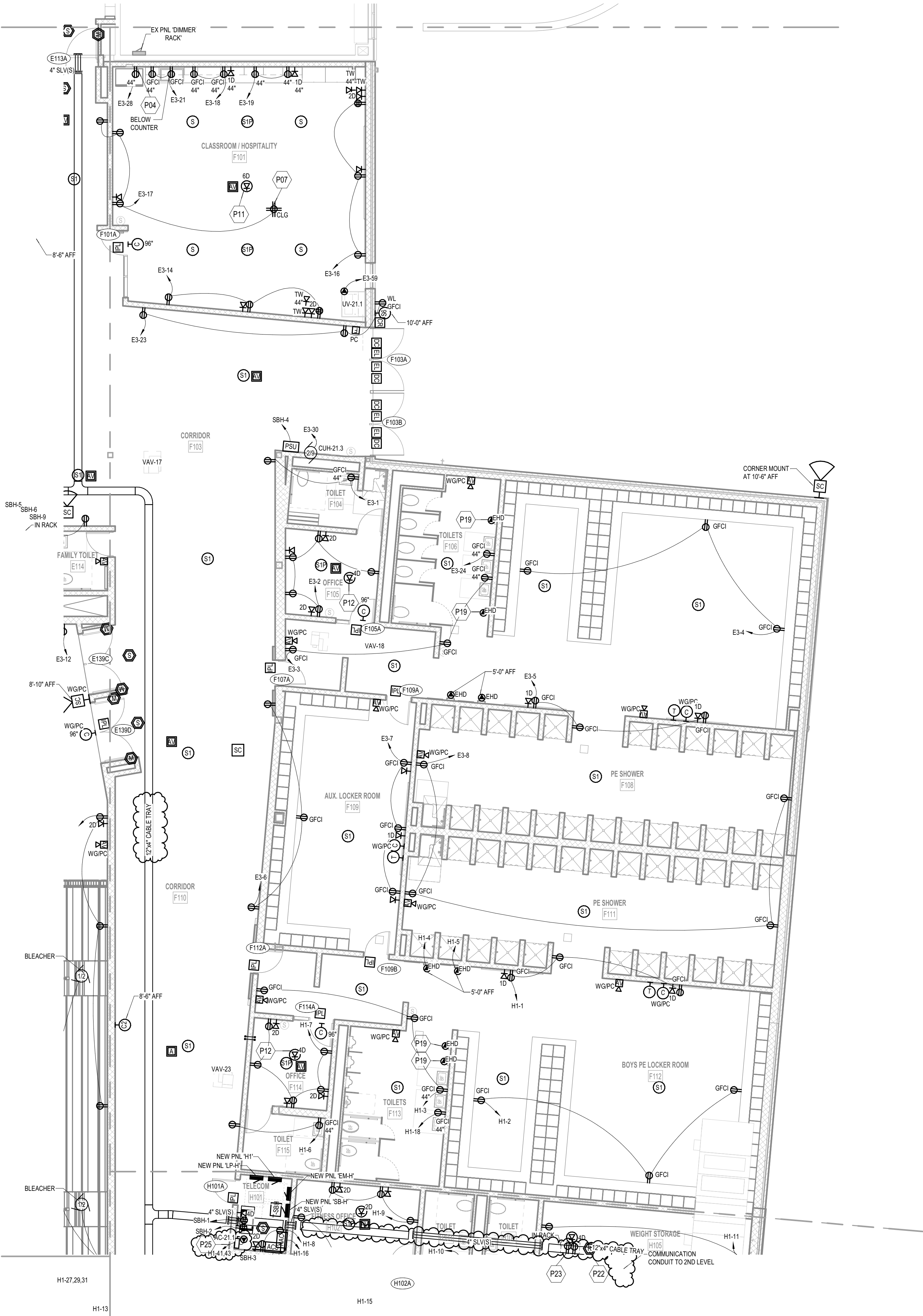
HS - UNIT 'E' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

E2.1E
HIGH SCHOOL



UNIT 'F' FIRST FLOOR POWER & COMMUNICATIONS PLAN

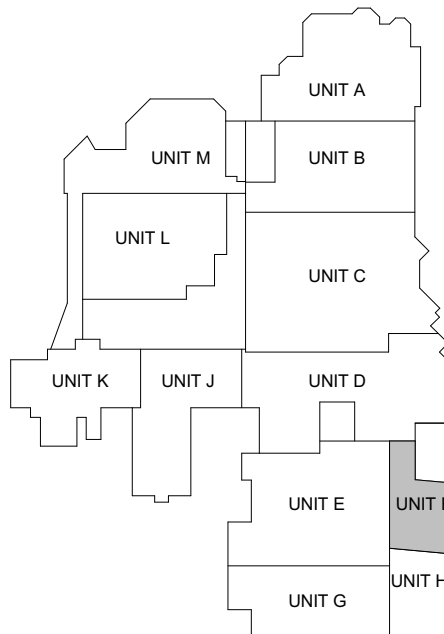
1/8" = 1'-0"



POWER & COMMUNICATION GENERAL NOTES

- REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
- REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
- REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANEL/BOARD FOR DAMPERS) IN EACH AREA. DAMPERS MAY BE GROUPE ON EACH CIRCUIT. TERMINATED IN BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
- PROVIDE FUSIBLE GANG BOXES IN WALLS FOR HVAC, TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPIABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL, TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
- PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COOL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

SYMBOL	ELECTRICAL KEYNOTES
P04	FURNISH AND INSTALL GFCI BREAKER FOR CIRCUIT.
P07	PROVIDE CEILING MOUNTED RECEPTACLE ABOVE PROJECTOR. PROJECTOR AND PROJECTOR MOUNTING PLATE PROVIDED AND INSTALLED BY OTHERS. COORDINATE LOCATION WITH PROJECTOR BEFORE INSTALLATION.
P11	PROVIDE (5) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM. FROM SURFACE MOUNT BOX ABOVE CEILING, PROVIDE (2) PATCH CORDS TO ACCESS POINT AND PROVIDE (2) PATCH CORDS TO PROJECTOR.
P12	PROVIDE (4) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM. FROM SURFACE MOUNT BOX, PROVIDE (2) PATCH CORDS TO ACCESS POINT.
P19	FURNISH AND INSTALL ROUGH-IN FOR FUTURE ELECTRIC HAND DRYER. REFER TO ARCHITECTURAL PLANS FOR ELECTRIC HAND DRYER ROUGH-IN LOCATION AND STANDARD MOUNTING HEIGHT.
P22	PROVIDE FIRE ALARM CONTACT CLOSURE INTERFACE TO INTERFACE WITH AV SYSTEM. AV SYSTEM SHALL TURN OFF DURING FIRE ALARM.
P23	PROVIDE OVERHIDE SIGNAL TO AV SYSTEM FROM INTERCOM SYSTEM. AV SYSTEM SHALL MUTE WHEN INTERCOM SYSTEM IS BROADCASTING MESSAGE.
P25	CIRCUIT SPLIT SYSTEM INDOOR UNIT FROM OUTDOOR UNIT. REFER TO MANUFACTURER'S INSTRUCTIONS FOR FURTHER DETAILS.



KEYPLAN

ISSUANCES

11.10.2020 BIDS & CONSTRUCTION
12.09.2020 ADDENDUM 003
02.05.2021 BULLETIN 001

DRAWN LCT
REVIEWED MCK

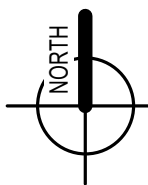
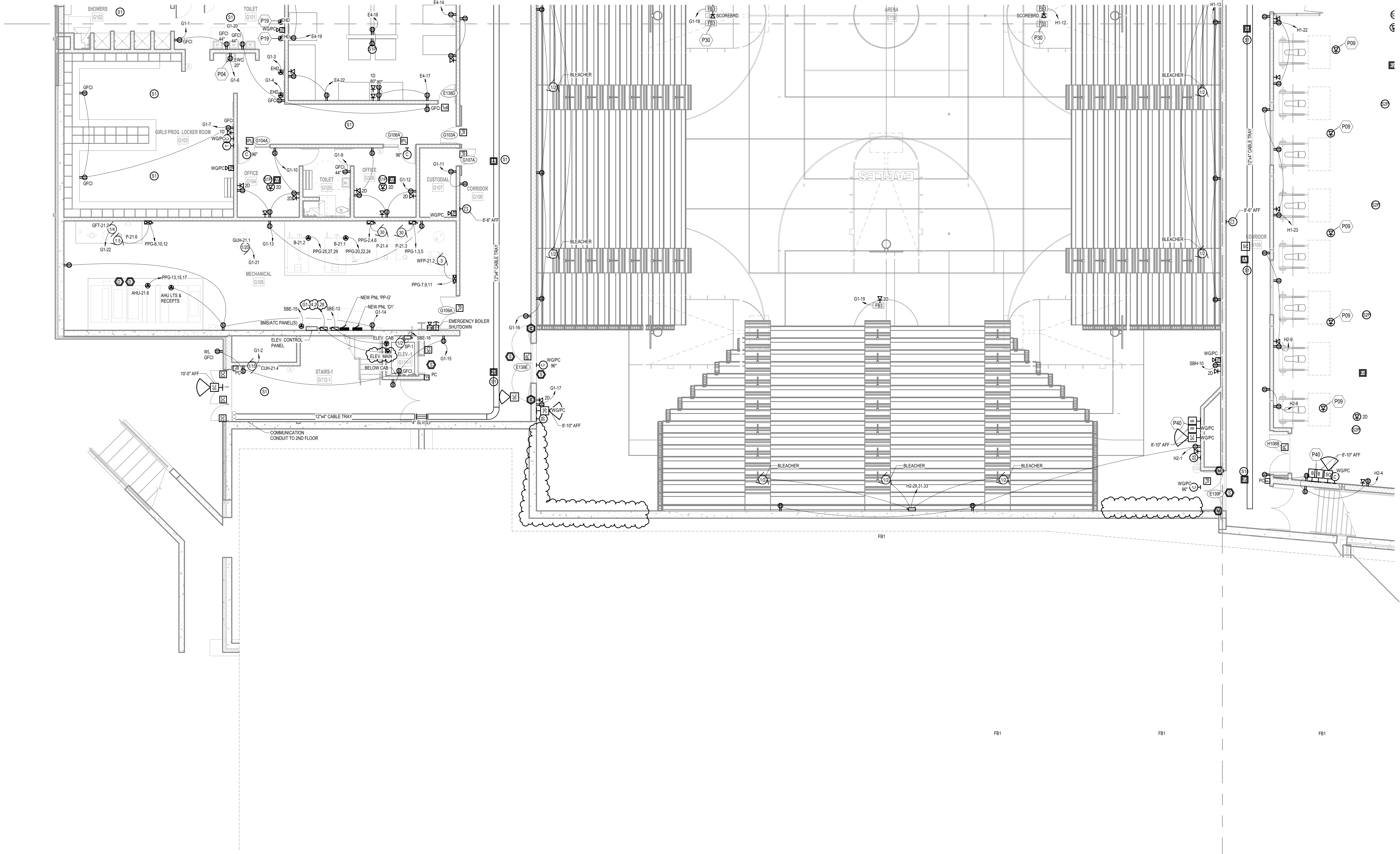
PROJECT NO. 5-5066

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HS - UNIT 'F' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

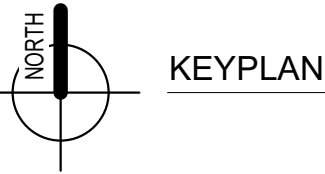
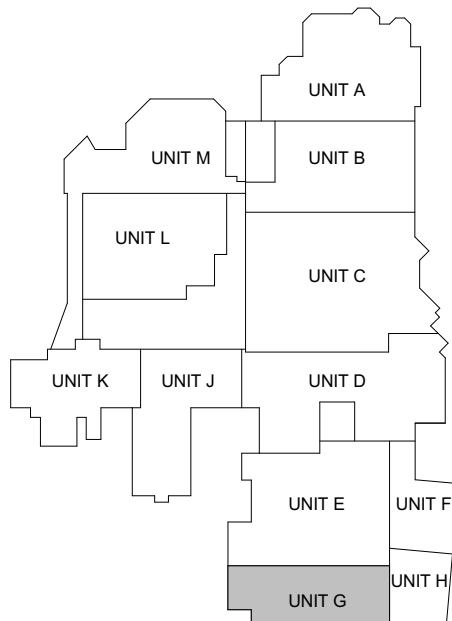
E2.1F
HIGH SCHOOL



UNIT 'G' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"

- POWER & COMMUNICATION GENERAL NOTES
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
 2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
 3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 12VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER/LOADING MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS (IN EACH AREA DAMPERS MAY BE GROUPED ON EACH CIRCUIT). TERMINATE IN BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
 4. PROVIDE FLUSH SINGLE GANG BOXES IN WALLS FOR HVAC TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL TEMPERATURE CONTROLS CONTRACTORS SHOP DRAWINGS.
 5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH ON BUILDING INTERIOR IN ACCESSIBLE LOCATION FOR EACH SMALL 1/2" 120V MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES	
P04	FURNISH AND INSTALL GFCI BREAKER FOR CIRCUIT.
P09	E.G. SHALL FURNISH AND INSTALL ROUGH-IN FOR A/V WALLPLATE. REFER TO ANY DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM. A/V WALLPLATE AND CABLEING FURNISHED AND INSTALLED BY OTHERS.
P19	FURNISH AND INSTALL ROUGH-IN FOR FUTURE ELECTRIC HAND DRYER. REFER TO ARCHITECTURAL PLANS FOR ELECTRIC HAND DRYER ROUGH-IN LOCATION AND STANDARD MOUNTING HEIGHT.
P30	E.G. SHALL FURNISH AND INSTALL FLOORBOX FOR POWER, DATA, AND A/V. REFER TO A/V DRAWINGS FOR CONDUIT AND FLOORBOX SIZING, LOCATION, AND RISER DIAGRAM. A/V WALLPLATES AND CABLEING FURNISHED AND INSTALLED BY OTHERS.
P40	PROVIDE ROUGH-IN FOR BEACON LOCATIONS. SECURITY SYSTEM BEACONS PROVIDED BY OTHERS.



KEYPLAN

ISSUANCES	
11.10.2020	BIDS & CONSTRUCTION
12.01.2020	ADDENDUM 002
12.09.2020	ADDENDUM 003
02.05.2021	BULLETIN 001
05.14.2021	BULLETIN 005
06.18.2021	BULLETIN 007

DRAWN	LCT
REVIEWED	MCK

PROJECT NO. 5-5066

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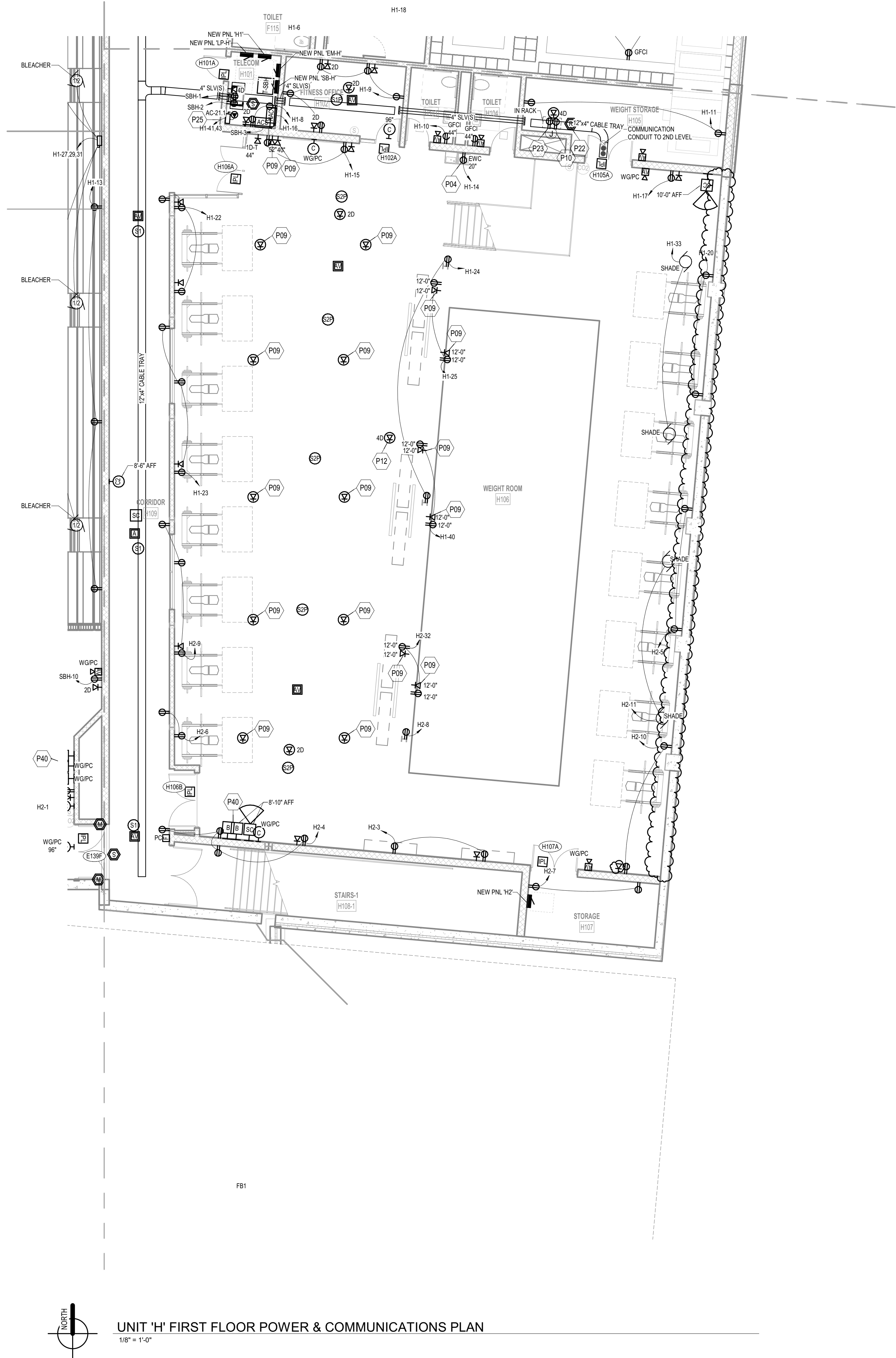
HS - UNIT 'G' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

E2.1G
HIGH SCHOOL

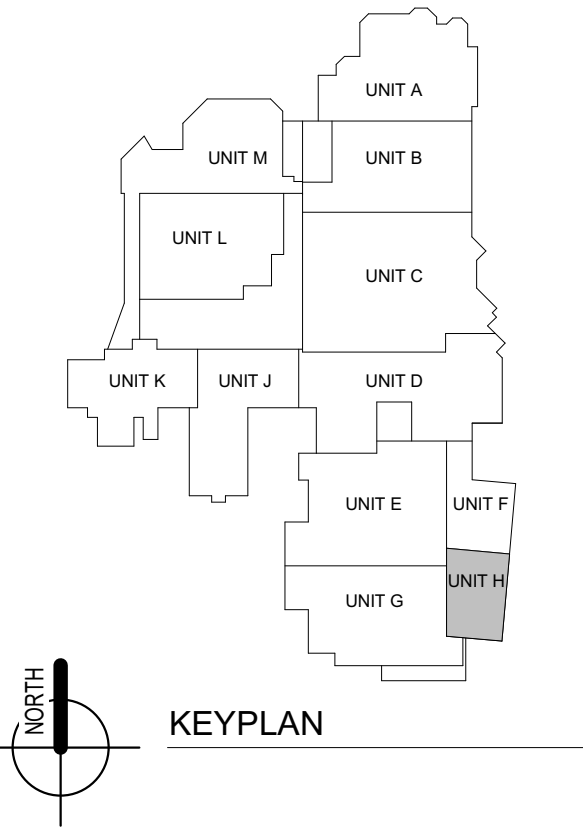
POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 120V/1P BRANCH CIRCUIT (WITH BREAKER/LOOKING MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA. (DAMPERS MAY BE GROUNDED ON EACH CIRCUIT). TERMINATED W/ BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY AND THEN DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC/TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL/TEMPERATURE CONTROLS CONTRACTORS SHOP DRAWINGS.
5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES	
P04	FURNISH AND INSTALL GFCI BREAKER FOR CIRCUIT.
P09	E.G. SHALL FURNISH AND INSTALL ROUGH-IN FOR AV WALLPLATE. REFER TO AV DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM. AV WALLPLATE AND CABLEING FURNISHED AND INSTALLED BY OTHERS.
P10	E.G. SHALL INSTALL SURFACE JUNCTION BOX FOR AV RACK LOCATION. REFER TO AV DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM.
P12	PROVIDE (4) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM. FROM SURFACE MOUNT BOX, PROVIDE (2) PATCH CORERS TO ACCESS POINT.
P22	PROVIDE FIRE ALARM CONTACT CLOSURE INTERFACE TO INTERFACE WITH AV SYSTEM. AV SYSTEM SHALL TURN OFF DURING FIRE ALARM.
P23	PROVIDE OVERRIDE SIGNAL TO AV SYSTEM FROM INTERCOM SYSTEM. AV SYSTEM SHALL MUTE WHEN INTERCOM SYSTEM IS BROADCASTING MESSAGE.
P25	CIRCUIT SPLIT SYSTEM INDOOR UNIT FROM OUTDOOR UNIT. REFER TO MANUFACTURER'S INSTRUCTIONS FOR FURTHER DETAILS.
P40	PROVIDE ROUGH-IN FOR BEACON LOCATIONS. SECURITY SYSTEM BEACONS PROVIDED BY OTHERS.



UNIT 'H' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"



ISSUANCES

11.10.2020 BIDS & CONSTRUCTION
12.09.2020 ADDENDUM 003
02.05.2021 BULLETIN 001
06.18.2021 BULLETIN 007

DRAWN LCT
REVIEWED MCK

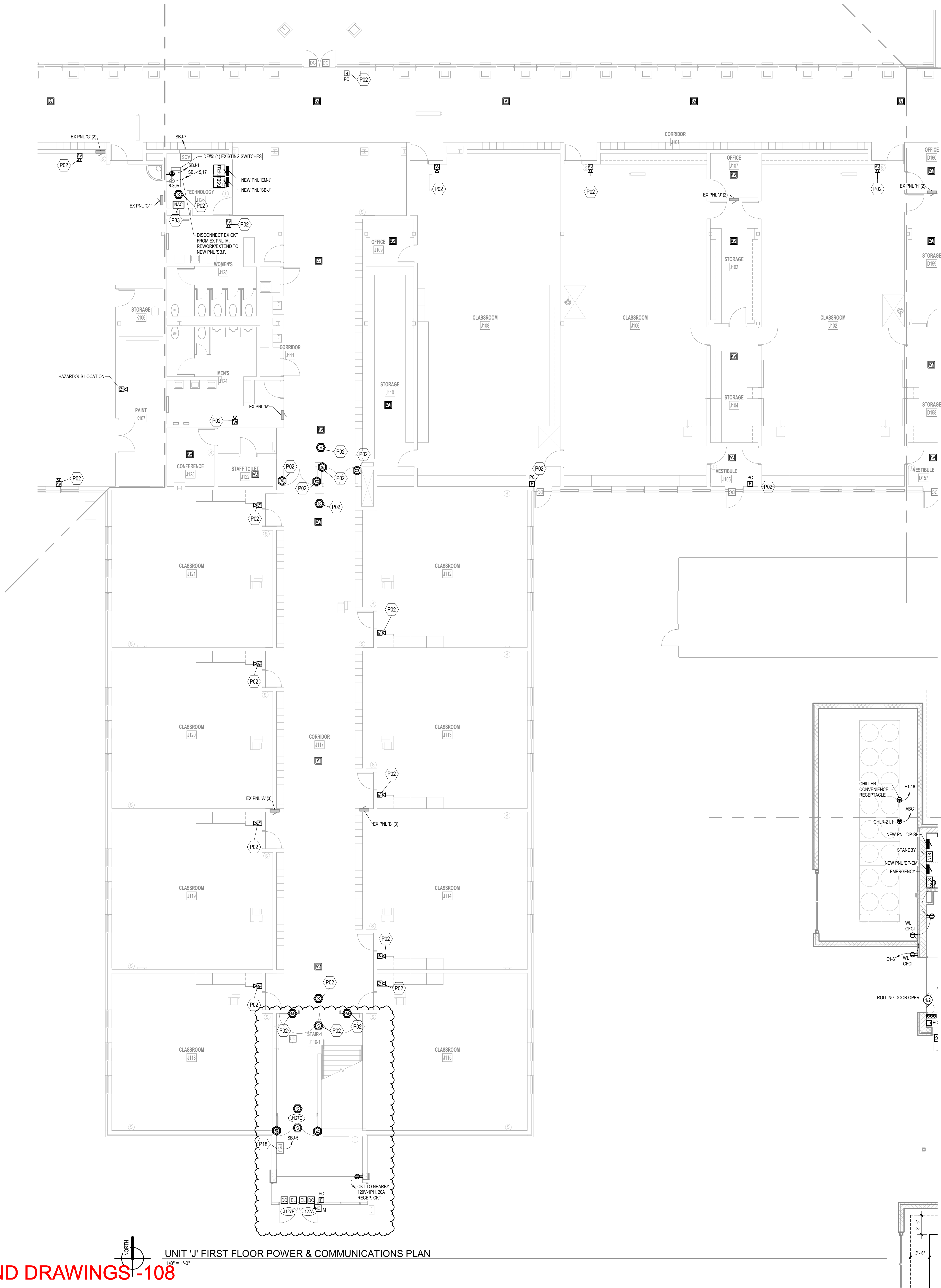
PROJECT NO. 5-5066

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HS - UNIT 'H' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

E2.1H
HIGH SCHOOL

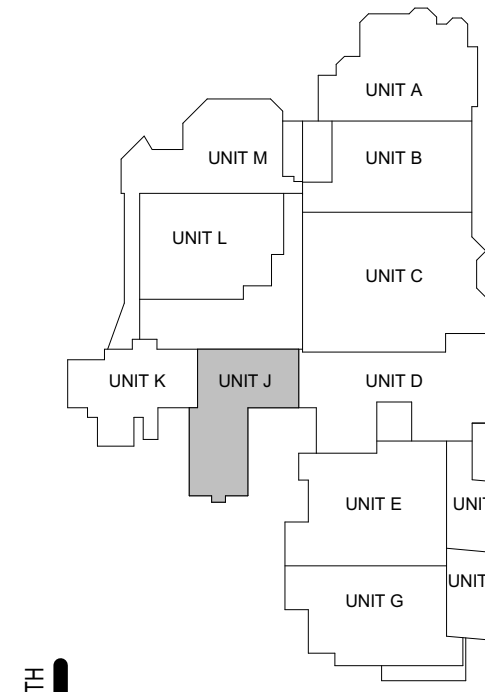


UNIT 'J' FIRST FLOOR POWER & COMMUNICATIONS PLAN

POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20AMP BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA. DAMPERS MAY BE GROUPED ON EACH CIRCUIT. TERMINATED W/ BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES, AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT BACKWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (≤ 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR/LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES	
P02	INSTALL IN EXISTING DEVICE BOX LOCATION.
P18	REWORK AND EXTEND EXISTING ACCESS CONTROL DOOR POWER SUPPLY CIRCUIT TO INDICATED STANDBY GENERATOR PANELBOARD. VERIFY IN FIELD EXISTING DOOR POWER SUPPLY LOCATION.
P33	RECONNECT EXISTING NAC PANEL CIRCUIT TO NEW NAC PANEL.



KEYPLAN

ISSUANCES

11.10.2020 BIDS & CONSTRUCTION
06.01.2021 BULLETIN 006
02.22.2022 BULLETIN 013

DRAWN LCT
REVIEWED MCK

PROJECT NO. 5-5066

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HS - UNIT 'J' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

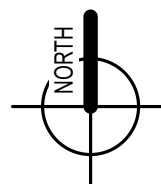
E2.1J
HIGH SCHOOL

POWER & COMMUNICATION GENERAL NOTES

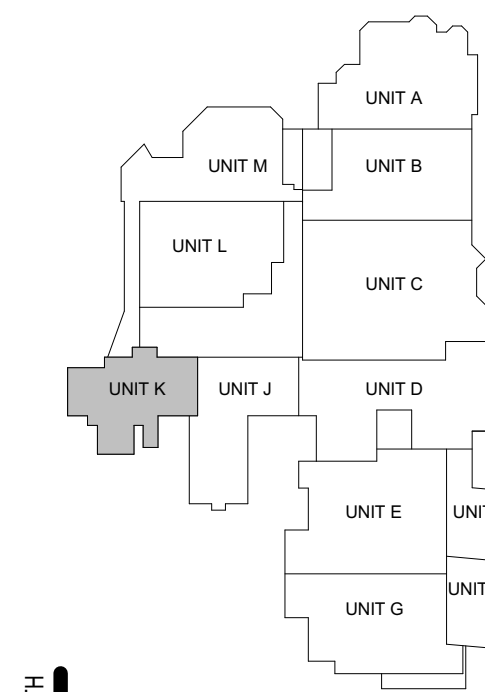
- REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
- REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
- REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA. DAMPERS MAY BE GROUNDED ON EACH CIRCUIT. TERMINATED W/ BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
- PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
- PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES

P02	INSTALL IN EXISTING DEVICE BOX LOCATION.
P18	REWORK AND EXTEND EXISTING ACCESS CONTROL DOOR POWER SUPPLY CIRCUIT TO INDICATED STANDBY GENERATOR PANELBOARD. VERIFY IN FIELD EXISTING DOOR POWER SUPPLY LOCATION.
P33	RECONNECT EXISTING NAC PANEL CIRCUIT TO NEW NAC PANEL.



UNIT 'K' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"



KEYPLAN

ISSUANCES

11.10.2020 BIDS & CONSTRUCTION
12.09.2020 ADDENDUM 003

DRAWN LCT
REVIEWED MCK

PROJECT NO. 5-5066

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HS - UNIT 'K' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

E2.1K
HIGH SCHOOL

ISSUANCES

11.10.2020 BIDS &
CONSTRUCTION
12.09.2020 ADDENDUM 003
02.05.2021 BULLETIN 001
04.07.2021 BULLETIN 003
05.14.2021 BULLETIN 005

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HS - UNIT 'M' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

E2.1M
HIGH SCHOOL

FOODSERVICE ELECTRICAL GENERAL NOTES

1. ELEC. CONTRACTOR SHALL REVIEW FOODSERVICE EQUIPMENT DRAWINGS ("FSE" SERIES) AND FOOD SERVICE SPECIFICATIONS (SECTION 11.40.00) FOR ADDITIONAL SCOPE OF WORK AND REQUIREMENTS. INCLUDE ALL WORK AND MATERIALS AS ASSIGNED TO THE ELEC. CONTRACTOR BY DRAWINGS, SPECIFICATIONS, CONSTRUCTION MANAGER'S WORK CATEGORY DESCRIPTIONS, ETC.
2. IF THERE IS A CONFLICT BETWEEN THE FOODSERVICE DRAWINGS/SPECIFICATIONS AND THIS DRAWING OR DIVISION 28 SPECIFICATIONS, THE ELEC. CONTRACTOR SHALL BID USING THE MORE STRINGENT AND GREATER-COST REQUIREMENTS. CLARIFICATIONS MAY BE REQUESTED IN WRITING PRIOR TO BID. COORDINATE WITH CONSTRUCTION MANAGER'S PROCEDURES.
3. THE WORK SHOWN ON THIS DRAWING AND THE DIVISION 28 SPECIFICATIONS SHALL SUPERSEDE THE FOOD SERVICE EQUIPMENT DRAWINGS/SPECIFICATION DRAWINGS.
4. LABEL ALL RECEPTACLES IN KITCHEN AND SERVING AREAS WITH CORRESPONDING PANELBOARD, CIRCUIT NUMBER, AND FOODSERVICE EQUIPMENT ITEM NUMBER AS REFERENCED ON THE FOODSERVICE EQUIPMENT DRAWINGS.
5. ELEC. CONTRACTOR SHALL VERIFY AND COORDINATE WITH THE FOODSERVICE EQUIPMENT VENDOR THAT ALL SINGLE-PHASE RECEPTACLES (150V L-G OR LESS, 5A OR LESS) AND THREE-PHASE RECEPTACLES (150V L-G OR LESS, 100A OR LESS) IN KITCHEN AND SERVING AREAS HAVE GFCI PROTECTION FOR PERSONNEL, AS REQUIRED BY NEC 210.8(B)(2), EITHER AT THE DEVICE (GFCI RECEPTACLE) OR AT THE RESPECTIVE PANELBOARD (GFCI BREAKER FOR THE BRANCH CIRCUIT). FOR ANY SUCH RECEPTACLE LOCATIONS THAT ARE NOT READILY ACCESSIBLE, (i.e. DEFINITION: GFCI PROTECTION SHALL BE PROVIDED FOR THE BRANCH CIRCUIT AT THE PANELBOARD USING A GFCI BRANCH CIRCUIT BREAKER).
6. PROVIDE CONCEALED ROUGH-IN FOR REMOTE MANUAL PULL STATIONS CONNECTED TO VENTILATION HOOD FIRE PROTECTION SYSTEMS. SURFACE-MOUNTED CONTACT, PIPE, AND PULL STATIONS ARE NOT ACCEPTABLE. COORDINATE LOCATIONS WITH ENGINEERED SHOP DRAWINGS FOR SYSTEM.

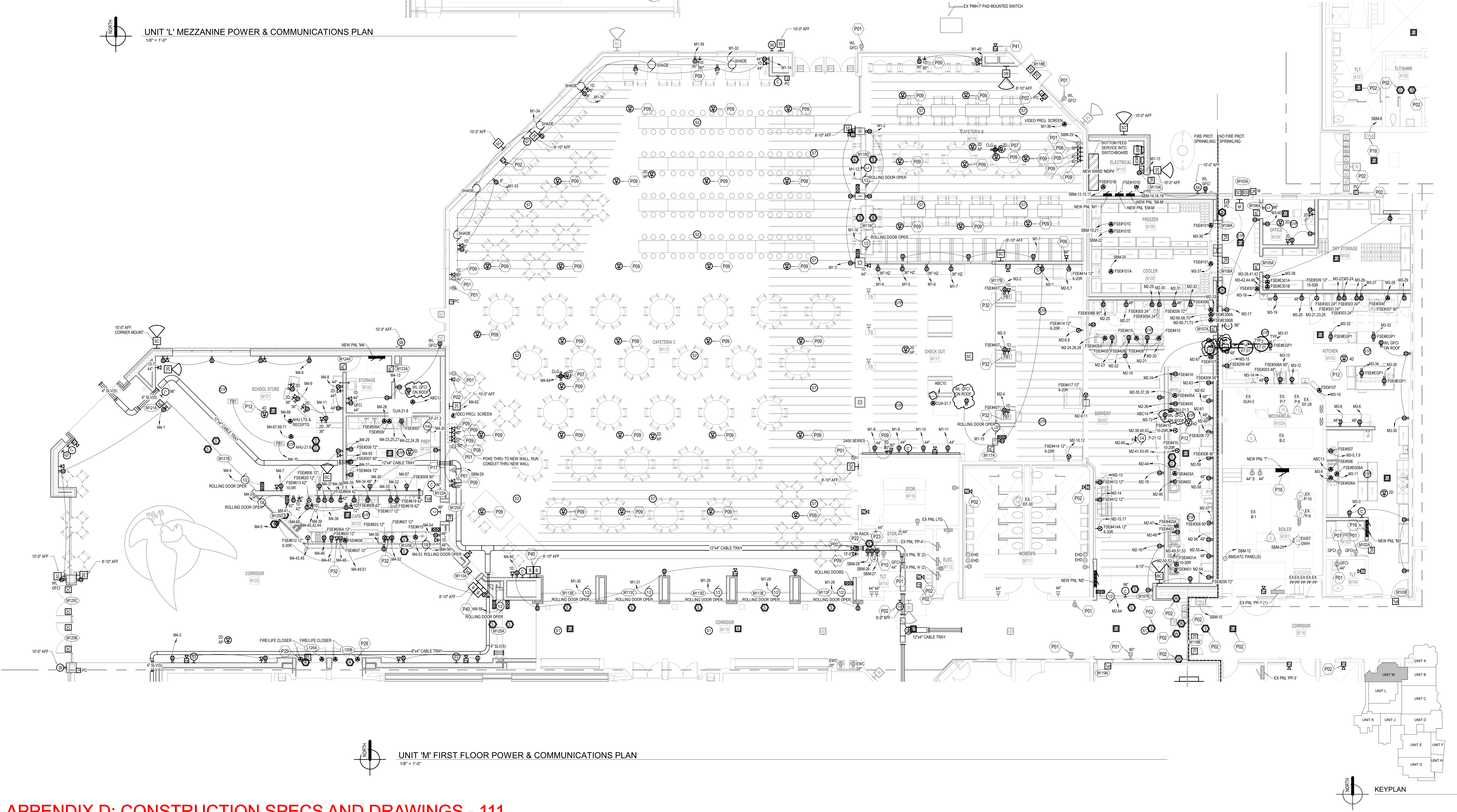
POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT). TERMINATE IN BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPERS IN CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FUSIBLE SINGLE GANG BOXES IN WALLS FOR HVAC TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL TEMPERATURE CONTROL CONTRACTORS SHOP DRAWINGS.
5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (1-1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAN BOXES, ETC.

ELECTRICAL KEYNOTES	
P01	REPLACE EXISTING RECEPTACLE AND WALL PLATE MATCH TO NEW RECEPTABLES AND WALL PLATES.
P02	INSTALL IN EXISTING DEVICE BOX LOCATION.
P07	PROVIDE CEILING MOUNTED RECEPTACLE ABOVE PROJECTOR. PROJECTOR AND PROJECTOR MOUNTING PLATE PROVIDED AND INSTALLED BY OTHERS. COORDINATE LOCATION WITH PROJECTOR BEFORE INSTALLATION.
P08	E.C. SHALL FURNISH AND INSTALL ROUGH-IN FOR ANY TOUCHSCREEN. REFER TO ANY DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM. TOUCHSCREEN FURNISHED AND INSTALLED BY OTHERS.
P09	E.C. SHALL FURNISH AND INSTALL ROUGH-IN FOR ANY WALLPLATE. REFER TO ANY DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM. ALL WALLPLATE AND CABLING FURNISHED AND INSTALLED BY OTHERS.
P10	E.C. SHALL INSTALL SURFACE JUNCTION BOX FOR AV RACK LOCATION. REFER TO ANY DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM.
P12	PROVIDE (1) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM, FROM SURFACE MOUNT BOX, PROVIDE (2) PATCH CORDS TO ACCESS POINT.
P16	REWORK AND EXTEND EXISTING TO REMAIN CIRCUITS TO NEW PANELBOARD LOCATION.
P17	REWORK AND EXTEND EXISTING RECEPTACLE CIRCUIT TO NEW RECEPTACLE.
P18	REWORK AND EXTEND EXISTING ACCESS CONTROL, DOOR POWER SUPPLY CIRCUIT TO INDICATED STANDBY GENERATOR PANELBOARD. VERIFY IN FIELD EXISTING DOOR POWER SUPPLY LOCATION.
P22	PROVIDE FIRE ALARM CONTACT CLOSURE INTERFACE TO INTERFACE WITH AN SYSTEM. AV SYSTEM SHALL TURN OFF DURING FIRE ALARM.
P23	PROVIDE OVERRIDE SIGNAL TO AV SYSTEM FROM INTERCOM SYSTEM. AV SYSTEM SHALL MUTE WHEN INTERCOM SYSTEM IS BROADCASTING MESSAGE.
P29	CIRCUIT FIRE LIFE CLOSER TO NEARBY 120V CIRCUIT. INTERFACE DOORS WITH FIRE ALARM SYSTEM.
P32	PROVIDE EMPTY CONDUIT FROM CASH REGISTER TO JUNCTION BOX AT DESK. CONDUIT FOR DATA CABLE FURNISHED AND INSTALLED BY CASH REGISTER SYSTEMS. PURVEYOR. REFER TO FOOD SERVICE PLANS FOR FURTHER DETAILS.
P40	PROVIDE ROUGH-IN FOR BEACON LOCATIONS. SECURITY SYSTEM BEACONS PROVIDED BY OTHERS.
P41	ELECTRICAL CONTRACTOR SHALL PROVIDE ROUGH-IN AT 9'-0" FOR HORNSTROBE. HORNSTROBE FURNISHED AND INSTALLED BY FIRE PROTECTION CONTRACTOR. REFER TO FIRE PROTECTION PLAN FOR FURTHER DETAILS.

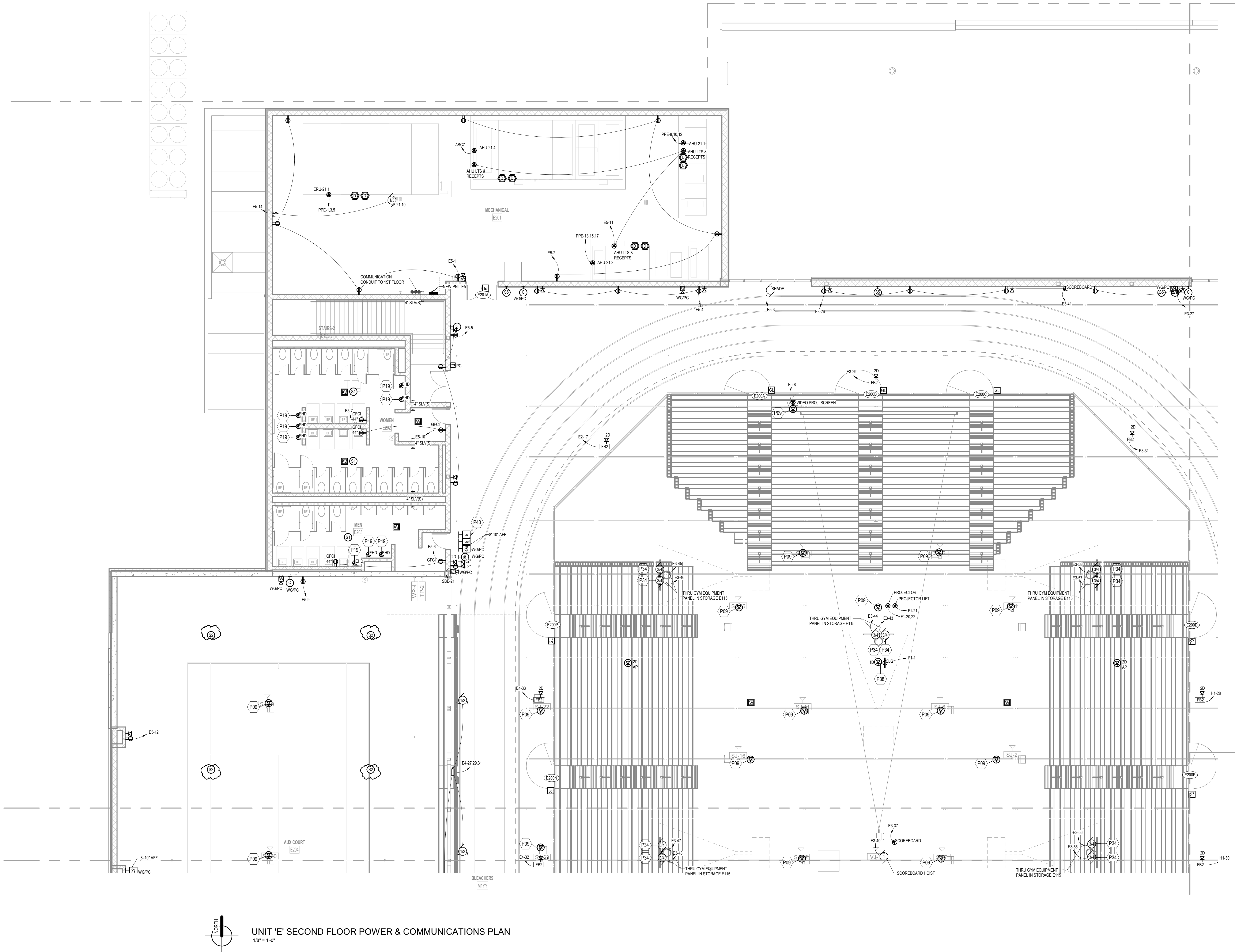
UNIT 'L' MEZZANINE POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"

UNIT 'M' FIRST FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"



BM 38015-5066 Hudsonville High SchoolE-5066E 2019.rvt
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APPENDIX D: CONSTRUCTION SPECS AND DRAWINGS - 112



UNIT 'E' SECOND FLOOR POWER & COMMUNICATIONS PLAN

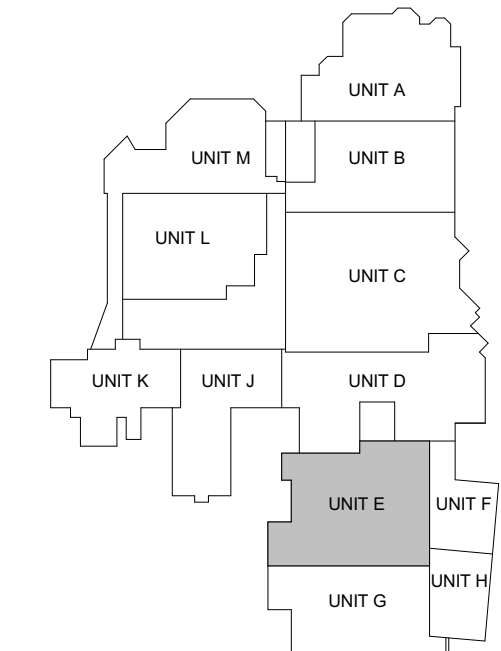
1/8" = 1'-0"

POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE DEDICATED POWER FROM DEDICATED 20AMP BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANELS/BOARDS FOR DAMPERS IN EACH AREA. DAMPERS MAY BE GROUPED ON EACH CIRCUIT. TERMINATED W/ BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT BACKWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (6-12 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR (LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT). TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES

P09	E.C. SHALL FURNISH AND INSTALL ROUGH-IN FOR AV WALL PLATE. REFER TO AV DRAWINGS FOR CONDUIT AND BOX SIZES, LOCATION, AND RISER DIAGRAM. AV WALL PLATE AND CABLING FURNISHED AND INSTALLED BY OTHERS.
P19	FURNISH AND INSTALL ROUGH-IN FOR FUTURE ELECTRIC HAND DRYER. REFER TO ARCHITECTURAL PLANS FOR ELECTRIC HAND DRYER ROUGH-IN LOCATION AND STANDARD MOUNTING HEIGHT.
P34	E.C. SHALL PROVIDE AND INSTALL 4" SQUARE JUNCTION BOX WITHIN 3' OF OR WHICH LOCATION FOR TWIST-LOCK RECEPTACLE. TWIST LOCK RECEPTACLE AND COVER PROVIDED BY EQUIPMENT PROVIDER. (1) HOOK-UP REQUIRED PER DEVICE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.
P38	E.C. SHALL FURNISH AND INSTALL TWIST-LOCK RECEPTACLE. TWIST-LOCK PLUGS AND DATA DROP FOR HOOP CAMERA/SPEAKER SYSTEM. E.C. SHALL FURNISH AND INSTALL SPEAKER WIRE AND CONDUIT BACK TO WALL MOUNTED SYSTEM RACK. COORDINATE LOCATION OF POWER, DATA, AND SPEAKER CONDUIT WITH OWNER BEFORE INSTALLATION. HOOP CAMERA/SPEAKER SYSTEM FURNISHED BY OWNER.
P40	PROVIDE ROUGH-IN FOR BEACON LOCATIONS. SECURITY SYSTEM BEACONS PROVIDED BY OTHERS.



KEYPLAN



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ISSUANCES

11.10.2020 BIDS & CONSTRUCTION
12.01.2020 ADDENDUM 002
12.09.2020 ADDENDUM 003
05.14.2021 BULLETIN 005
06.18.2021 BULLETIN 007

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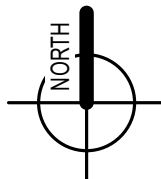
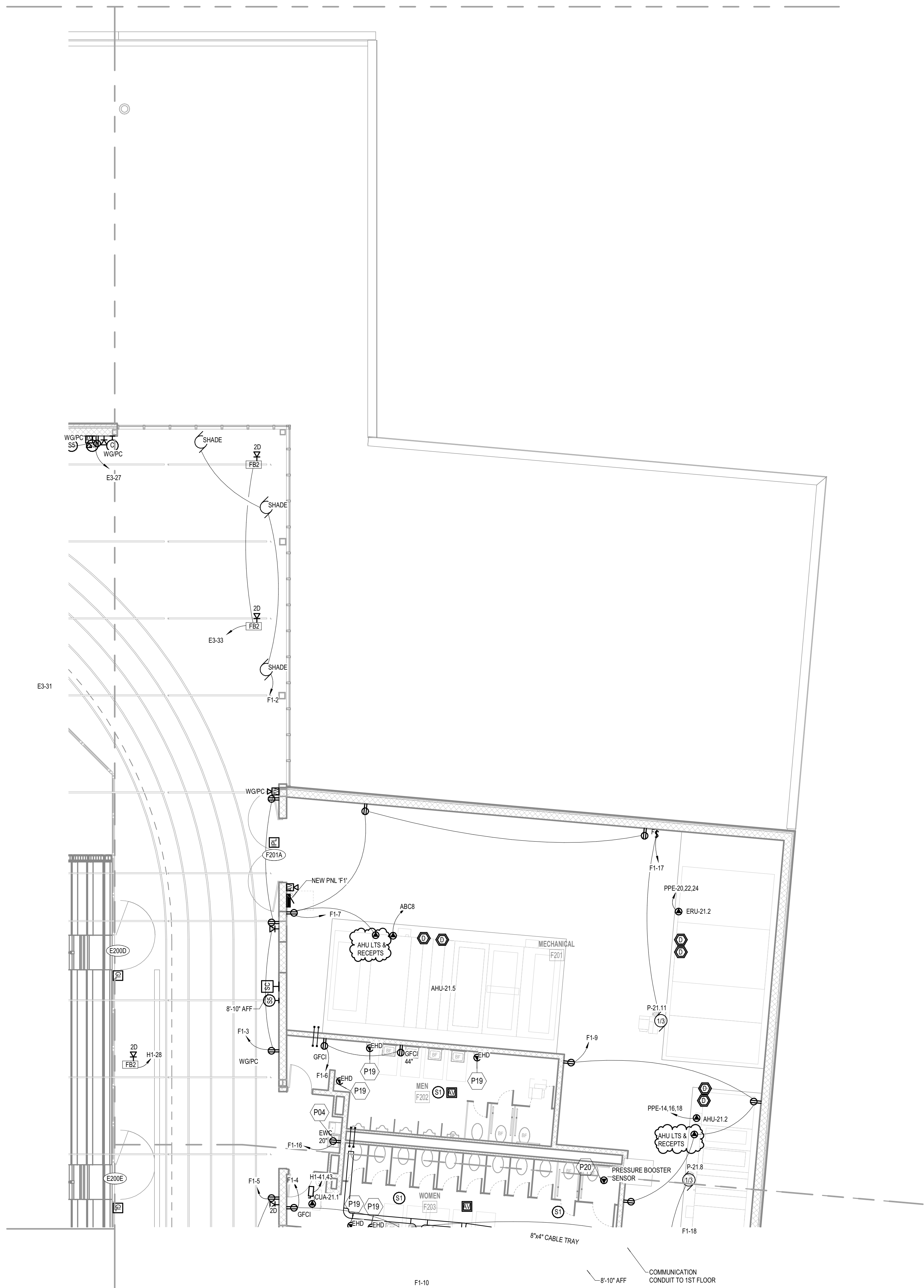
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HS - UNIT 'E' SECOND FLOOR
POWER & COMMUNICATIONS
PLAN

E2.2E
HIGH SCHOOL

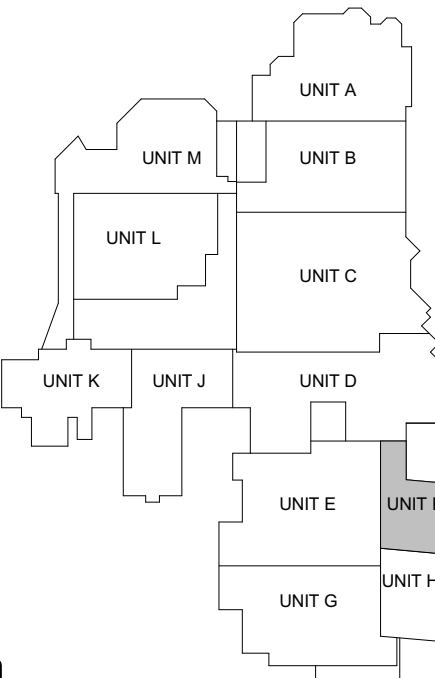


UNIT 'F' SECOND FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"

POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCK PANELS FOR DAMPERS IN EACH AREA. DAMPERS MAY BE GROUPED ON EACH CIRCUIT. TERMINATED W/ BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES, AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (6-12 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO: CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES
P18 FURNISH AND INSTALL GFCI BREAKER FOR CIRCUIT.
P19 FURNISH AND INSTALL ROUGH-IN FOR FUTURE ELECTRIC HAND DRYER. REFER TO ARCHITECTURAL PLANS FOR ELECTRIC HAND DRYER ROUGH-IN LOCATION AND STANDARD MOUNTING HEIGHT.
P20 ELECTRICAL CONTRACTOR SHALL WIRE PRESSURE BOOSTER SENSORS BACK TO DOMESTIC POWER BOOSTER CONTROLLER. REFER TO MECHANICAL DRAWINGS AND MANUFACTURERS INSTRUCTIONS FOR FURTHER DETAILS.



KEYPLAN

ISSUANCES

11.10.2020 BIDS & CONSTRUCTION
12.01.2020 ADDENDUM 002
12.09.2020 ADDENDUM 003
02.05.2021 BULLETIN 001
05.14.2021 BULLETIN 005

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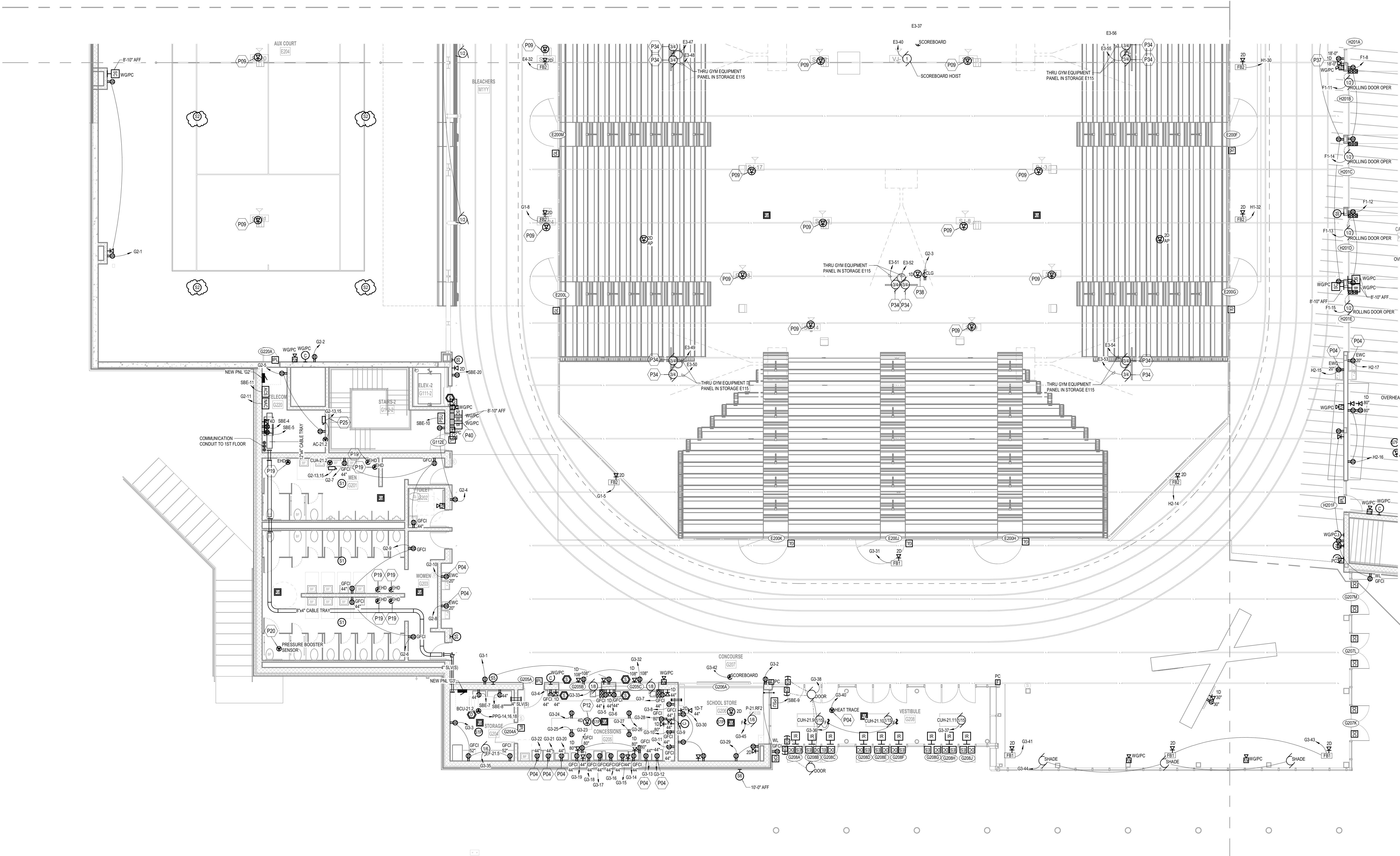
HS - UNIT 'F' SECOND FLOOR
POWER & COMMUNICATIONS
PLAN

E2.2F
HIGH SCHOOL

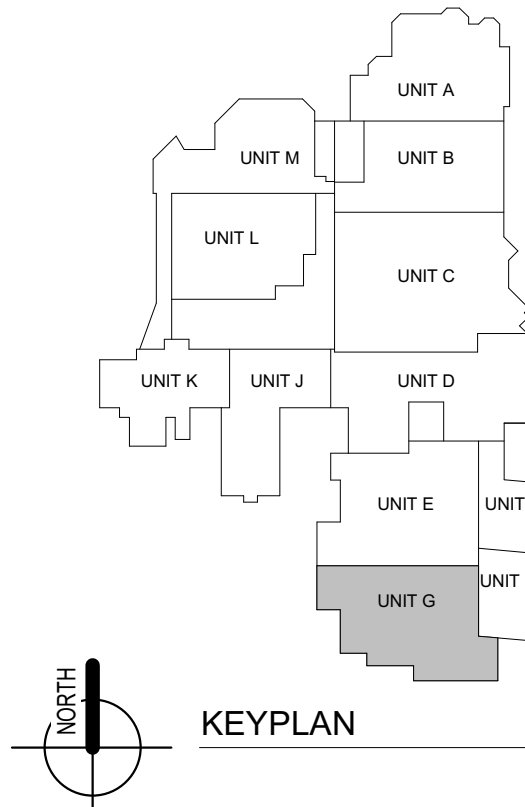
POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DESIGNATED 20A/1P BRANCH CIRCUIT WITH BREAKER LOCKING MECHANISM IN LOCAL PANELBOARD FOR DAMPERS. IN EACH AREA DAMPERS MAY BE GROUPED IN EACH CIRCUIT. TERMINATED W/ BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION FOR EACH SMALL < 10 HP MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES	
P04	FURNISH AND INSTALL GFCI BREAKER FOR CIRCUIT.
P09	E.C. SHALL FURNISH AND INSTALL ROUGH-IN FOR A/V WALLPLATE. REFER TO A/V DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISE/DIAGRAM. A/V WALLPLATE AND CABLING FURNISHED AND INSTALLED BY OTHERS.
P12	PROVIDE (4) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM. FROM SURFACE MOUNT BOX, PROVIDE (2) PATCH CORDS TO ACCESS POINT.
P19	FURNISH AND INSTALL ROUGH-IN FOR FUTURE ELECTRIC HAND DRYER. REFER TO ARCHITECTURAL PLANS FOR ELECTRIC HAND DRYER ROUGH-IN LOCATION AND STANDARD MOUNTING HEIGHT.
P20	ELECTRICAL CONTRACTOR SHALL WIRE PRESSURE BOOSTER SENSORS BACK TO DOMESTIC POWER BOOSTER CONTROLLER. REFER TO MECHANICAL DRAWINGS AND MANUFACTURER'S INSTRUCTIONS FOR FURTHER DETAILS.
P25	CIRCUIT SPLIT SYSTEM INDOOR UNIT FROM OUTDOOR UNIT. REFER TO MANUFACTURER'S INSTRUCTIONS FOR FURTHER DETAILS.
P34	E.C. SHALL PROVIDE AND INSTALL 4" SQUARE JUNCTION BOX WITHIN 5' OF WHICH LOCATION FOR TWIST LOCK RECEPTACLE AND COVER PROVIDED BY EQUIPMENT PROVIDER. (1) HOOK-UP REQUIRED PER DEVICE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.
P37	E.C. SHALL FURNISH AND INSTALL RECEPTACLE AND DATA OUTLET FOR PIXELOT CAMERA. COORDINATE LOCATION WITH OWNER BEFORE INSTALLATION. CAMERA FURNISHED AND INSTALLED BY OWNER.
P38	E.C. SHALL FURNISH AND INSTALL TWISTLOCK RECEPTACLE, TWISTLOCK PLUG AND DATA DROP FOR HOOR CAMERA/SPEAKER SYSTEM. E.C. SHALL FURNISH AND INSTALL BREAKER WIRE AND CONDUIT BACK TO WALL MOUNTED SYSTEM RACK. COORDINATE LOCATION OF POWER, DATA, AND SPEAKER CONDUIT WITH OWNER BEFORE INSTALLATION. HOOR CAMERA/SPEAKER SYSTEM FURNISHED BY OWNER.
P40	PROVIDE ROUGH-IN FOR BEACON LOCATIONS. SECURITY SYSTEM BEACONS PROVIDED BY OTHERS.



UNIT 'G' SECOND FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"



KEYPLAN

ISSUANCES

11.10.2020 BIDS & CONSTRUCTION
12.01.2020 ADDENDUM 002
12.09.2020 ADDENDUM 003
02.05.2021 BULLETIN 001
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06.18.2021 BULLETIN 007

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PLAN

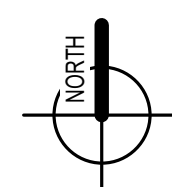
E2.2G
HIGH SCHOOL

HUDSONVILLE, MICHIGAN

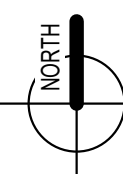
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.0

2. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E01.
3. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE WEATHERSTRIpping SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
4. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE-SMOKE DAMPERS. PROVIDE 160V POWER FROM THE MAIN PANEL TO EACH BRANCH CIRCUIT BREAKER. PROVIDE ONE 160V LINE IN MAIN PANEL BOARD FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUPED TOGETHER BY ZONE). PROVIDE ALARM SIGNAL FROM SMOKE SWITCH TO EACH CONTROL UNIT. PROVIDE ALARM SIGNAL FROM SMOKE SWITCH TO EACH FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER DETECT OR DETECTOR WITHIN 10 FEET. PROVIDE FIRE ALARM SIGNAL TO EACH FEET OF EACH DAMPER WHEN CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
5. PROVIDE FUSIBLE SINGLE-GANG BOXES AND RINGS FOR HVAC /TEMPERATURE CONTROL DISCHARGES, AT LEAST ONE PER OCCUPANCY ROOM OR SPACE.
6. PROVIDE TEMPORARY BACKFILL FOR EXPOSED PIPING. COORDINATE WITH MECHANICAL /TEMPERATURE CONTROL SYSTEM DESIGN OR CONTROLLANT UNIT. REFER TO MECHANICAL DRAWINGS FOR LOCATION OF TEMPERATURE CONTROL DISCHARGES. PROVIDE MECHANICAL /TEMPERATURE CONTROL CONTRACTOR'S SHOP DRAWINGS.
7. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR) ACCESSIBLE LOCATION FOR EACH SMALL (1-12HP) MECHANICAL AND/OR AIR CONDITIONING UNIT. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT NOT LIMITED TO: PACKAGED GAS HEATERS, PACKAGED GAS EXHAUST FANS, FAN COIL UNITS, CAMPBELL UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES	
P04	FURNISH AND INSTALL GFCI BREAKER FOR CIRCUIT.
P05	E.C. SHALL FURNISH AND INSTALL ROUGH-IN FOR AV WALLPLATE. REFER TO A/D DRAWINGS FOR CONDUIT AND WIRING. LOCATIONS FOR WALLPLATE, CONDUIT, WALLPLATE AND CABLING FURNISHED AND INSTALLED BY OTHERS.
P19	FURNISH AND INSTALL ROUGH-IN FOR FUTURE ELECTRIC HAND DRYER. REFER TO ARCHITECTURAL PLANS FOR ELECTRIC HAND DRYER ROUGH-IN LOCATION AND STAND MOUNTING HEIGHT.
P20	ELECTRICAL CONTRACTOR SHALL WIRE PRESSURE BOILER ROOMS BACK TO THE ELECTRICAL CONTROL ROOM CONTROLLER. REFER TO MECHANICAL DRAWINGS AND MANUFACTURERS INSTRUCTIONS FOR FURTHER DETAILS.
P37	E.C. SHALL FURNISH AND INSTALL RECEPTACLE AND DATA OUTLET FOR PIXELCAT LOCATION. COORDINATE LOCATION W/ OWNER BEFORE INSTALLATION. CAMERA FURNISHED AND INSTALLED BY OWNER.



UNIT 'H' SECOND FLOOR POWER & COMMUNICATIONS PLAN



KEYPLAN

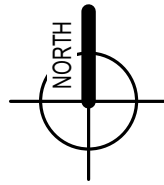
PROJECT NO. 5-5066

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APPENDIX D: CONSTRUCTION SPECS AND DRAWINGS - 116





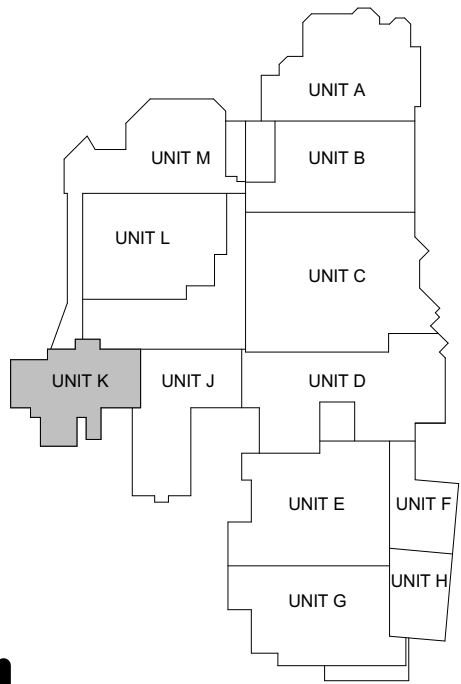
UNIT 'K' SECOND FLOOR POWER & COMMUNICATIONS PLAN

POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT WITH BREAKER LOCKING MECHANISM IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT). TERMINATE IN BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2\"/>
5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION FOR EACH SMALL < 1/2 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES

D12	REMOVE EXISTING FIRE ALARM SYSTEM DEVICE AND CABLEING. REMOVE COMPLETE BACK TO SOURCE. FIRE ALARM SYSTEM SHALL BE COMPLETELY REMOVED. A NEW FIRE ALARM SYSTEM IS TO BE INSTALLED. MAKE PROVISIONS TO CROSS TIE EXISTING FIRE ALARM TO NEW FIRE ALARM SYSTEM DURING THE PHASED CONSTRUCTION. COORDINATE CLOSELY WITH PHASING OF PROJECT.
P02	INSTALL IN EXISTING DEVICE BOX LOCATION.
P43	MODIFY AND EXTEND EXISTING MECHANICAL EQUIPMENT CIRCUIT TO NEW MECHANICAL EQUIPMENT.



KEYPLAN

ISSUANCES

11.10.2020	BIDS & CONSTRUCTION
12.09.2020	ADDENDUM 003
05.14.2021	BULLETIN 005

DRAWN	LCT
REVIEWED	MCK

PROJECT NO. 5-5066

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HS - UNIT 'K' SECOND FLOOR
POWER & COMMUNICATIONS
PLAN

E2.2K
HIGH SCHOOL

APPENDIX D: CONSTRUCTION SPECS AND DRAWINGS - 118

ELECTRICAL ABBREVIATIONS			
AFB	ABOVE FINISHED FLOOR	INTLK	INTERLOCK
BKR	BREAKER	JCT	JUNCTION
BOB	BOTTOM OF BOX	JB	JUNCTION BOX
BOS	BOTTOM OF STRUCTURE	KW	KILOWATT
BP	BREAKER PANEL	KWH	KILOWATT HOUR
BUD	BUILDING	KO	KNOCK OUT
CAP	CAPACITY	LBL	LABEL
CLG	CEILING	LT	LIGHT
CKT	CIRCUIT	LC	LIGHT CONTROL
CB	CIRCUIT BREAKER	LCM	LIGHTING CONTROL MODULE
C	CONDUIT	LON	LIGHTING CONTROL NARRATIVE
COM	COMMUNICATIONS	LTH	LIGHTING
CONN	CONNECTION	MAX	MAXIMUM
CONST	CONSTRUCTION	MCC	MOTOR CONTROL CENTER
CONTR	CONTRACT (OR)	MIN	MINIMUM
CLL	CONTRACT LIMIT LINE	NEC	NATIONAL ELECTRIC CODE
CT	CURRENT TRANSFORMER	NEG	NEGATIVE (-)
E.C.	ELECTRICAL CONTRACTOR	NC	NORMALLY CLOSED
EDM	ELECTRIC HAND DRIVER	NO	NORMALLY OPEN
ELEC	ELECTRIC (AL)	NA	NOT APPLICABLE
EWG	ELECTRIC WATER COOLER	NC	NOT IN CONTRACT
EM	EMERGENCY	NL	NIGHT LIGHT
ENT	ENTRANCE	PC	PHOTO CELL
EQ	EQUAL	POS	POSITIVE (+)
EQUIP	EQUIPMENT	PWR	POWER
EST	ESTIMATE	P&L	POWER & LIGHTING
EF	EXHAUST FAN	S	SURFACE
ETR	EXISTING TO REMAIN	S.B.O.	SUPPLIED BY OTHERS
EX	EXISTING	SP	SINGLE POLE
F	FLUSH	SPD	SURGE PROTECTION DEVICE
FA	FIRE ALARM	SPKR	SPEAKER
FSE	FOOD SERVICE EQUIPMENT	SPEC	SPECIFICATION
FP	FIRE PROOF / FIRE PROTECTION	SUB	SUBSTITUTE
FLR	FLOOR	SWBD	SWITCHBOARD
FLUOR	FLUORESCENT	TEL	TELEPHONE
GEN	GENERATOR	TS/TAT	THERMOSTAT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TXMR	TRANSFORMER
GRD	GROUND	UG	UNDERGROUND
HORIZ	HORIZONTAL	UL	UNDERWRITERS LABORATORIES
HTR	HEATER	UH	UNIT HEATER
HTG	HEATING	UNO	UNLESS NOTED OTHERWISE
HV	HEATING / VENTILATING	VERT	VERTICAL
HVAC	HEATING, VENTILATING, AIR CONDITIONING	W	WITH
HOA	HAND - OFF - AUTOMATIC	W/O	WITHOUT
HP	HEAT PUMP	WL	WET LOCATION
		WP	WEATHER PROOF

MAXIMUM CONDUCTOR LENGTHS FOR TYPICAL BRANCH CIRCUITS

FEET ONE-WAY BASED ON SINGLE PHASE,
20A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE	CONDUCTOR SIZE			
	#12 AWG	#10 AWG	#8 AWG	#6 AWG
120	60	100	150	245
208	100	170	265	425
277	135	230	355	565
480	240	400	615	980

FEET ONE-WAY BASED ON SINGLE PHASE,
30A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE	CONDUCTOR SIZE			
	#12 AWG	#10 AWG	#8 AWG	#6 AWG
120	60	100	150	245
208	100	170	265	425
277	135	230	355	565
480	240	400	615	980

FEET ONE-WAY BASED ON THREE PHASE,
20A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE	CONDUCTOR SIZE			
	#12 AWG	#10 AWG	#8 AWG	#6 AWG
120	60	100	150	245
208	100	170	265	425
277	135	230	355	565
480	240	400	615	980

FEET ONE-WAY BASED ON THREE PHASE,
30A CIRCUIT, 75% LOAD, 100% P.F., IN STEEL
CONDUIT, 3% VOLTAGE DROP

CIRCUIT VOLTAGE	CONDUCTOR SIZE			
	#12 AWG	#10 AWG	#8 AWG	#6 AWG
120	60	100	150	245
208	100	170	265	425
277	135	230	355	565
480	240	400	615	980

COMMUNICATIONS SYMBOL LEGEND	
	COMMUNICATIONS OUTLET, ONE DATA ACTIVATION
	COMMUNICATIONS OUTLET, CEILING-MOUNTED
	COMMUNICATIONS OUTLET, FLOOR-MOUNTED
	CEILING-MOUNTED VIDEO PROJECTOR
	COMMUNICATIONS EQUIPMENT RACK, FLOOR-MOUNTED
	COMMUNICATIONS EQUIPMENT RACK, WALL-MOUNTED
	CONDUIT SLEEVE FOR COMMUNICATIONS CABLING, 2" TYPE UNLESS NOTED OTHERWISE
	LOUDSPEAKER, CEILING-MOUNTED, TYPE 1 (S1 = ANALOG, S1P = IP)
	LOUDSPEAKER, WALL-MOUNTED, TYPE 1 (S1 = ANALOG, S1P = IP)
	INTERCOM SYSTEM CALL STATION BUTTON
	VOLUME CONTROL FOR AUDIO SYSTEM, PAGING, OR INTERCOM LOUDSPEAKERS
	SECONDARY CLOCK, CEILING-MOUNTED, TYPE 1
	SECONDARY CLOCK, WALL-MOUNTED, TYPE 1
	SIGNALING BELL
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

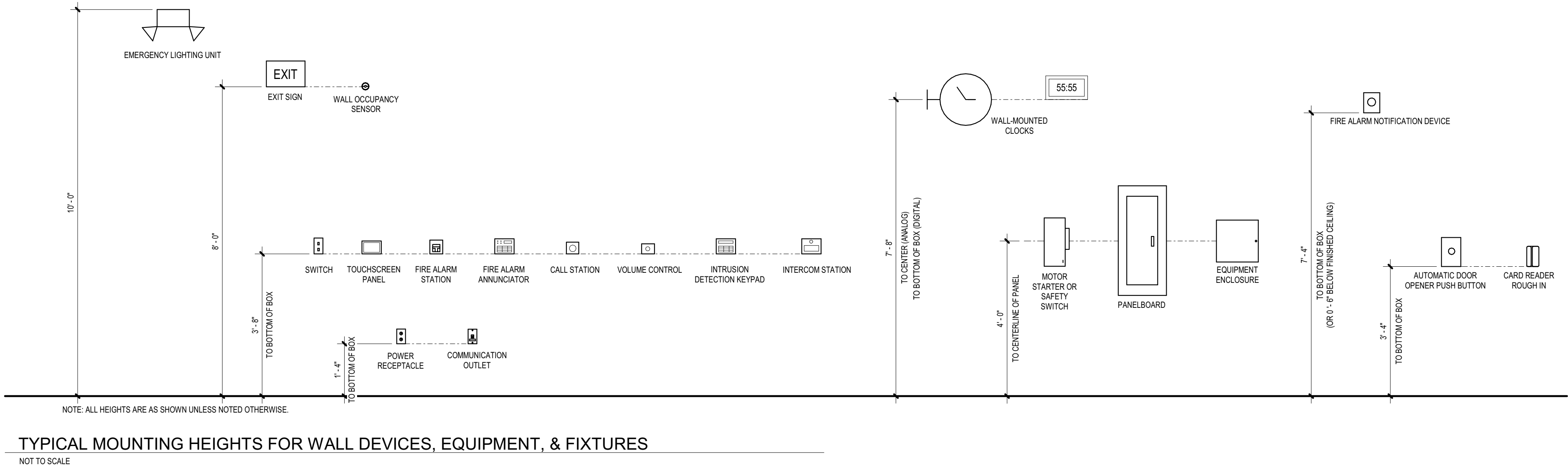
ELECTRONIC SAFETY / SECURITY SYMBOL LEGEND	
	DOOR CONTACT
	ELECTRONIC LATCH
	ELECTRONIC STRIKE
	PNE ELECTRONIC LOCK
	INTRUSION DETECTION KEYPAD
	INTERCOM STATION
	WALL-MOUNTED SURVEILLANCE CAMERA COMMUNICATIONS ROUGH-IN
	CEILING-MOUNTED SURVEILLANCE CAMERA COMMUNICATIONS ROUGH-IN
	WALL-MOUNTED SURVEILLANCE CAMERA, TYPE 1
	CEILING-MOUNTED SURVEILLANCE CAMERA, TYPE 1
	WALL-MOUNTED INFRARED MOTION DETECTOR
	CEILING-MOUNTED INFRARED MOTION DETECTOR
	WALL-MOUNTED ULTRASONIC MOTION DETECTOR
	CEILING-MOUNTED ULTRASONIC MOTION DETECTOR
	CARD READER
	ACCESS CONTROL DOOR TAG, REFER TO HARDWARE SCHEDULE(S) IN SPECIFICATION 08 11 00 AND/OR 28 13 00 FOR DETAILS
	ACCESS CONTROL SYSTEM EQUIPMENT
	INTRUSION DETECTION SYSTEM EQUIPMENT
	POWER SUPPLY UNIT
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

POWER SYMBOL LEGEND	
	THREE PHASE MOTOR CONNECTION, 5 HORSE POWER
	SINGLE PHASE MOTOR CONNECTION, 1/2 HORSE POWER
	SAFETY SWITCH DISCONNECTING MEANS, NOT FUSIBLE
	SAFETY SWITCH DISCONNECTING MEANS, FUSIBLE
	COMBINATION MOTOR STARTER AND FUSIBLE DISCONNECTING MEANS
	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECTING MEANS
	MOTOR STARTER
	BOX-COVER FUSIBLE DISCONNECT SWITCH
	MANUAL MOTOR CONTROLLER
	POWER SWITCH, REFER TO LIGHTING SYMBOL LEGEND FOR SIMILAR SWITCH TYPES
	DIRECT ELECTRICAL CONNECTION
	SINGLE RECEPTACLE
	SINGLE RECEPTACLE, FLOOR-MOUNTED
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, CEILING-MOUNTED
	DUPLEX RECEPTACLE, FLOOR-MOUNTED
	DUPLEX STANDBY POWER RECEPTACLE
	DUPLEX SPLIT WIRED RECEPTACLE
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	QUADRUPLX RECEPTACLE
	QUADRUPLX RECEPTACLE, CEILING-MOUNTED
	QUADRUPLX RECEPTACLE, FLOOR-MOUNTED
	MULTI-PHASE RECEPTACLE, SEE PLAN FOR TYPE
	MULTI-PHASE RECEPTACLE, FLOOR-MOUNTED
	SURFACE RACEWAY SYSTEM
	AUTOMATIC TRANSFER SWITCH
	SWITCHBOARD
	PANLEBOARD
	TRANSFORMER
	MOTOR CONTROL CENTER
	EMERGENCY STOP STATION, REFER TO DETAIL FOR REQUIREMENTS
	AUTOMATIC DOOR OPERATOR PUSH BUTTON
	ON/OFF PUSH BUTTON
	THREE-FUNCTION PUSH BUTTON
	FLOORBOX, TYPE 1
	JUNCTION BOX
	METER
	THERMOSTAT ROUGH-IN
	RELAY
	ENCLOSED CONTROL CONTACTOR
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

LIGHTING SYMBOL LEGEND	
	SINGLE POLE LIGHT SWITCH
	DOUBLE POLE LIGHT SWITCH
	THREE-WAY LIGHT SWITCH
	FOUR-WAY LIGHT SWITCH
	SINGLE POLE LIGHT SWITCH WITH INTEGRAL OCCUPANCY SENSOR
	OCCUPANCY SENSOR DIMMER
	WALL BOX DIMMER SWITCH
	THREE-WAY DIMMER SWITCH
	ELECTRONIC INTERVAL TIMER SWITCH
	LIGHT SWITCH WITH PILOT LIGHT
	LIGHTING CONTROL SWITCH, REFER TO LIGHTING CONTROL SWITCH SCHEDULE AND SPECIFICATIONS FOR DETAILS
	DOUBLE THROW (MAINTAINED) LIGHT SWITCH
	KEY-OPERATED LIGHT SWITCH, (SUFFIX DESIGNATION) (BLANK: SINGLE POLE, 2 DOUBLE POLE, 3 THREE-WAY, 4 FOUR-WAY)
	LOCKING SWITCH, (SUFFIX DESIGNATION) (BLANK: SINGLE POLE, 2 DOUBLE POLE, 3 THREE-WAY, 4 FOUR-WAY)
	TOUCHSCREEN PANEL
	CIRCUIT NUMBER FOR LIGHT FIXTURES WITHIN INDICATED SPACE
	WALL-MOUNTED LIGHTING FIXTURE, TYPE 'X'
	RECESSED LIGHTING FIXTURE, TYPE 'X'
	SURFACE-MOUNTED LIGHTING FIXTURE, TYPE 'X'
	TRACK LIGHTING
	SINGLE FACE EXIT SIGN, TYPE "X1" IN SCHEDULE UNLESS OTHERWISE NOTED. SHADING INDICATES FACE ORIENTATION
	DOUBLE FACE EXIT SIGN, TYPE "X2" IN SCHEDULE UNLESS OTHERWISE NOTED. SHADING INDICATES FACE ORIENTATION
	WALL-MOUNTED EXIT SIGN
	EMERGENCY LIGHT FIXTURE DESIGNATION
	EMERGENCY LIGHTING AUTOMATIC LOAD CONTROL RELAY
	LIGHTING CONTROL RELAY
	LIGHTING CONTROL ENCLOSED CONTACTOR
	TIME SWITCH
	LIGHTING CONTROL MODULE
	EMERGENCY LIGHTING INVERTER, TYPE 1
	WALL-MOUNTED OCCUPANCY SENSOR
	CEILING-MOUNTED OCCUPANCY SENSOR
	WALL-MOUNTED PHOTOCELL FOR ON/OFF CONTROL
	CEILING-MOUNTED PHOTOCELL FOR ON/OFF CONTROL
	WALL-MOUNTED PHOTOSENSOR FOR DAYLIGHT HARVESTING DIMMING CONTROL
	CEILING-MOUNTED PHOTOSENSOR FOR DAYLIGHT HARVESTING DIMMING CONTROL
	POLE-MOUNTED SITE/AREA FIXTURE
	SELF-CONTAINED EMERGENCY LIGHTING UNIT
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

FIRE ALARM SYMBOL LEGEND	
	MANUAL PULL STATION
	AUDIBLE NOTIFICATION APPLIANCE, WALL-MOUNTED
	VISUAL NOTIFICATION APPLIANCE, WALL-MOUNTED
	AUDIBLE/VISUAL NOTIFICATION APPLIANCE, WALL-MOUNTED
	AUDIBLE NOTIFICATION APPLIANCE, CEILING-MOUNTED
	AUDIBLE/VISUAL NOTIFICATION APPLIANCE, CEILING-MOUNTED
	VISUAL NOTIFICATION APPLIANCE, CEILING-MOUNTED
	WHERE "WGPC" IS NOTED, PROVIDE LISTED WIRE GUARD OR PROTECTIVE POLYCARBONATE COVER FOR NOTIFICATION DEVICE
	WHERE "WL" IS NOTED, PROVIDE LISTED WET LOCATION NOTIFICATION DEVICE, SUITABLE FOR INDOOR OR OUTDOOR USE
	SMOKE DETECTOR
	HEAT DETECTOR
	DUCT SMOKE DETECTOR
	SMOKE DAMPER OPERATOR MOTOR
	FIRE PROTECTION FLOW SWITCH
	FIRE PROTECTION TAMPER SWITCH
	ELECTROMAGNETIC DOOR HOLD-OPEN DEVICE
	ADDRESSABLE RELAY FOR FIRE ALARM CONTROL
	PRESSURE SWITCH
	CARBON MONOXIDE DETECTOR
	NOTIFICATION APPLIANCE CONTROL PANEL
	FIRE ALARM REMOTE ANNUNCIATOR
	FIRE ALARM CONTROL PANEL
	KEYED TEST SWITCH AND REMOTE INDICATOR FOR DUCT SMOKE DETECTOR
	FIRE PROTECTION OR ALARM BELL
NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED	

ELECTRICAL GENERAL NOTES	
1.	ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE AS AMENDED AND ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION WHERE THE WORK IS PERFORMED.
2.	ALL "LOW-VOLTAGE" CONTROLS, COMMUNICATIONS, AND SAFETY/SECURITY CABLING MAY BE INSTALLED WITHOUT CONDUIT, RACEWAY, OR CABLE TRAY ONLY WHERE CONCEALED ABOVE A SUSPENDED CEILING SYSTEM AND ACCESSIBLE FOR FUTURE MAINTENANCE. OTHERWISE, ALL CABLING (INCLUDING BUT NOT LIMITED TO CABLES ASSOCIATED WITH SYSTEMS SUCH AS ARCHITECTURAL EQUIPMENT, BUILDING ENERGY MANAGEMENT, TEMPERATURE CONTROLS, LIGHTING CONTROL, S.S. COMMUNICATIONS NETWORKS, TELEPHONE, AUDIO-VIDEO, INTERCOM, PAGING, CLOCK, SURVEILLANCE, ACCESS CONTROL, FIRE ALARM, ETC.) SHALL BE INSTALLED IN AN APPROVED CONDUIT, RACEWAY SYSTEM, AND/OR CABLE TRAY UNLESS OTHERWISE NOTED. IN EXPOSED STRUCTURE CEILING AREAS, CONCEALED INSTALLATION OF CABLES IN RACEWAYS SHALL BE REQUIRED FOR AESTHETIC REASONS. REFER TO REFERENCED CEILING PLANS FOR LOCATIONS. THIS APPLIES TO ALL TRADES AND WORK CATEGORIES. EXCEPTIONS: A. DEDICATED MECHANICAL AND/OR ELECTRICAL ROOMS ABOVE 6'-0" AFF B. DEDICATED TELECOMMUNICATIONS ROOMS
3.	"LOW-VOLTAGE" CONTROLS, COMMUNICATIONS, AND SAFETY/SECURITY CABLING SHALL NOT BE PAINTED. PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY PROTECTION OF ANY EXISTING CABLING PRIOR TO PAINTING EXISTING AREAS. CONTRACTORS INSTALLING CABLING WHERE APPROVED FOR EXPOSED INSTALLATION SHALL INSTALL CABLES AFTER PAINTING HAS BEEN COMPLETED OR PROVIDE TEMPORARY PROTECTION OF CABLES UNTIL PAINTING HAS BEEN COMPLETED. PAINTED CABLES SHALL BE REPLACED AT THE EXPENSE OF THE NEGLIGENT CONTRACTOR.
4.	METAL CLAD CABLE MAY BE USED FOR FIXTURE WHIPS IN LENGTHS OF 6 FEET OR LESS ABOVE AN ACCESSIBLE SUSPENDED CEILING SYSTEM ONLY. OTHERWISE, METAL CLAD OR OTHER FLEXIBLE CABLE TYPES SHALL NOT BE USED UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER. IT IS THE INTENT OF THESE CONTRACT DOCUMENTS THAT ALL INSTALLED BRANCH CIRCUITS CONSIST OF SEPARATE RACEWAY AND CONDUCTORS ALLOWING REMOVAL AND REPLACEMENT OF WIRING AS REQUIRED FOR FUTURE UPGRADES. REFER TO SPECIFICATIONS FOR EXCEPTIONS.
5.	CIRCUIT WIRING FOR ARTICLE 700 EMERGENCY SYSTEMS AND ARTICLE 708 CRITICAL OPERATIONS POWER SYSTEMS SHALL BE INSTALLED IN SEPARATE CONDUITS/RACEWAYS AND BE KEPT ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND EQUIPMENT PER NEC REQUIREMENTS.
6.	ALL FEEDERS AND BRANCH CIRCUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR SIZED ACCORDING TO THE NEC RACEWAYS INCLUDING CONDUITS, BOXES, WIREWAYS, ETC. SHALL NOT BE CONSIDERED AN ACCEPTABLE GROUND.
7.	CONDUITS AND CABLING SHALL NOT BE INSTALLED WITHIN 4" OF ROOF DECK, EXCEPT AS NECESSARY TO SERVE ROOF-MOUNTED ITEMS AND ONLY WHEN THE CONDUIT OR CABLE IS ROUTED VERTICALLY TO SUCH EQUIPMENT FROM BELOW.
8.	SUPPLEMENTAL METAL FRAMING SHALL BE PROVIDED FOR SUSPENSION POINTS OF ALL ITEMS LOCATED BETWEEN OVERHEAD STRUCTURAL MEMBERS, TRUSSES, BEAMS, ETC. IN DEPENDABLE STRUCTURE CEILING AREAS. METAL FRAMING SHALL SPAN ACROSS THE TOP CHORD OR FLANGE OF THE STRUCTURAL MEMBERS FOR BOTH STRUCTURAL AND EQUIPMENT PER NEC REQUIREMENTS. SPECIFIC EXCEPTIONS SHALL BE COORDINATED IN WRITING WITH THE ARCHITECT/ENGINEER.
9.	CONDUIT INSTALLED WITHIN INACCESSIBLE CONSTRUCTION SHALL BE 3/4" MINIMUM SIZE.
10.	FEEDERS SHOWN ON DRAWINGS ARE SCHEMATIC ONLY. CONDUIT RUNS SHALL COMPLY WITH CONDUIT SPECIFICATIONS AND CONTAIN BENDS THAT ARE NO GREATER THAN 90 DEGREES. CONDUITS INSTALLED ABOVE GRADE SHALL BE RUN PARALLEL TO, OR PERPENDICULAR WITH, BUILDING STEEL AND/OR ARCHITECTURAL LINES.
11.	CONTRACTOR(S) SHALL VERIFY COLOR/FINISH OF WIRING DEVICES, DEVICE FACE PLATES, SURFACE RACEWAY SYSTEMS, AND/OR MULTI-OUTLET ASSEMBLIES WITH ARCHITECT/ENGINEER IF NOT EXPLICITLY SPECIFIED.
12.	ELECTRICAL CONTRACTOR SHALL REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ADDITIONAL LIGHTING FIXTURE INFORMATION AND MOUNTING LOCATIONS.
13.	ELECTRICAL CONTRACTOR SHALL ADJUST LIGHTING FIXTURE LOCATIONS IN MECHANICAL ROOMS TO ACCOMMODATE MECHANICAL EQUIPMENT AND FIELD CONDITIONS.
14.	CONTRACTOR(S) SHALL BE RESPONSIBLE TO REVIEW INTERIOR ELEVATION SHEETS FOR PLACEMENT OF DEVICE BOXES. COORDINATE LOCATIONS SO THAT NO DEVICES ARE INSTALLED BEHIND CASEWORK, MILLWORK, VISUAL DISPLAY BOARDS, MIRRORS, CUSTOM GRAPHICS, SIGNAGE, ETC.
15.	ELECTRICAL CONTRACTOR SHALL REVIEW TOILET EQUIPMENT SHOP DRAWINGS AND ARCHITECTURAL DETAIL ELEVATIONS FOR CORRECT DEVICE BOX ROUGH-IN LOCATION OF HAND DRYERS.
16.	ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PLUMBING CONTRACTOR AND THE ELECTRIC WATER COOLER (BOTTLE FILLER) SHOP DRAWINGS FOR MOUNTING HEIGHT AND CONNECTION METHOD OF PLUMBING EQUIPMENT POWER CONNECTIONS. READILY ACCESSIBLE GFCI PROTECTION SHALL BE PROVIDED FOR THE BRANCH CIRCUITS SUPPLYING ALL SUCH UNITS PER NEC REQUIREMENTS.
17.	REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR DETAILED INFORMATION REGARDING EQUIPMENT AND CONTROL. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING AND PROVIDING ITEMS AS SPECIFICALLY LISTED AND ASSIGNED ON MECHANICAL EQUIPMENT SCHEDULE SUCH AS DISCONNECT SWITCHES, VARIABLE FREQUENCY DRIVES, STARTERS, TIMERS, SWITCHES, ETC.
18.	ELECTRICAL CONTRACTOR SHALL CONFIRM THE LOCATION OF THE EXHAUST FANS LISTED IN THE MECHANICAL EQUIPMENT SCHEDULES BY REFERRING TO MECHANICAL/HVAC PLANS.
19.	REFER TO ROOF PLANS FOR EXACT LOCATIONS OF ROOF-TOP MECHANICAL EQUIPMENT.
20.	CABINET HEATERS MAY HAVE LINE VOLTAGE THERMOSTATS SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. REFER TO MECHANICAL EQUIPMENT SCHEDULE.
21.	DIVISION 26 CONTRACTOR SHALL PROVIDE CONDUIT SLEEVES WITH APPROPRIATE BUSHINGS FOR CONTROLS AND ELECTRONIC SAFETY/SECURITY CABLING THROUGH WALLS AND FLOORS. SLEEVE SIZES SHALL BE COORDINATED WITH CABLING REQUIREMENTS.
22.	SECTION 27 05 26 CONTRACTOR SHALL PROVIDE CONDUIT SLEEVES WITH APPROPRIATE BUSHINGS FOR COMMUNICATIONS CABLING THROUGH WALLS AND FLOORS. SLEEVE SIZE SHALL BE 2" MIN. UNLESS NOTED OTHERWISE.
23.	EXISTING BUILDING SYSTEMS CABLING SHALL BE SLEEVED WHERE CABLES PASS THROUGH ANY NEW WALLS THAT ARE TO BE CONSTRUCTED. PROVIDE SPLIT SLEEVES IF CABLING CANNOT BE DISCONNECTED. FIELD VERIFY QUANTITIES AND LOCATIONS. COORDINATE USE OF ALLOWANCES WITH PROJECT ADMINISTRATIVE REQUIREMENTS. NO CABLING SHALL PASS THROUGH OR OVER THE TOP OF NEW WALL CONSTRUCTION WITHOUT THE USE OF A SLEEVE. DIVISION 26 CONTRACTOR SHALL PROVIDE SLEEVES (UNLESS OTHERWISE ASSIGNED) AND COORDINATE WITH ARCHITECTURAL TRADES DURING THE WALL CONSTRUCTION PROCESS.
24.	PROVIDE DIRECT CONNECTIONS FROM LOCAL RECEPTACLE CIRCUIT TO ACCESS CONTROL SYSTEM AND DOOR HARDWARE POWER SUPPLIES WHERE REQUIRED FOR DOOR LOCK DEVICES, CONTROLLERS, ETC. REFER TO DOOR HARDWARE SCHEDULE AND ACCESS CONTROL SYSTEM SCHEDULE IN RESPECTIVE SPECIFICATIONS FOR QUANTITIES AND LOCATIONS.





POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET 03.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20AMP BRANCH CIRCUIT WITH BREAKER LOCKING MECHANISM IN LOCAL PANELBOARD FOR DAMPERS. IN EACH AREA DAMPERS MAY BE GROUPED ON EACH CIRCUIT, TERMINATED W/ BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM OUT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE GANG BOXES IN WALLS FOR HVAC TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR) ACCESSIBLE LOCATION FOR EACH SMALL < 1/2 HP MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR/LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES	
P04	FURNISH AND INSTALL GFCI BREAKER FOR CIRCUIT.
P06	PROVIDE ACCESSIBLE RECEPTACLE UNDER COUNTER ADJACENT TO DISHWASHER FOR DISHWASHER POWER.
P07	PROVIDE CEILING MOUNTED RECEPTACLE ABOVE PROJECTOR. PROJECTOR AND PROJECTOR MOUNTING PLATE PROVIDED AND INSTALLED BY OTHERS. COORDINATE LOCATION WITH PROJECTOR BEFORE INSTALLATION.
P11	PROVIDE (6) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM FROM SURFACE MOUNT BOX ABOVE CEILING. PROVIDE (2) PATCH CORDS TO ACCESS POINT AND PROVIDE (2) PATCH CORDS TO PROJECTOR.
P12	PROVIDE (4) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM FROM SURFACE MOUNT BOX ABOVE CEILING. PROVIDE (2) PATCH CORDS TO ACCESS POINT.
P14	PROVIDE INTERCOM ENTRY SYSTEM MASTER STATION. COORDINATE EXACT LOCATION WITH OWNER BEFORE INSTALLATION. REFER TO SPECIFICATION 28 15 23 FOR FURTHER DETAILS.
P15	PROVIDE INTERCOM ENTRY SYSTEM SUBMASTER STATION. COORDINATE EXACT LOCATION WITH OWNER BEFORE INSTALLATION. REFER TO SPECIFICATION 28 15 23 FOR FURTHER DETAILS.
P27	DESK MOUNT BUTTON FURNISHED UNDER DOOR HARDWARE SPECIFICATION 08 71 05 AND INSTALL BY ELECTRIC CONTRACTOR. COORDINATE EXACT LOCATION WITH OWNER BEFORE INSTALLATION.
P28	LOCKDOWN PUSHBUTTON FURNISHED UNDER ACCESS CONTROL HARDWARE SPECIFICATION 28 10 00 AND INSTALLED BY ELECTRICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH OWNER BEFORE INSTALLATION.
P31	ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ROUGHING AND/OR COMMUNICATIONS PATHWAYS FOR CLASSROOM AV SYSTEM SPEAKERS (SHOWN AS S). CABLING IN EXPOSED CEILING LOCATIONS SHALL BE CONCEALED IN CONDUIT. COORDINATE EXACT SPEAKER LOCATION WITH OWNER BEFORE INSTALLATION. CLASSROOM AV SPEAKERS FURNISHED AND INSTALLED BY OWNER. COORDINATE BOX AND CONDUIT SIZING WITH CLASSROOM AUDIO SYSTEM WITH OWNER.

ISSUANCES	
11.10.2020	BIDS & CONSTRUCTION
12.01.2020	ADDENDUM 002
02.05.2021	BULLETIN 001

DRAWN	LCT
REVIEWED	MCK

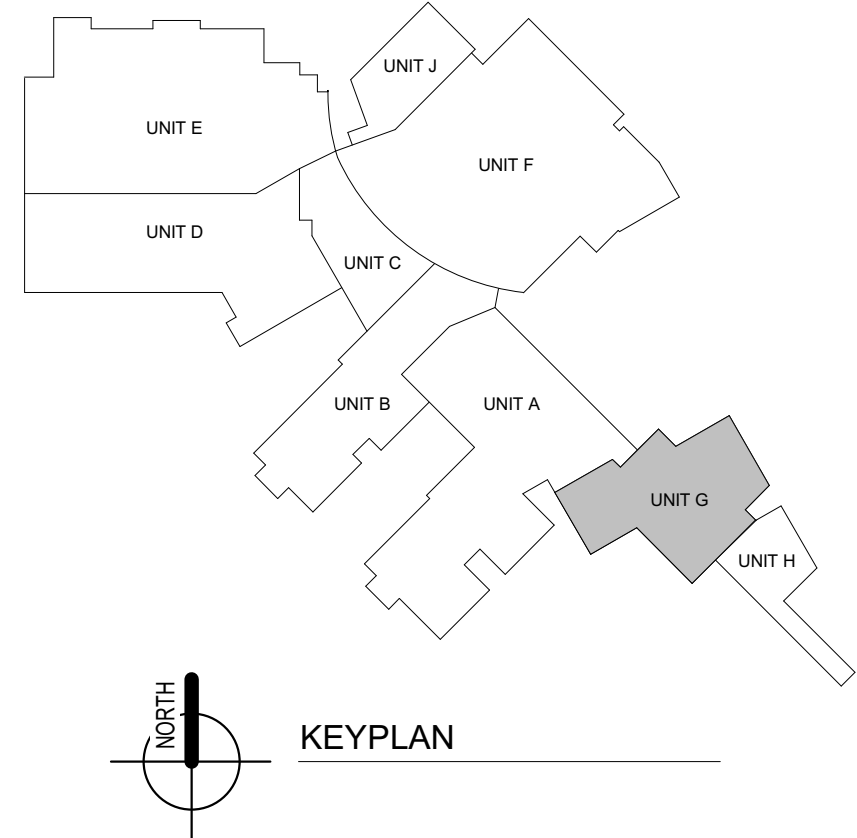
PROJECT NO. 5-5066

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FC - UNIT 'G' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

E2.1G

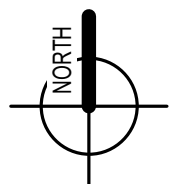
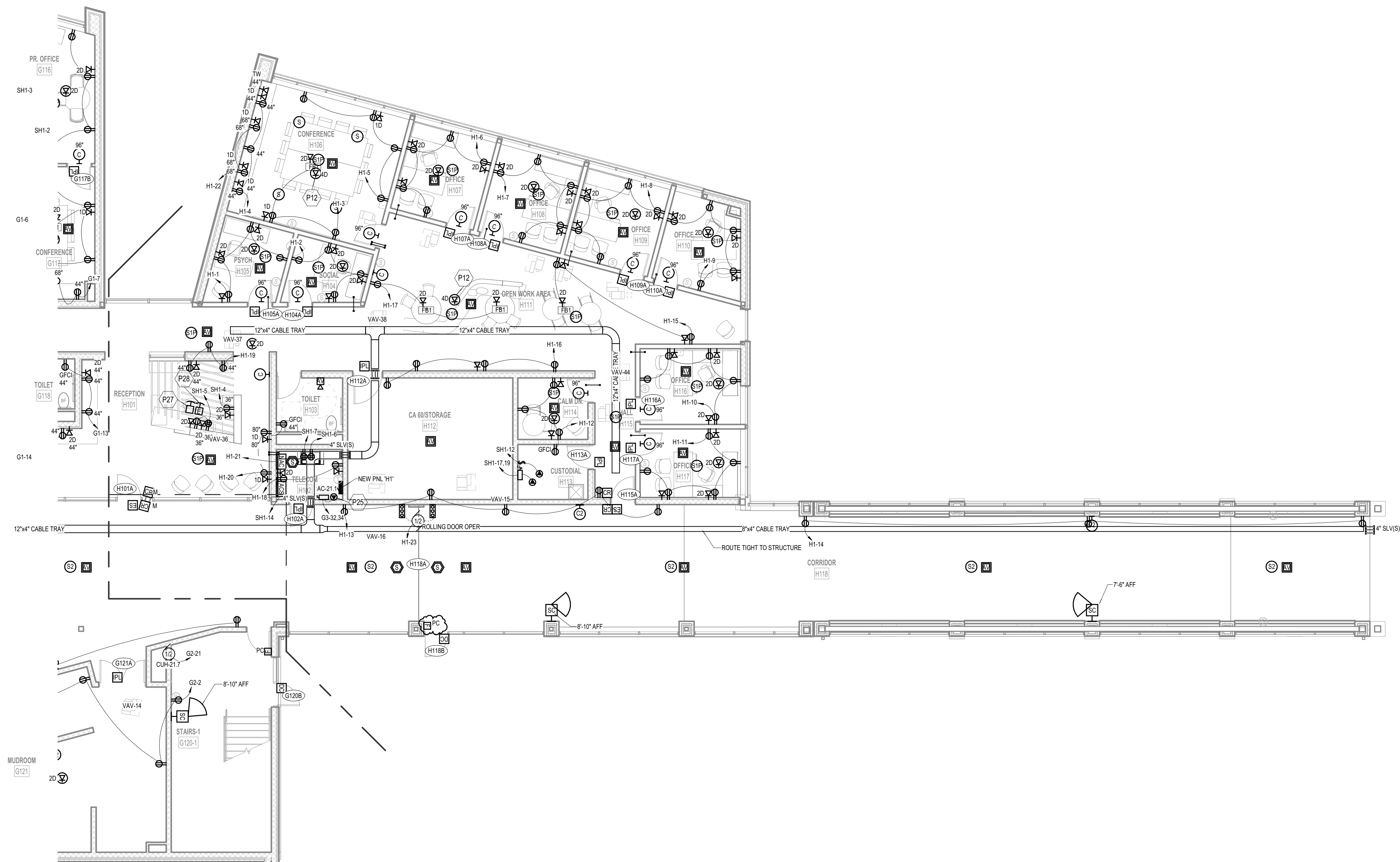


POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE-SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS. IN EACH AREA DAMPERS MAY BE GROUPED ON EACH CIRCUIT, TERMINATED W/ BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPIABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROL CONTRACTORS SHOP DRAWINGS.
5. PROVIDE BOX COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 12 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

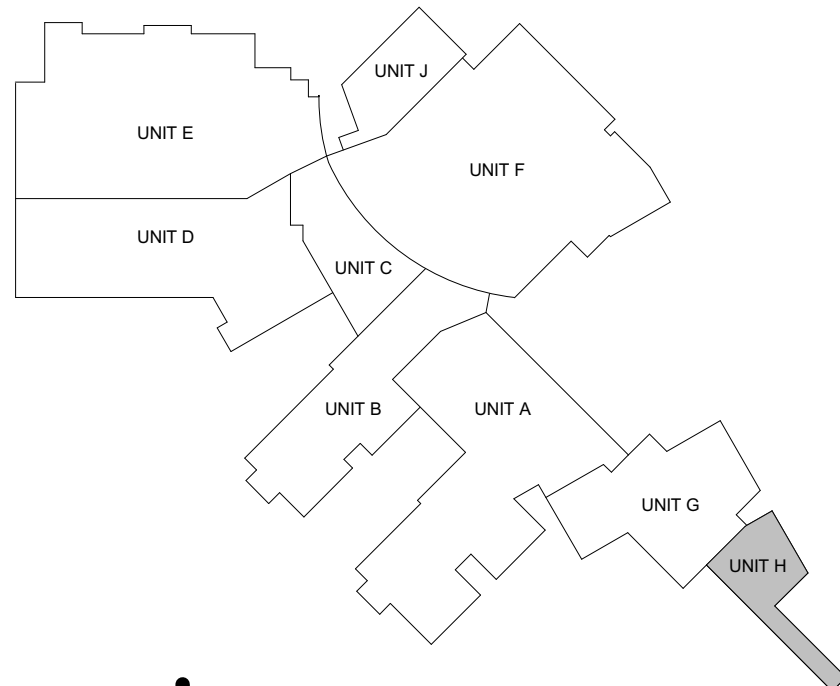
ELECTRICAL KEYNOTES

- | | |
|-----|---|
| P12 | PROVIDE (4) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM FROM SURFACE MOUNT BOX. PROVIDE (2) PATCH CORDS TO ACCESS POINT. |
| P25 | CIRCUIT SPLIT SYSTEM INDOOR UNIT FROM OUTDOOR UNIT. REFER TO MANUFACTURER'S INSTRUCTIONS FOR FURTHER DETAILS. |
| P27 | DESK MOUNT BUTTON FURNISHED UNDER DOOR HARDWARE SPECIFICATION 08 71 00 AND INSTALL BY ELECTRIC CONTRACTOR. COORDINATE EXACT LOCATION WITH OWNER BEFORE INSTALLATION. |
| P28 | LOCKDOWN PUSH-BUTTON FURNISHED UNDER ACCESS CONTROL HARDWARE SPECIFICATION 28 10 00 AND INSTALL BY ELECTRICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH OWNER BEFORE INSTALLATION. |



UNIT 'H' FIRST FLOOR POWER & COMMUNICATIONS PLAN

1/8" = 1'-0"



ISSUANCES

11.10.2020 BIDS & CONSTRUCTION
12.09.2020 ADDENDUM 003
02.05.2021 BULLETIN 001
04.07.2021 BULLETIN 003
12.20.2021 BULLETIN 012

DRAWN LCT
REVIEWED MCK

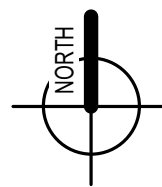
PROJECT NO. 5-5066

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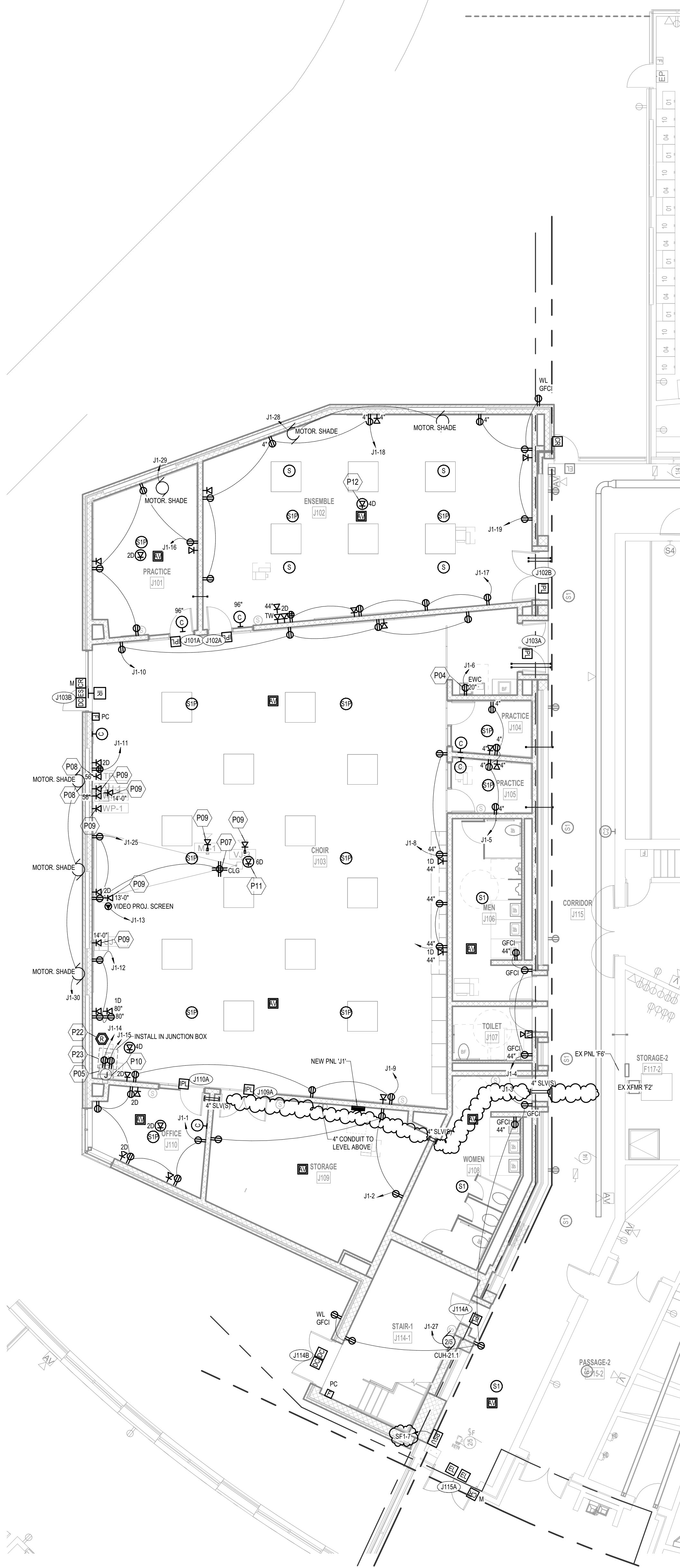
FC - UNIT 'H' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

E2.1H



UNIT 'J' FIRST FLOOR POWER & COMMUNICATIONS PLAN

1/8" = 1'-0"

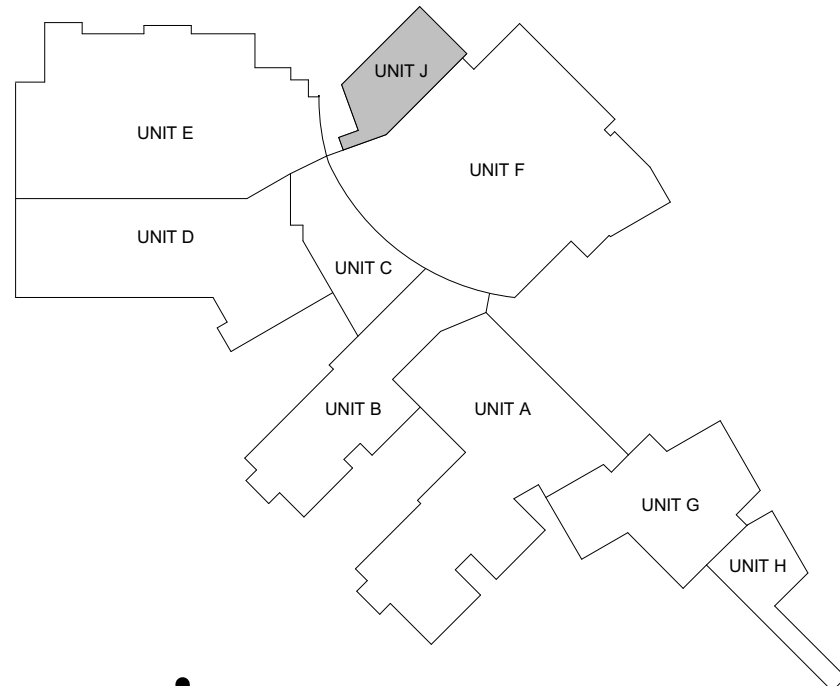


POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET ED-01.
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20A/1P BRANCH CIRCUIT WITH BREAKER LOCATING MECHANISM IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA. DAMPERS MAY BE GROUPED ON EACH CIRCUIT. TERMINATED W/ BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC TEMPERATURE CONTROL DEVICES, AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (1-10 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES

P04	FURNISH AND INSTALL GFCI BREAKER FOR CIRCUIT.
P05	AUDIOVISUAL EQUIPMENT RACK PROVIDED AND INSTALLED BY OTHERS.
P07	PROVIDE CEILING MOUNTED RECEPTACLE ABOVE PROJECTOR. PROJECTOR AND PROJECTOR MOUNTING PLATE PROVIDED AND INSTALLED BY OTHERS. COORDINATE LOCATION WITH PROJECTOR BEFORE INSTALLATION.
P08	E.C. SHALL FURNISH AND INSTALL ROUGH-IN FOR AV TOUCHSCREEN. REFER TO AV DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM. TOUCHSCREEN FURNISHED AND INSTALLED BY OTHERS.
P09	E.C. SHALL FURNISH AND INSTALL ROUGH-IN FOR AV WALLPLATE. REFER TO AV DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM. AV WALLPLATE AND CABLING FURNISHED AND INSTALLED BY OTHERS.
P10	E.C. SHALL INSTALL SURFACE JUNCTION BOX FOR AV RACK LOCATION. REFER TO AV DRAWINGS FOR CONDUIT AND BOX SIZING, LOCATION, AND RISER DIAGRAM.
P11	PROVIDE (6) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM FROM SURFACE MOUNT BOX ABOVE CEILING. PROVIDE (2) PATCH CORDS TO ACCESS POINT AND PROVIDE (2) PATCH CORDS TO PROJECTOR.
P12	PROVIDE (4) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM FROM SURFACE MOUNT BOX. PROVIDE (2) PATCH CORDS TO ACCESS POINT.
P22	PROVIDE FIRE ALARM CONTACT CLOSURE INTERFACE TO INTERFACE WITH AV SYSTEM. AV SYSTEM SHALL TURN OFF DURING FIRE ALARM.
P23	PROVIDE OVERRIDE SIGNAL TO AV SYSTEM FROM INTERCOM SYSTEM. AV SYSTEM SHALL MUTE WHEN INTERCOM SYSTEM IS BROADCASTING MESSAGE.



KEYPLAN

ISSUANCES

11.10.2020 BIDS & CONSTRUCTION
02.05.2021 BULLETIN 001
12.20.2021 BULLETIN 012

DRAWN LCT
REVIEWED MCK

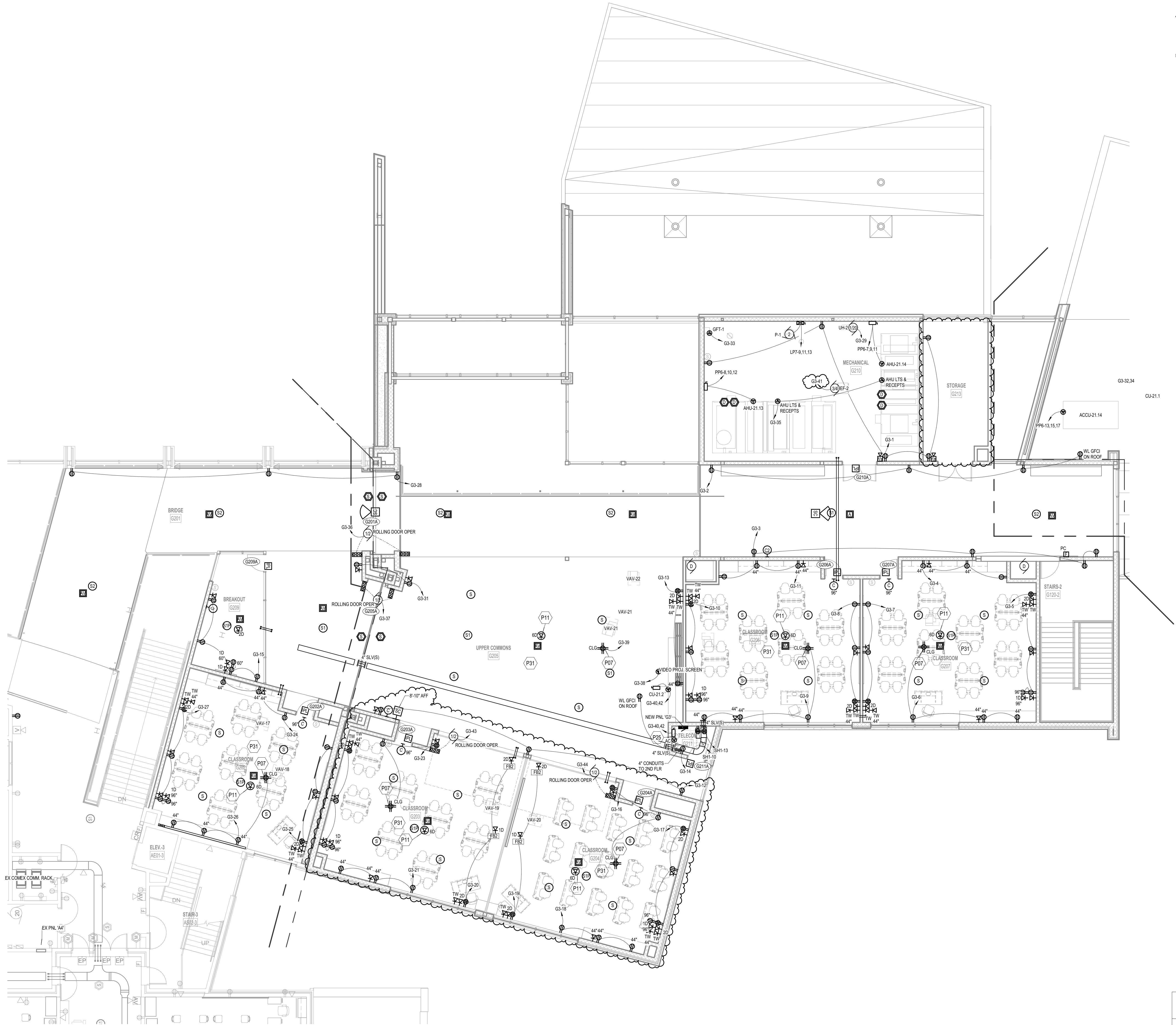
PROJECT NO. 5-5066

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FC - UNIT 'J' FIRST FLOOR
POWER & COMMUNICATIONS
PLAN

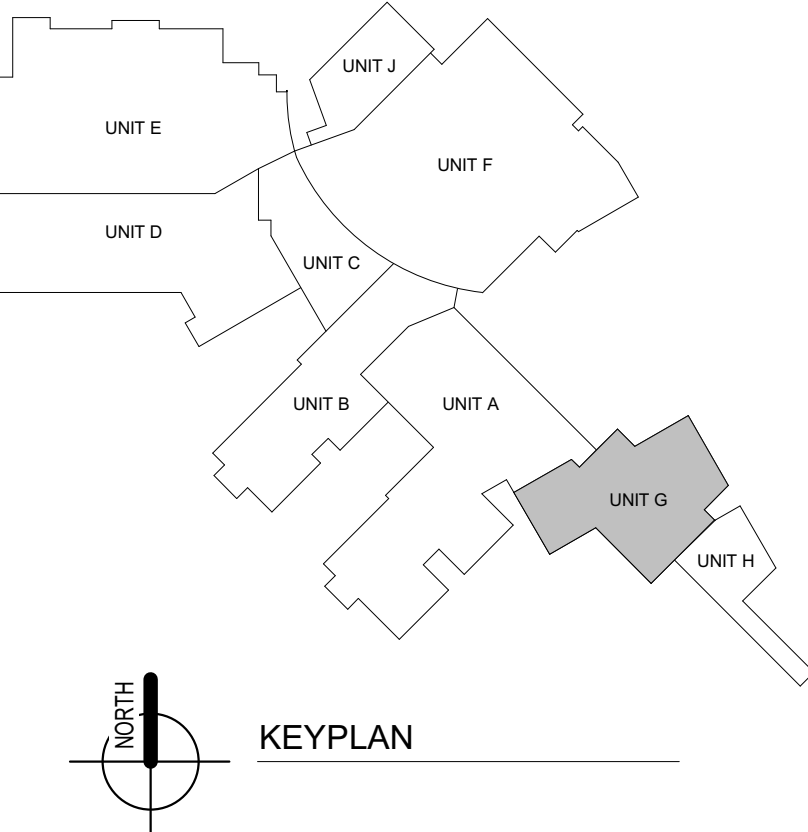
E2.1J



UNIT 'G' SECOND FLOOR POWER & COMMUNICATIONS PLAN
1/8" = 1'-0"

- POWER & COMMUNICATION GENERAL NOTES**
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
 2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
 3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. PROVIDE 120VAC POWER FROM DEDICATED 20AMP BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANE BOARD FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT). TERMINATED BY BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
 4. PROVIDE FLUSH SINGLE GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPIABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RACEWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROL CONTRACTOR'S SHOP DRAWINGS.
 5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 12 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.

ELECTRICAL KEYNOTES	
P07	PROVIDE CEILING MOUNTED RECEPTACLE ABOVE PROJECTOR. PROJECTOR AND PROJECTOR MOUNTING PLATE PROVIDED AND INSTALLED BY OTHERS. COORDINATE LOCATION WITH PROJECTOR BEFORE INSTALLATION.
P11	PROVIDE (6) PORT SURFACE MOUNT BOX ABOVE CEILING IN CENTER OF ROOM. FROM SURFACE MOUNT BOX ABOVE CEILING. PROVIDE (2) PATCH CORDS TO ACCESS POINT AND PROVIDE (2) PATCH CORDS TO PROJECTOR.
P25	CIRCUIT SPLIT SYSTEM INDOOR UNIT FROM OUTDOOR UNIT. REFER TO MANUFACTURER'S INSTRUCTIONS FOR FURTHER DETAILS.
P31	ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ROUGH-INS AND/OR COMMUNICATIONS PATHWAYS FOR CLASSROOM AV SYSTEM SPEAKERS (SHOWN AS 'S'). CABLING IN EXPOSED CEILING LOCATIONS SHALL BE CONCEALED IN CONDUIT. COORDINATE EXACT SPEAKER LOCATION WITH OWNER BEFORE INSTALLATION. CLASSROOM AV SPEAKERS FURNISHED AND INSTALLED BY OWNER. COORDINATE BOX AND CONDUIT SIZING WITH CLASSROOM AUDIO SYSTEM WITH OWNER.



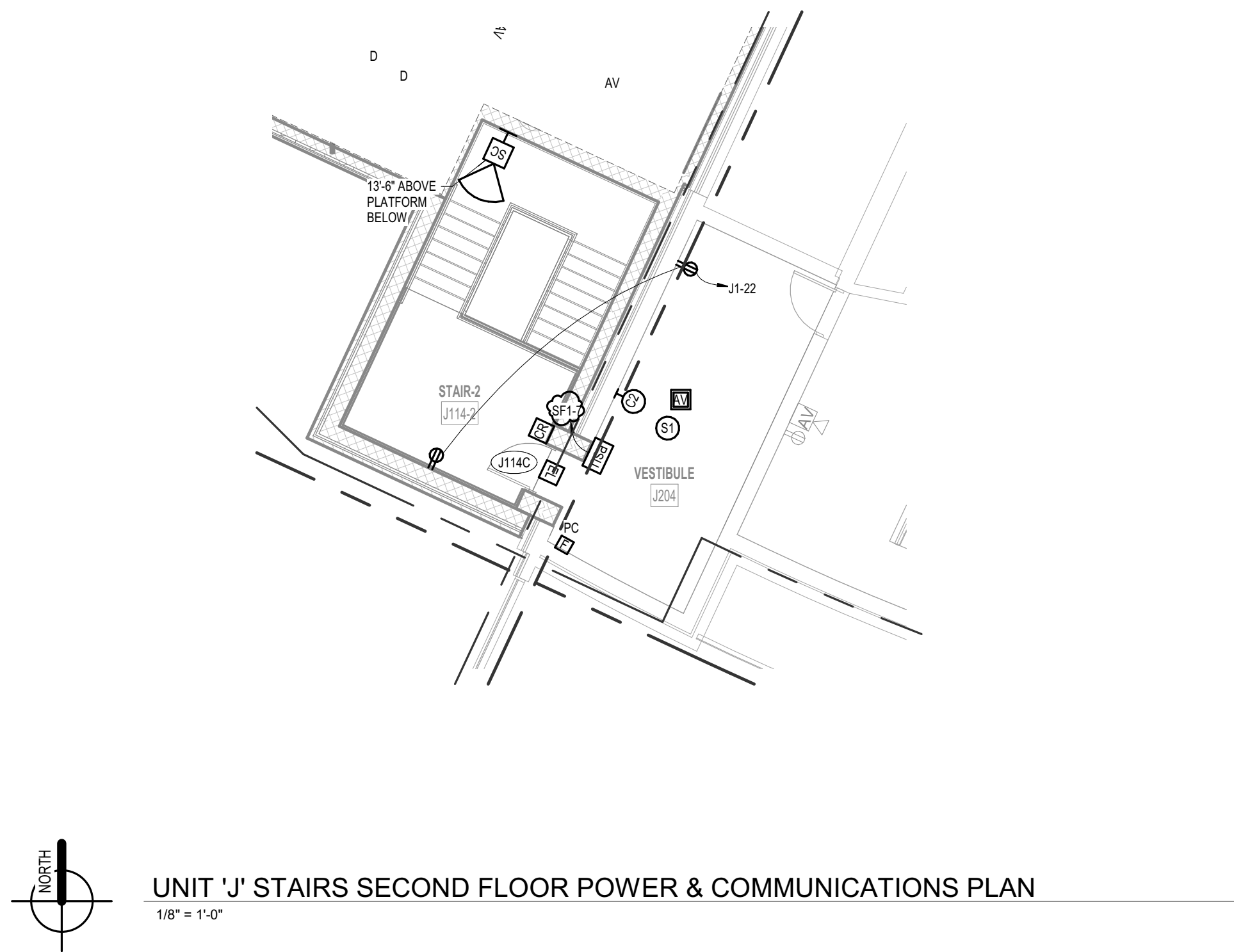
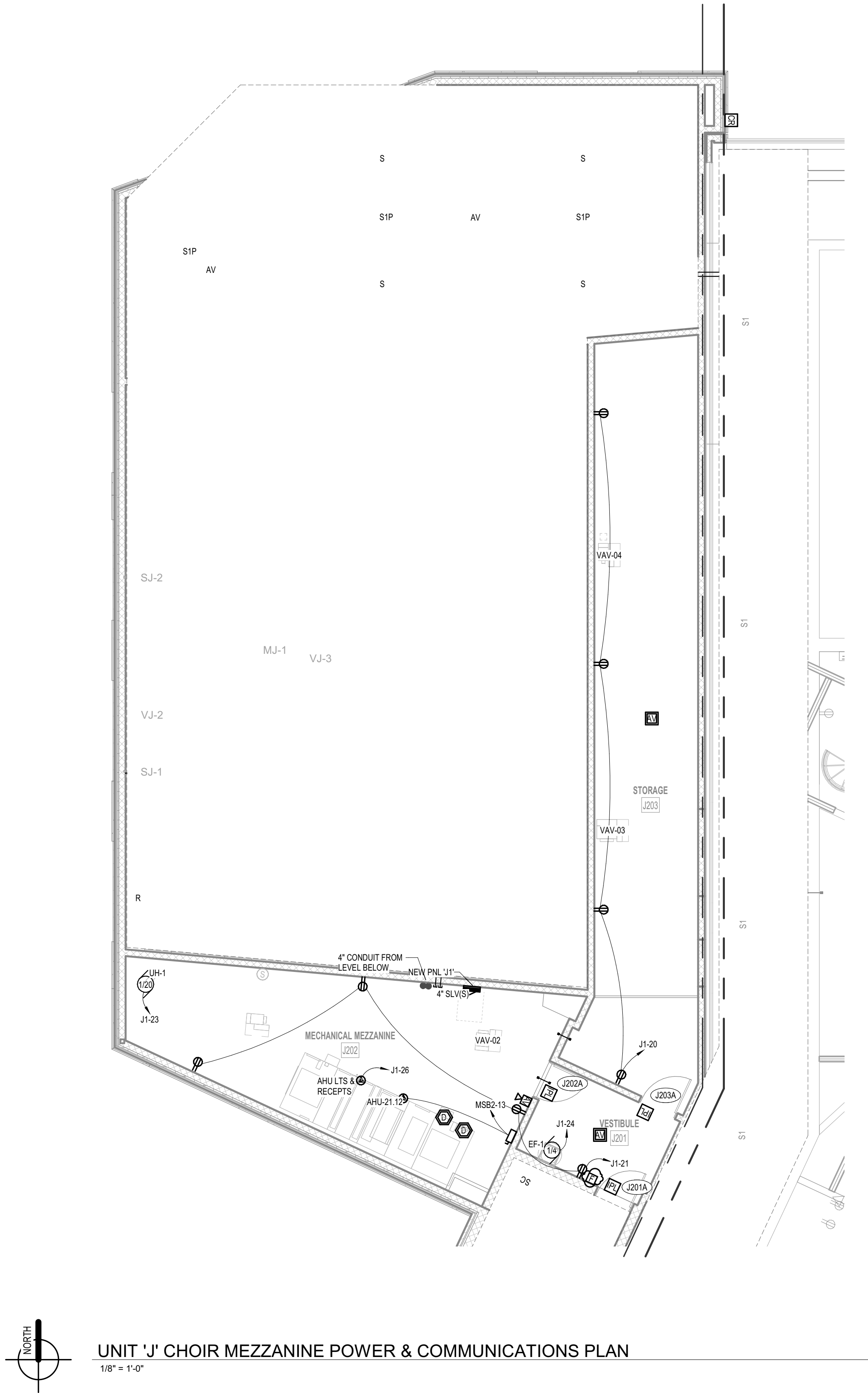
ISSUANCES	
11.10.2020	BIDS & CONSTRUCTION
12.01.2020	ADDENDUM 002
02.05.2021	BULLETIN 001
04.07.2021	BULLETIN 003
05.14.2021	BULLETIN 005

DRAWN	LCT
REVIEWED	MCK

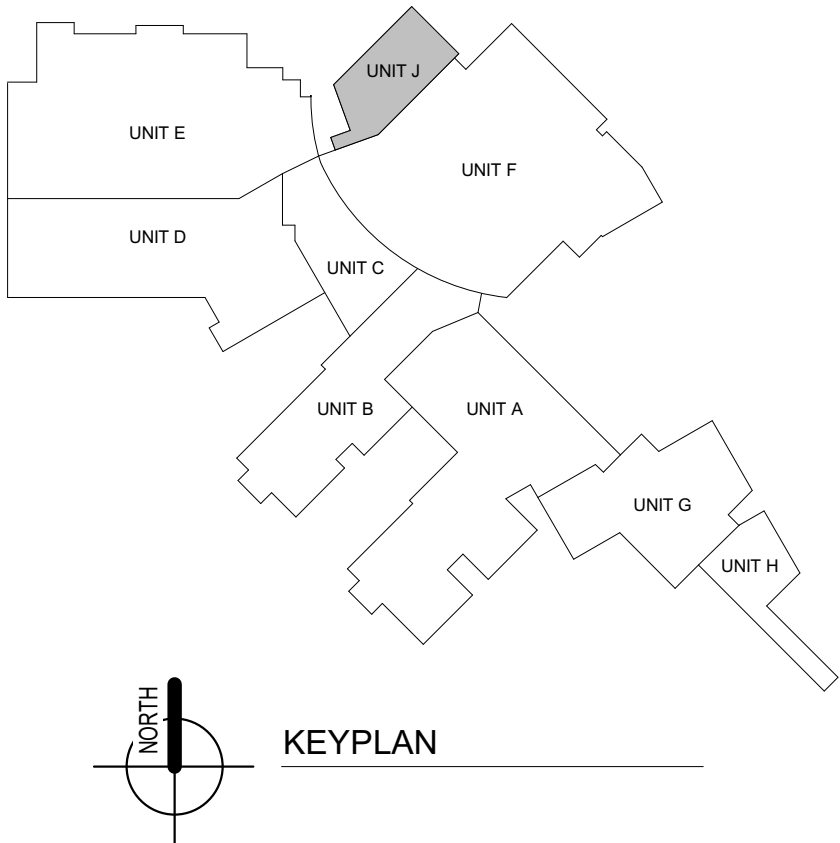
PROJECT NO.	5-5066
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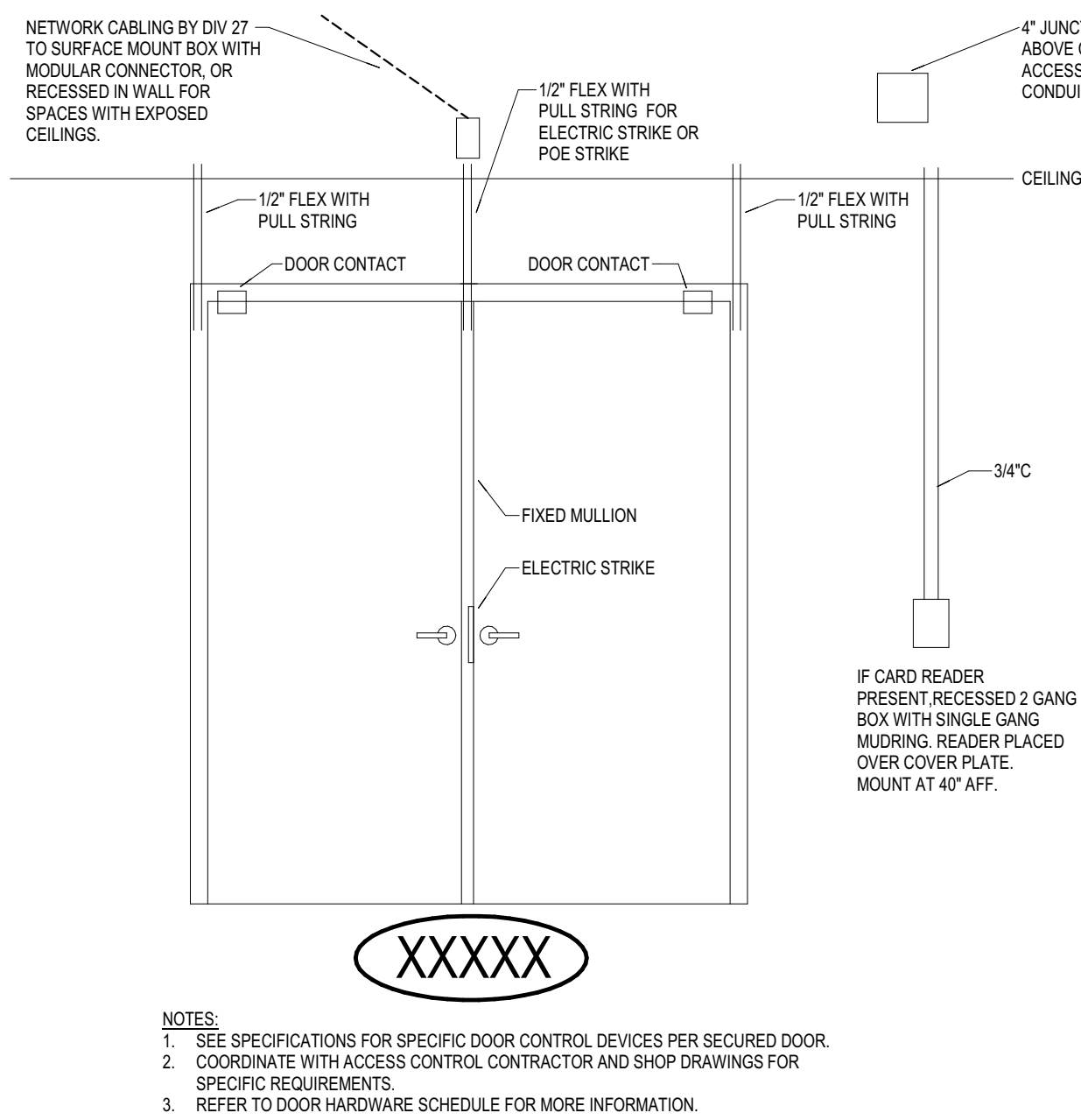


- POWER & COMMUNICATION GENERAL NOTES
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E0.01.
 2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
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 4. PROVIDE FLUSH SINGLE-GANG BOXES IN WALLS FOR HVAC / TEMPERATURE CONTROL DEVICES. AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT BACKWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL / TEMPERATURE CONTROLS CONTRACTORS SHOP DRAWINGS.
 5. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH (ON BUILDING INTERIOR IN ACCESSIBLE LOCATION) FOR EACH SMALL (< 10 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
- ELECTRICAL KEYNOTES

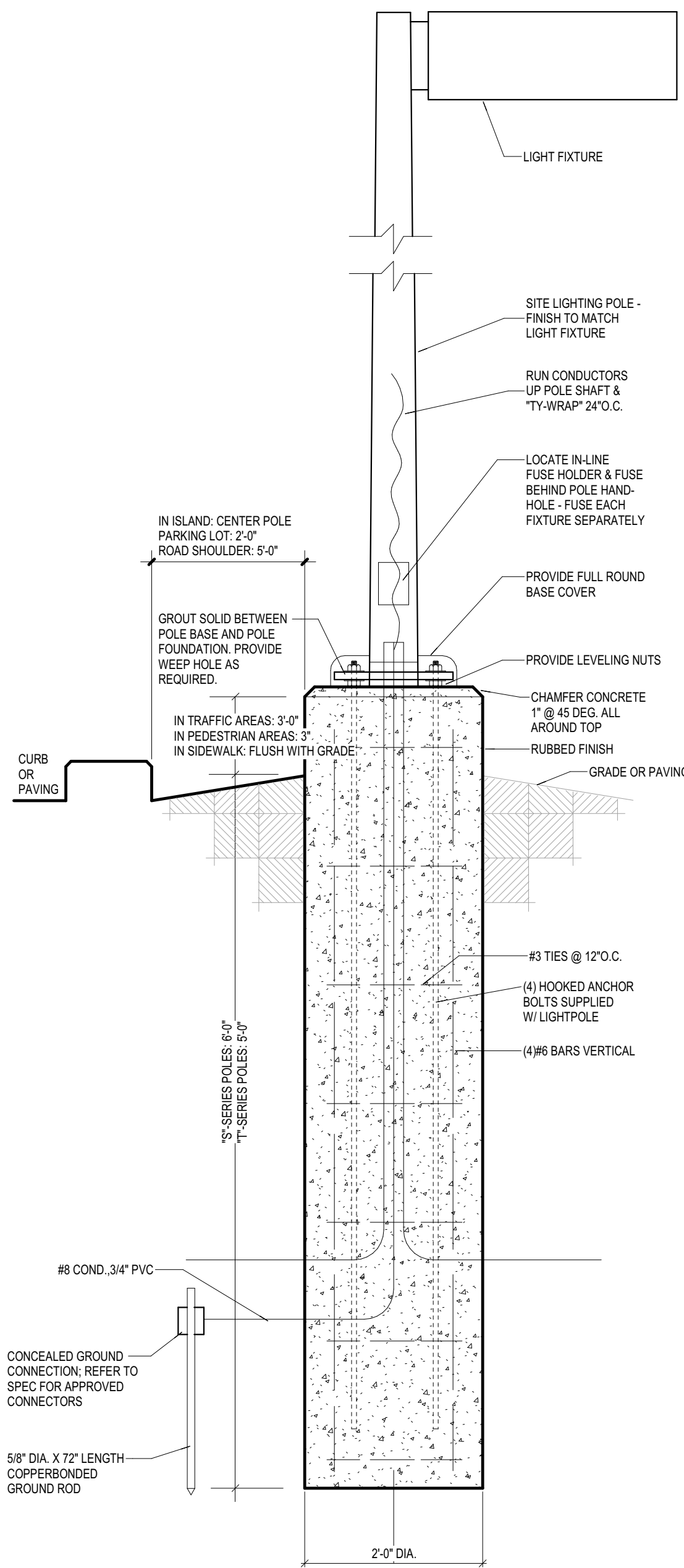


ISSUANCES	
11.10.2020	BIDS & CONSTRUCTION
12.20.2021	BULLETIN 012
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PROJECT NO.	5-5066
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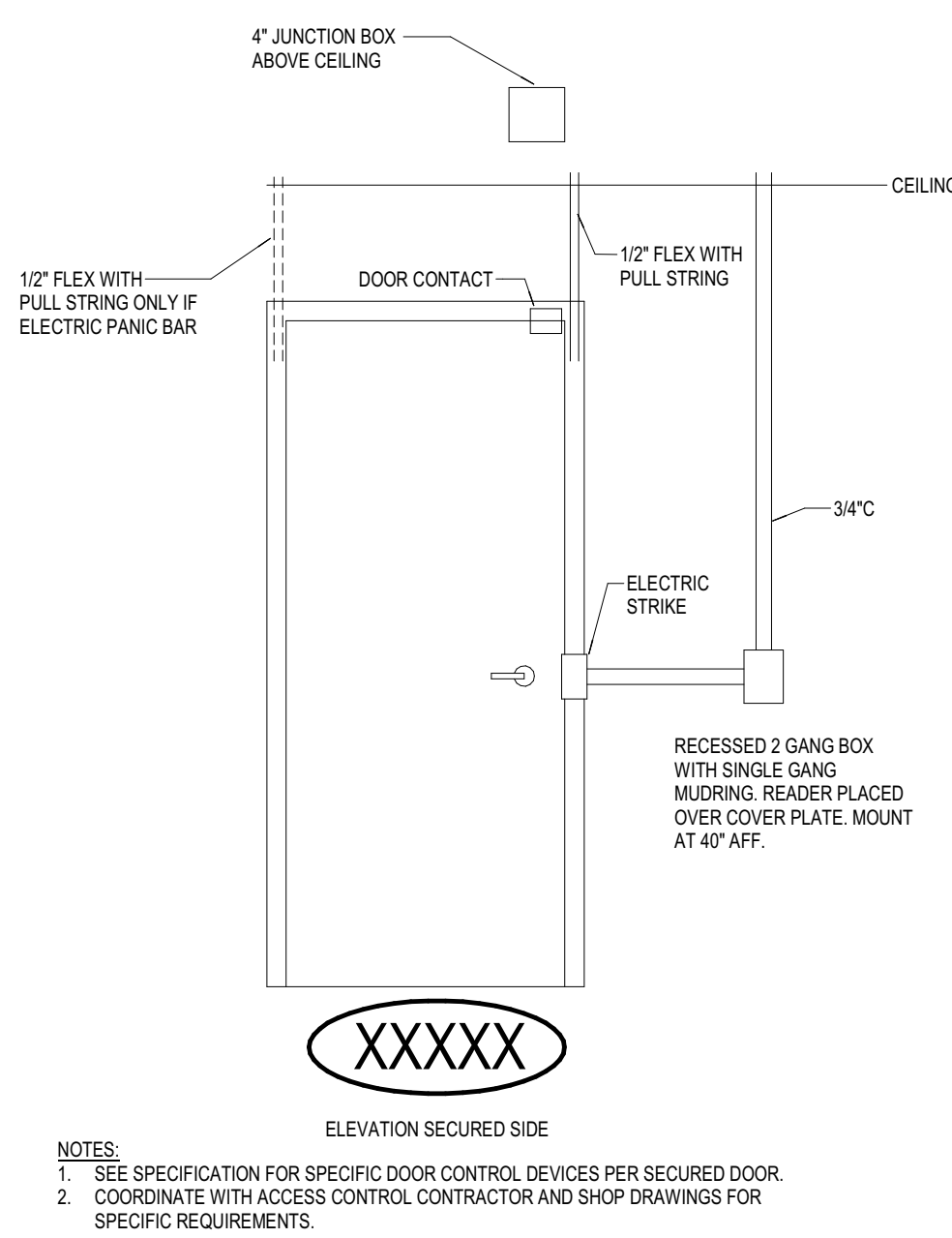
8
E7.01
DOUBLE SECURED DOOR ROUGH-IN (PoE)
NOT TO SCALE



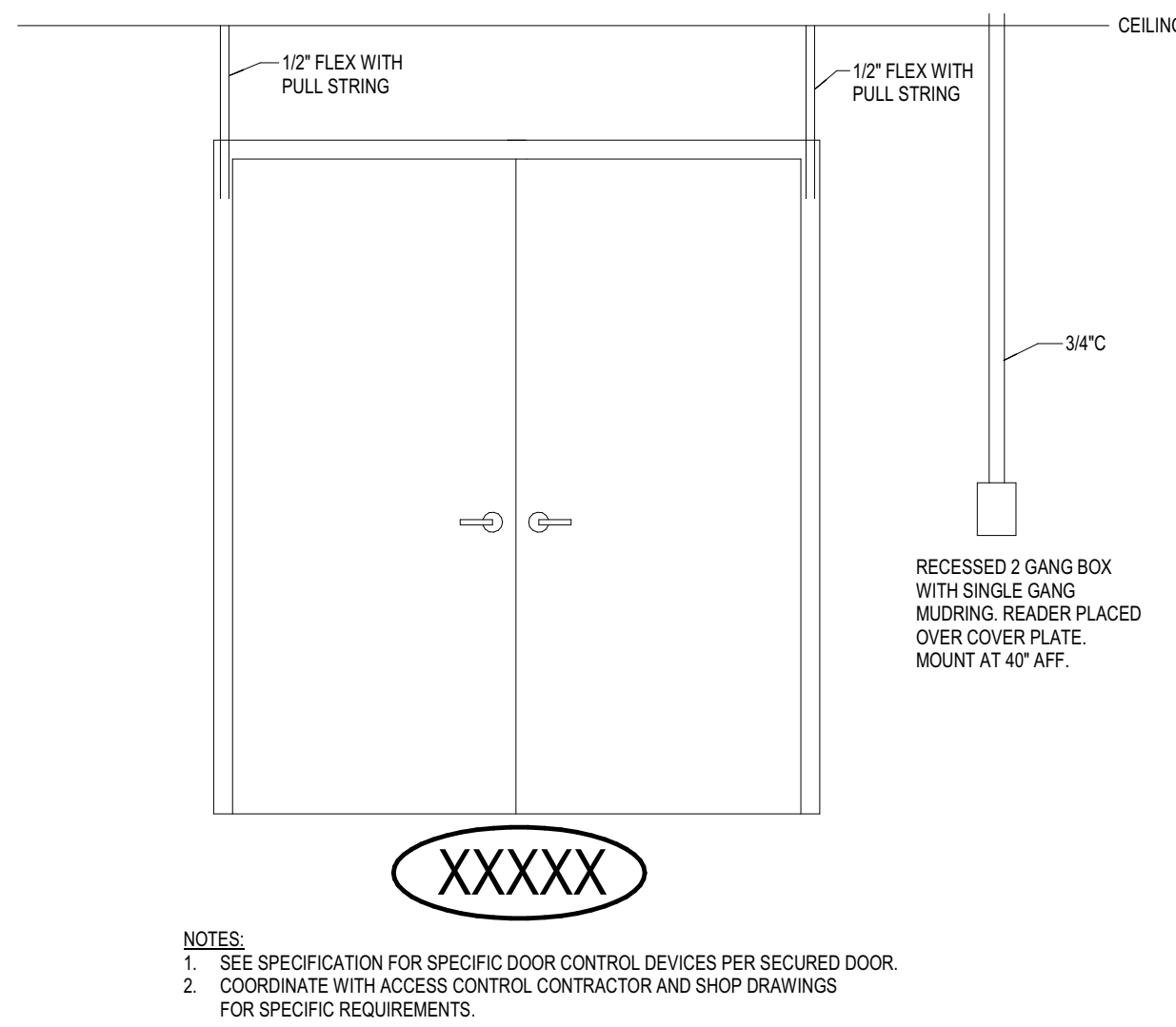
5
E7.01
SITE LIGHTING POLE FOUNDATION
NOT TO SCALE



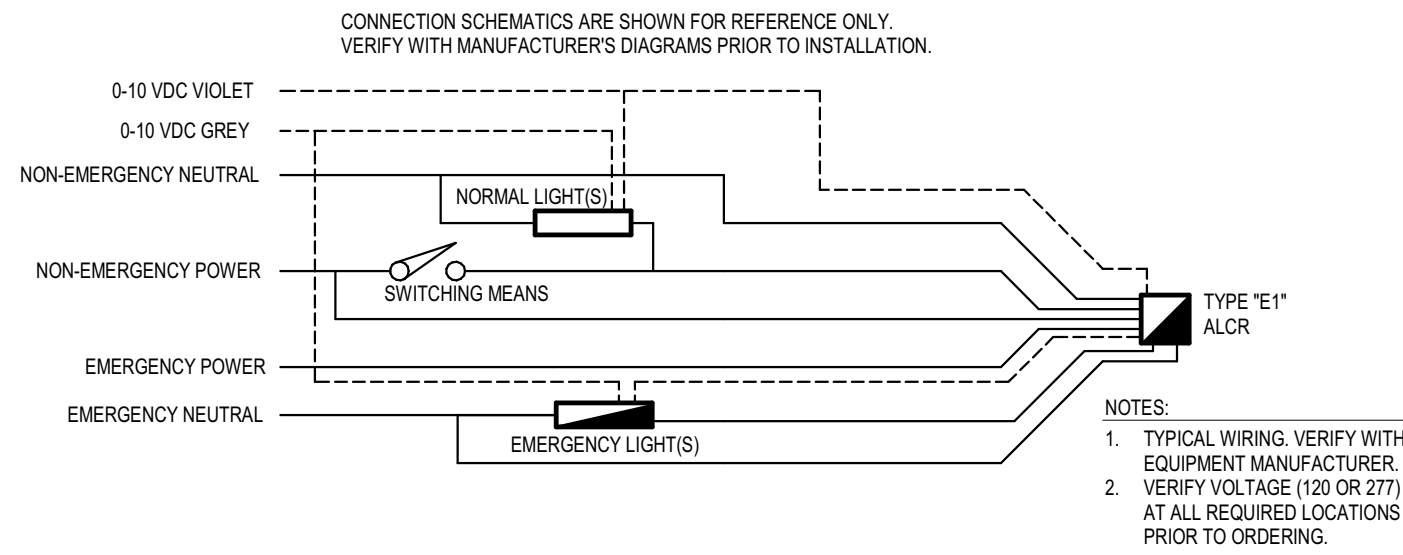
1
E7.01
SINGLE SECURED DOOR ROUGH-IN
NOT TO SCALE



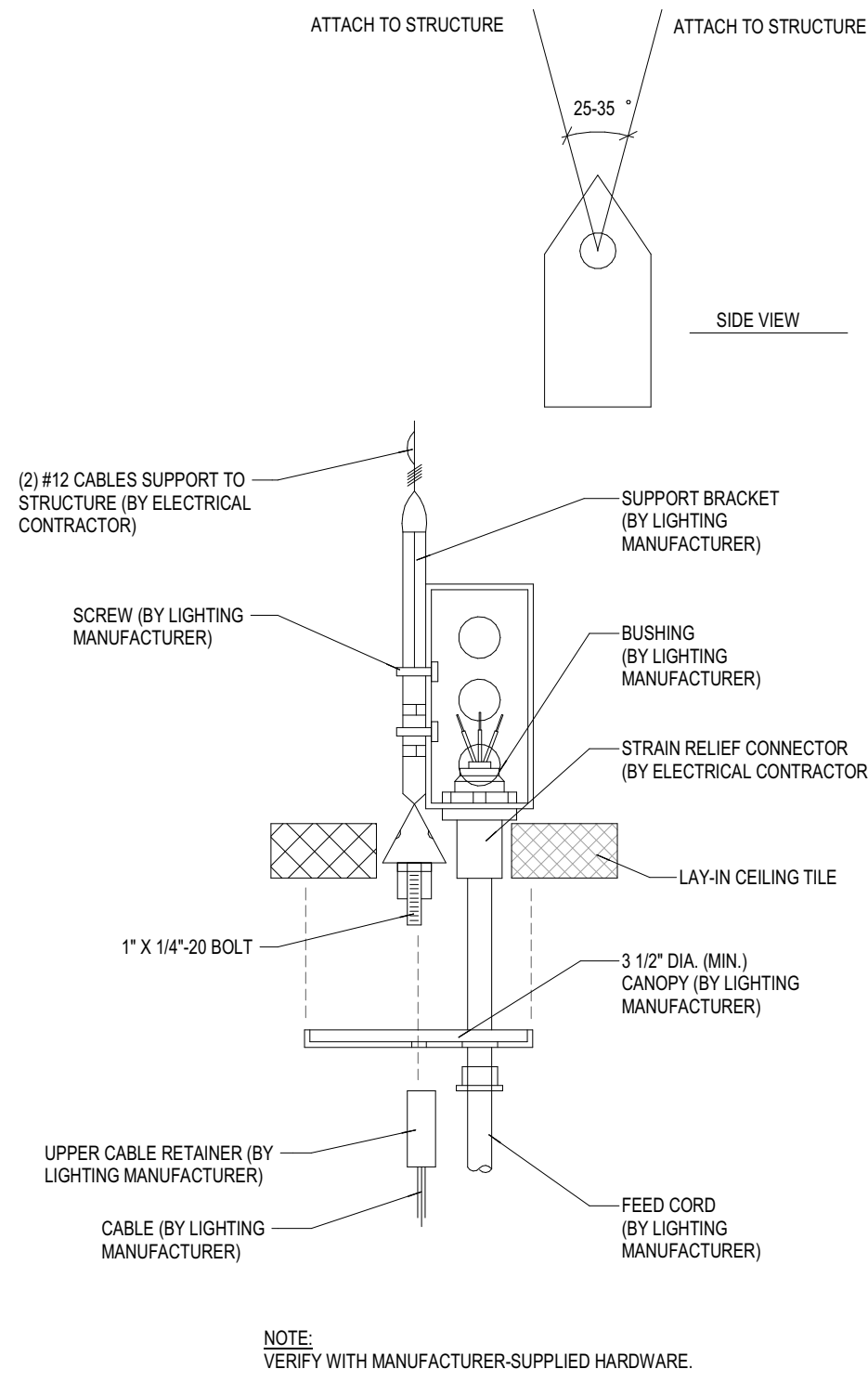
2
E7.01
DOUBLE SECURED DOOR ROUGH-IN
NOT TO SCALE



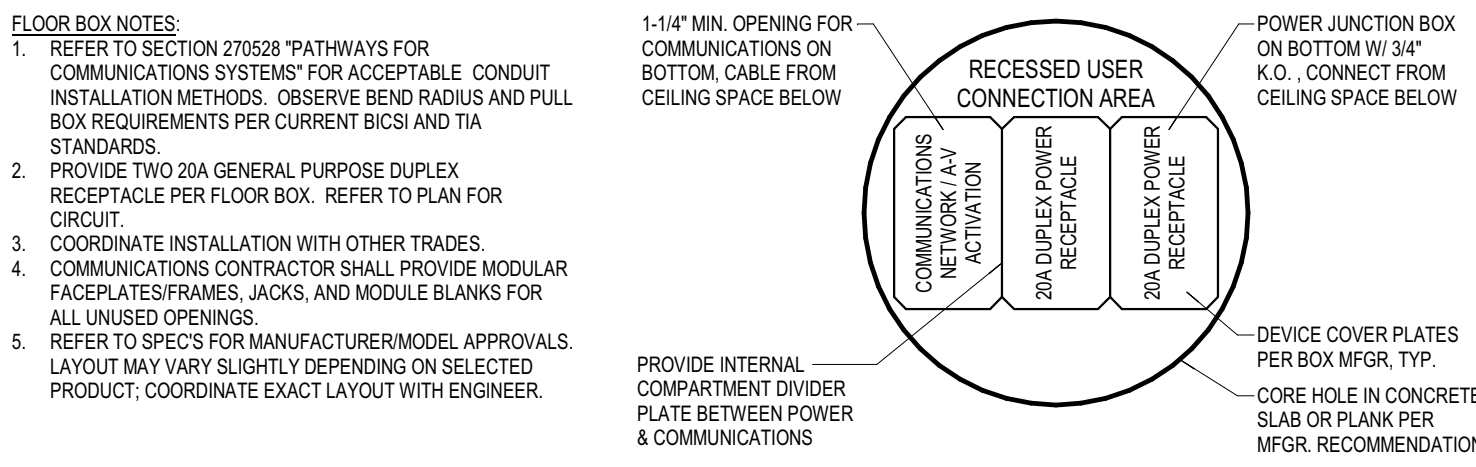
3
E7.01
EMERGENCY LIGHTING AUTOMATIC LOAD CONTROL RELAY
NOT TO SCALE



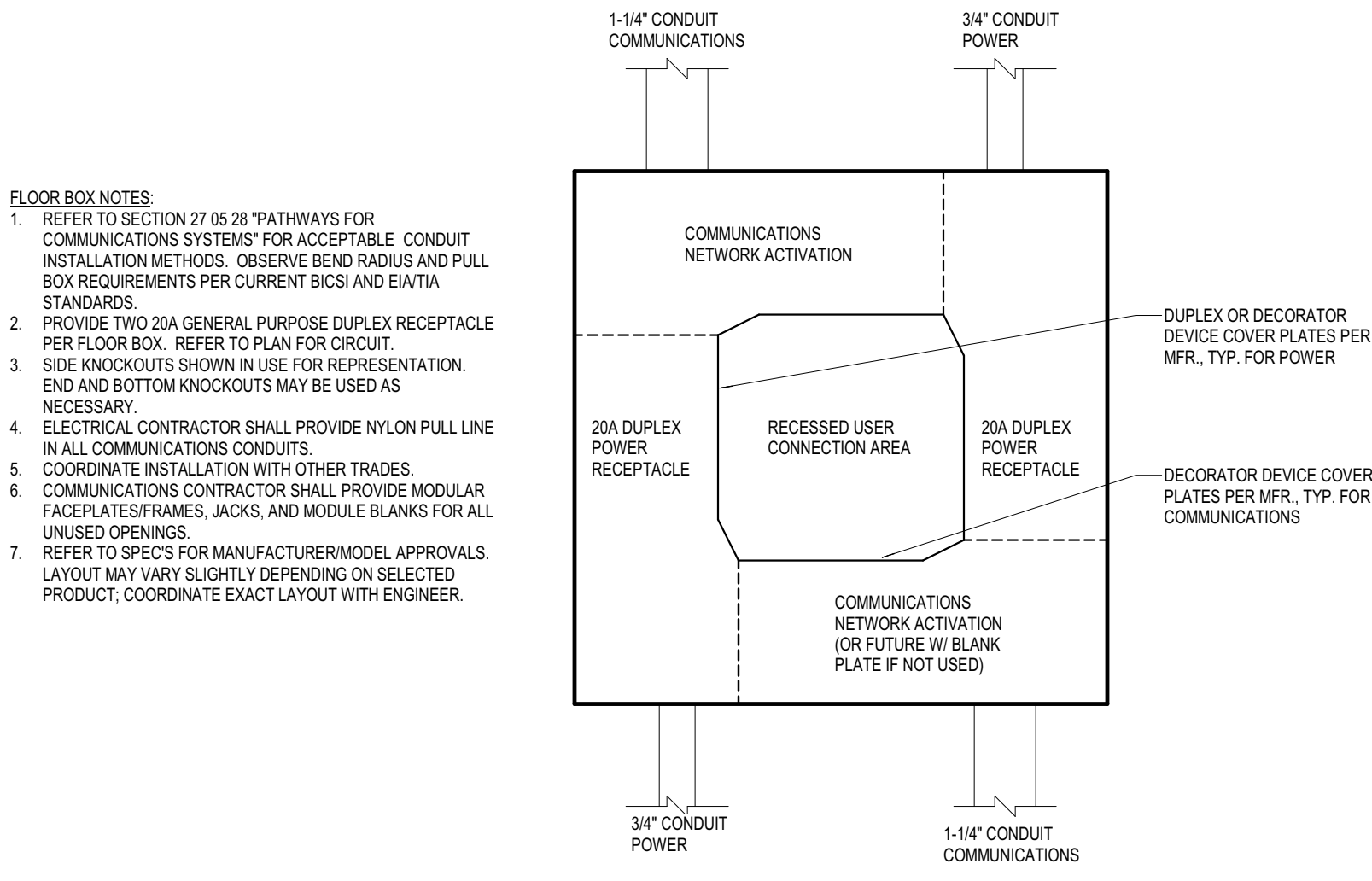
4
E7.01
INDIRECT/DIRECT LIGHTING FIXTURE SUPPORT DETAIL
NOT TO SCALE



7
E7.01
TYPE "FB2" FLOOR BOX CONFIGURATION
NOT TO SCALE



6
E7.01
TYPE "FB1" FLOOR BOX CONFIGURATION
NOT TO SCALE



SECTION 08 71 00 - DOOR HARDWARE
(ADDENDUM 003) (BULLETIN 001) (BULLETIN 005)

PART 1 - GENERAL

1.1 SUMMARY

- A. Scope of Work: This Section describes all finish hardware required to complete the work as indicated on the Drawings and specified herein. Provide all trim attachments and fastening specified or required for proper and complete installation.
- B. Related Sections:
 - 1. Section 08 11 13: Hollow Metal Doors and Frames
 - 2. Section 08 14 16: Flush Wood Doors
 - 3. Section 08 43 13: Aluminum Entrances and Storefronts
 - 4. Section 28 10 00: Access Control Systems

1.2 SUBMITTALS

- A. Product Data, Shop Drawings, Samples:
 - 1. General: Comply with the provisions of Section 01 33 00.
 - 2. Product Data: Within 15 calendar days after award of the Contract, submit:
 - a. Complete materials list of all items proposed to be furnished and delivered under this Section.
 - 1) Identify each hardware item by manufacturer, the manufacturer's catalog number, and the location of the item in the work.
 - 2) Make the list in form suitable for ready checking by the Architect.
 - b. Manufacturer's specifications, catalog cuts, and other data required to demonstrate compliance with specified requirements.
 - 3. Approval of the hardware list by the Architect/Engineer shall not relieve the Contractor from the responsibility for furnishing all required finish hardware.
 - 4. Samples: Within 15 calendar days after being so requested by the Architect/Engineer, deliver to the Architect/Engineer samples of each finish hardware item.
 - 5. Templates: In a timely manner to ensure orderly progress of the work, deliver templates or physical samples of the approved finish hardware items to pertinent manufacturers of interfacing items such as door and frame.

1.3 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Qualifications of Manufacturers: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect/Engineer.
 - 2. Qualification of Suppliers: The supplier shall have a qualified representative readily available to the Architect/Engineer, and/or Owner on short notice for consultation and service during the execution of this work and the warranty period.
 - 3. Qualification of Installers: Use adequate numbers of skilled workmen who are trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of this Section.
- B. Regulatory Requirements & References: Fire Rated Openings: Comply with the requirements of Underwriter's Laboratories, Inc.
- C. Pre-Installation Conference: Prior to the installation of hardware, manufacturer's representatives for locksets, closers, and exit devices shall arrange and hold a jobsite meeting to instruct the installing contractor's personnel on the proper installation of their respective

products. A letter of compliance, indicating when this meeting is held and who is in attendance, shall be sent to the Architect and Owner.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Packing and Shipping: Individually package each units of finish hardware, complete with proper fastening and appurtenances, clearly marked on the outside to indicate the contents and specific locations in the work.
- B. Protection: Use all means necessary to protect materials of this Section before, during, and after delivery to the job site and to protect the work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect/Engineer and at no additional cost to the owner.
- D. Deliveries:
 - 1. Stockpile all items sufficiently in advance to ensure their availability and make all necessary deliveries in a timely manner to ensure orderly progress of the total work.
 - 2. All hardware shall be delivered to a destination as directed by the Construction Manager with sufficient time in advance for proper inspection in order not to delay the scheduled completion date.
 - 3. The Construction Manager shall provide a lockable room with ample shelving for the storage of hardware. Upon receipt of the hardware, the Finish Hardware supplier shall unpack and place on the shelves all hardware in order of item and/or door numbers.

1.5 SEQUENCING AND SCHEDULING

- A. Coordinate all work with job site superintendent and all applicable trades.

1.6 WARRANTY

- A. Provide a written warranty in approved form in compliance with the related requirements of the General Conditions, covering all Finish Hardware furnished under this Section against defects in manufacturing and workmanship for a minimum of two (2) years from the final acceptance of the building.
- B. Any material failing to comply with the above guarantee shall be removed and replaced with satisfactory material at the Finish Hardware supplier's expense, including the necessary labor for removing and replacing.
- C. During the Warranty Period, the Finish Hardware supplier shall, upon request, make prompt adjustments, repairs or replacements as required to any hardware installed under this contract, other than normal maintenance service.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

Product	Specified	Acceptable Alternates
Continuous Hinges	Ives	Select, Pemko
Hinge	Ives	McKinney, Stanley
Electrified Hinge (PoE)	McKinney (Provided by Integrator)	No Substitution
Wire Harness (PoE)	McKinney (Provided by Integrator)	No Substitution
Locks	Yale 5400LN Series	No Substitution
Deadbolts	Yale D161/D162 Series	No Substitution
Electronic Locks	Corbin-Russwin IN220 (Provided by Integrator)	No Substitution
Keys and Cylinders	Yale G Keyway	No Substitution (Owners Key System)

Exit Devices	Von Duprin 98 Series (Exterior)	No Substitution
Exit Devices	Von Duprin XP98/98 Series (Interior)	Yale 7150/7000 Series
Electric Strikes (PoE)	Trine 4000 Series	No Substitution
Magnetic Locks	Schlage Electronics M450 Series	Securitron M62BD Series, Security Door Controls 1570 Series
Door Closers	LCN 4040XP Series	No Substitution
Fire/Life Closers	LCN 4410ME Series	No Substitution
Push/Pull & Kick Plates	Ives	Trimco, Rockwood
Stops	Ives	Trimco, Rockwood
Overhead Stops	Glynn-Johnson	No Substitution
Seals and Thresholds	Zero	NGP, Reese, Pemko
Auto Operators	LCN 4600 Series	No Substitution
Power Supplies	Von Duprin PS900 Series	Securitron
Fire/Life Wall Magnet	LCN 7800 Series	Rixson, ABH

2.2 MATERIALS

A. General:

1. Proprietary Products: References to specific proprietary products are used to establish minimum standards of utility and quality. Unless otherwise approved by the Architect/Engineer, provide only the specific products. Design is based on the materials specified. Other materials may be considered by the Architect/Engineer in accordance with the provisions of Section 01 33 00.
2. Fasteners:
 - a. Furnish all finish hardware with all necessary screws, bolts, and other fasteners of suitable size and type to anchor the hardware in position for long life under hard use.
 - b. Furnish fastenings where necessary with expansion shields, toggle bolts, sex bolts, and other anchors approved by the Architect/Engineer, according to the materials to which the hardware is to be applied and the recommendations of the hardware manufacturer.
 - c. All fastenings shall harmonize with the hardware as to materials and finish.
3. Finishes of all hardware shall match the finish of the locksets. Take special care to coordinate all of the various manufactured items furnished under this Section, to ensure acceptably uniform finish.
4. Through-bolt door closers on all wood doors.

B. Keying: All lock shall be master keyed as directed by the Architect and Owner to the Owners Existing Yale key system. Supply 3 keys per lock, 6 master keys for each master key group and 3 grand master keys.

C. Tools and Manuals: With the delivery of permanent keys, deliver to the Owner one complete set of adjustment tools and one set of maintenance manuals for locksets, latchsets, closers, and panic devices.

- a. Provide Special Product Configurable Code (SPAR05493) for all Yale 7100 Series Exit Devices with Corbin-Russwin IN220 Electronic Exit Device Trim. Must be included in purchase orders as well.
- b. Corbin Russwin IN220 electronic lock, McKinney electrified hinge and McKinney wire harness for PoE applications to be provided by Access Control Integrator as listed in hardware sets.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install the materials in strict accordance with the manufacturer's recommendations and schedules.
- B. All doors should swing as far as conditions allow. When mounting door closers, use the mounting that allows doors to swing to the wall or floor bumper. Do not stop the door with the closer arm unless the arm is designed specifically to stop the door. When mounting closers designed with arms to stop the door or overhead door stops, always mount them to allow the door to swing as far as conditions will permit.
- C. Anchor all screws with Loc-Tite to assure permanence of attachment.
- D. All doors and hardware to be left in proper working order and cleaned.
- E. Special Hardware Instructions:
 1. Wall stops WS33 are to be mounted on the wall up at the top of the door and as far out on the latch edge as conditions allow. The sloped side is to face up, preventing anyone or anything to hang on them.
 2. Wall stop & holds WH45 are to be mounted the same as the WS33.

3.2 ADJUSTING AND CLEANING

- A. Final inspections shall be made by the Architect and Finish Hardware Supplier. They shall report any installation adjustments that are to be made to have all hardware in perfect working order. The Finish Hardware Supplier shall verify the keying to the Architect to insure proper location of locksets and cylinders. All closers shall be checked and adjusted for closing.
- B. Prior to final acceptance of the installation, the Finish Hardware Supplier shall make a final inspection to verify that all corrections have been made and that all hardware items are in good working condition.

PART 4 - HARDWARE SCHEDULE

Hardware Group No. 101

For use on Door #(s):

E202A	E203A	F202A	F203A	G201A	G203A
G203B					

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	CLASSROOM DEADBOLT	D161/D162 (AS REQ'D) - KEYED TO EXISTING YALE KEY SYSTEM, COORDINATE WITH OWNER		626	YAL
1	EA	PUSH PLATE	8200 6" X 16"		630	IVE
1	EA	PULL PLATE	8303 10" 4" X 16" F		630	IVE
1	EA	SURFACE CLOSER	4040XP HW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 102

For use on Door #(s):

G207A	G207C	G207D	G207E	G207F	G207G
G207H	G207J				

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	DUMMY PUSH BAR	350		626	VON
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

Hardware Group No. 103

For use on Door #(s):

G207B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	DUMMY PUSH BAR	350		626	VON
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100SE		630	GLY
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
1	EA	ACTUATOR, JAMB MOUNT	8310-818T	✓	630	LCN
1	EA	FLUSH MOUNT BOX	8310-819F	✓	689	LCN
1	EA	RELAY/DOOR SEQUENCER	8310-845	✓	689	LCN
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

ACTUATOR BUTTON IS ENABLED WHEN THE OPERATOR IS TURNED ON. PUSHING ENABLED ACTUATOR BUTTON WILL CAUSE THE AUTOMATIC OPERATOR TO MOMENTARILY OPEN BOTH THE INTERIOR AND EXTERIOR DOOR SIMULTANEOUSLY. FREE EGRESS AT ALL TIMES.

Hardware Group No. 104

For use on Door #(s):

E116A	E118A	F104A	F115A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		626	IVE
1	EA	PRIVACY LOCK W/INDICATOR	PBR 8802FL IND		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 105

For use on Door #(s):

E114A	E121A	G105A	G105B	G202A	H103A
H104A					

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		626	IVE
1	EA	PRIVACY LOCK W/INDICATOR	PBR 8802FL IND		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 106

For use on Door #(s):

E131A	E131B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		626	IVE
1	EA	PRIVACY LOCK W/INDICATOR	PBR 8802FL IND		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE

Hardware Group No. 107

For use on Door #(s):

E103A	E129	E132A	E136A	E137A	E138A
E138D	F114A	G104A	G106A	H102A	H201F
M102A	M106A	M124A			

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 108

For use on Door #(s):

M122A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 109

For use on Door #(s):

F105A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 110

For use on Door #(s):

F109A	F109B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	MAGNETIC LOCK	M450P TJ450 ATS/LED	✓	628	SCE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POWER SUPPLY	P902 - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE MAGNETIC LOCK SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM THROUGH A SET OF NORMALLY CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

LOCKSET IS NORMALLY SECURE. MAGNETIC LOCK NORMALLY DE-ENERGIZED AND UNLOCKED. THE MAGNETIC LOCK SHALL BE WIRED TO THE CARD READER AND SHALL CONTROL THE LOCKING AND UNLOCKING OF THE OPPOSITE DOOR MAGNETIC LOCK. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL UNLOCK LOCKSET, LOCK MAGNETIC LOCK ON OPPOSITE DOOR AND ALLOW ENTRY. LOCKSET TO MAINTAIN UNLOCK STATUS UNTIL PRESENTING VALID CREDENTIAL TO CARD READER TO RELOCK LOCKSET AND UNLOCK MAGNETIC LOCK ON OPPOSITE DOOR. DURING LOCKDOWN THE STATUS OF THE LOCKSET WILL CHANGE TO LOCK. IF THE FIRE ALARM AND/OR LOCKDOWN SYSTEM IS ACTIVATED POWER TO THE MAGNETIC LOCK WILL BE DISCONNECTED UNLOCKING MAGNETIC LOCK.

Hardware Group No. 111

For use on Door #(s):

C107A	C108D	C110A	C112A	D142A	F101A
M117A					

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 112

For use on Door #(s):

E111A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	WALL STOP	WS406/407CCV		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 113

For use on Door #(s):

C108A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	WALL STOP	WS406/407CCV		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK
<p>OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.</p> <p>LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.</p>						

Hardware Group No. 114

For use on Door #(s):

C108B	C111C	H201A	M105A	M123A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 115

For use on Door #(s):

G204A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 116

For use on Door #(s):

E106A	E107A	E108A	H105A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100S		630	GLY
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 117

For use on Door #(s):

C109A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 118

For use on Door #(s):

M107A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 119

For use on Door #(s):

H107A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100S		630	GLY
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 120

For use on Door #(s):

E115A	E119A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100S		630	GLY
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 121

For use on Door #(s):

E101C	E117A	E133A	F107A	F112A	G103A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 122

For use on Door #(s):

G205A	M103B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 123

For use on Door #(s):

G109A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 124

For use on Door #(s):

M121A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 125

For use on Door #(s):

E138B	E138B	E138C
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW B-CS		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 126

For use on Door #(s):

E109B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP HW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 127

For use on Door #(s):

E109A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

NOTES:

1) DOOR E122B KEYED STAIR SIDE OF OPENING.

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 128

For use on Door #(s):

E124A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	WALL STOP	WS406/407CCV		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 129

For use on Door #(s):

F201A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB51P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	WALL STOP	WS406/407CCV		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 130

For use on Door #(s):

E102A	E128A	G107A	G220A	H101A	
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 131

For use on Door #(s):

E102A	M118A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30		689	LCN
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 132

For use on Door #(s):

E138B	E201A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB51P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 133

For use on Door #(s):

B114A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

NOTE:

1) SURFACE WIRING TO BE LOCATED INSIDE OF ROOM.

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 133A

For use on Door #(s):

B114A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
<u>2</u>	<u>EA</u>	<u>HINGE</u>	<u>5BB1HW 4.5 X 4.5 NRP</u>		<u>652</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>ELECTRIFIED HINGE (HW)</u>	<u>73696 POE</u> <u>- PROVIDED BY INTEGRATOR</u>	↗	<u>652</u>	<u>MCK</u>
<u>1</u>	<u>EA</u>	<u>ELECTRONIC LOCK (PoE)</u>	<u>CL33134-PZD-IN220-IP-B-LC</u> <u>- PROVIDED BY INTEGRATOR</u>	↗	<u>626</u>	<u>C-R</u>
<u>1</u>	<u>EA</u>	<u>CYLINDER</u>	<u>KEYED TO EXISTING YALE KEY</u> <u>SYSTEM</u> <u>- COORDINATE WITH OWNER</u>		<u>626</u>	<u>YAL</u>
<u>1</u>	<u>EA</u>	<u>SURFACE CLOSER</u>	<u>4040XP RW/PA</u> <u>- PUSH-SIDE</u>		<u>689</u>	<u>LCN</u>
<u>1</u>	<u>EA</u>	<u>KICK PLATE</u>	<u>8400 10" X 2" LDW B-CS</u>		<u>630</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>WALL STOP</u>	<u>WS406/407CCV</u>		<u>630</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>GASKETING</u>	<u>488S</u>		<u>BK</u>	<u>ZER</u>
<u>1</u>	<u>EA</u>	<u>POE WIRE HARNESS</u> <u>(HINGE TO LOCK X HINGE</u> <u>TO CEILING)</u>	<u>94212/3 X 94217</u> <u>- PROVIDED BY INTEGRATOR</u>	↗		<u>MCK</u>

NOTE:

1) SURFACE WIRING TO BE LOCATED INSIDE OF ROOM.

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 135

For use on Door #(s):

C111A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	AUTO FLUSH BOLT	FB41P		630	IVE
<u>1</u>	<u>SET</u>	<u>CONST LATCHING BOLT</u>	<u>FB61P</u>		<u>630</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>DUST PROOF STRIKE</u>	<u>DP2</u>		<u>626</u>	<u>IVE</u>
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	COORDINATOR	COR-X-FL		628	IVE
2	EA	MOUNTING-BRACKET	MB		689	IVE
<u>1</u>	<u>EA</u>	<u>OH STOP</u>	<u>100S</u>		<u>630</u>	<u>GLY</u>
1 (2)	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
<u>1</u>	<u>EA</u>	<u>DOOR SWEEP</u>	<u>328AA</u>		<u>AA</u>	<u>ZER</u>
<u>1</u>	<u>EA</u>	<u>GASKETING</u>	<u>870AA-S</u>		<u>AA</u>	<u>ZER</u>
1	EA	MEETING STILE	383AA		AA	ZER
<u>1</u>	<u>EA</u>	<u>THRESHOLD</u>	<u>566A</u>		<u>A</u>	<u>ZER</u>
1	EA	GASKETING	488S		BK	ZER
<u>1</u>	<u>EA</u>	<u>MOUNTING BRACKET</u>	<u>870SPB</u>			<u>ZER</u>
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 136

For use on Door #(s):

M108A	M109A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	✓	689	LCN
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 137

For use on Door #(s):

K101A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	AUTO FLUSH BOLT	FB41P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	COORDINATOR	COR X FL		628	IVE
2	EA	MOUNTING BRACKET	MB		689	IVE
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	✓	689	LCN
1	EA	MEETING STILE	383AA		AA	ZER
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 138

For use on Door #(s):

E112B	M110A	M119A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		630	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	630	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

NOTES:

1) KEYED INSIDE FOR DOOR E112B AND M119A.

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 139

For use on Door #(s):

L119K

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		630	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	630	MCK
2	EA	MANUAL FLUSH BOLT	FB458		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP HW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
2	EA	DOOR SWEEP	39A		A	ZER
1	EA	THRESHOLD	655A		A	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			
<p>OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.</p> <p>LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.</p>						

Hardware Group No. 140

For use on Door #(s):

E111B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	SET	CONST LATCHING BOLT	FB51P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	INSTITUTIONAL LOCK	PB 5430LN - KEYED TO EXISTING YALE KEY SYSTEM, COORDINATE WITH OWNER		626	YAL
2	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 141

For use on Door #(s):

E112A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	PANIC HARDWARE	LD-XP98-EO	626	VON
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 142

For use on Door #(s):

C133B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	PANIC HARDWARE	98-L-17	626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER	626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 143

For use on Door #(s):

D126A

D130A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	PANIC HARDWARE	98-L-17-SNB	626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER	626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	DOOR WRAP	AS REQUIRED		DON
		NOTE	BALANCE OF HARDWARE EXISTING		

NOTES:

1) FIELD VERIFY EXISTING CONDITIONS. VERIFY/COORDINATE PREPS ON EXISTING DOORS AND FRAMES. PROVIDE FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING DOORS AND FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE.

Hardware Group No. 144

For use on Door #(s):

L119C	L119D
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1HW 5 X 4.5 NRP	652	IVE
1	EA	REMOVABLE MULLION	4954 STAB	689	VON
2	EA	PANIC HARDWARE	LD-98-EO	626	VON
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 145

For use on Door #(s):

L119B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1HW 5 X 4.5 NRP	652	IVE
1	EA	REMOVABLE MULLION	KR4954 STAB	689	VON
2	EA	PANIC HARDWARE	LD-98-EO	626	VON
1	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER	626	YAL
2	EA	SURFACE CLOSER	4040XP SHCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 146

For use on Door #(s):

E139A	E139C
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1HW 5 X 4.5 NRP	652	IVE
1	EA	REMOVABLE MULLION	KR4954XP STAB	689	VON
2	EA	PANIC HARDWARE	LD-XP98-EO	626	VON
1	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER	626	YAL
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	689	LCN
2	EA	SILENCER	SR64	GRY	IVE

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

ALL WIRING AND CONDUIT BY ELECTRICAL CONTRACTOR. COORDINATE ALL WIRING AND INSTALLATION WITH ELECTRICAL AND SECURITY CONTRACTORS.

MAGNETIC HOLD OPEN IS CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. ACTIVATION OF LOCKDOWN SYSTEM AND/OR LOSS OF POWER TO THE MAGNETIC HOLD OPEN WILL RELEASE THE MAGNETS CAUSING THE DOOR CLOSER TO CLOSE THE DOOR. DOORS CAN ALSO BE MANUALLY RELEASED FROM THE MAGNET.

Hardware Group No. 147

For use on Door #(s):

G112D	H108A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1HW 5 X 4.5	652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-BE-F-LBR-17	626	VON
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
2	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	MEETING STILE	8217S	BK	ZER
1	EA	GASKETING	488S	BK	ZER

Hardware Group No. 148

For use on Door #(s):

E122C

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-BE-F-LBR-17	626	VON
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	MEETING STILE	8217S	BK	ZER
1	EA	GASKETING	488S	BK	ZER

Hardware Group No. 149

For use on Door #(s):

C133A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	PANIC HARDWARE	9849-EO-LBL	626	VON
2	EA	PANIC HARDWARE	9850WDC-EO-LBL-SNB	626	VON
2	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
2	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 150

For use on Door #(s):

E104A	E113A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
8	EA	HINGE	5BB1HW 5 X 4.5	652	IVE
2	EA	FIRE EXIT HARDWARE	9849-EO-F-LBL	626	VON
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	689	LCN
1	EA	GASKETING	488S	BK	ZER
1	EA	ASTRAGAL	PROVIDED BY DOOR SUPPLIER		

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

Hardware Group No. 151

For use on Door #(s):

B112A	B112B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	FIRE EXIT HARDWARE	9849-L-BE-F-17-LBL	626	VON
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	689	LCN
1	EA	MEETING STILE	8217S	BK	ZER
1	EA	GASKETING	488S	BK	ZER

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

Hardware Group No. 151A

For use on Door #(s):

M119B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
<u>6</u>	<u>EA</u>	<u>HINGE</u>	<u>5BB1HW 4.5 X 4.5 NRP</u>		<u>652</u>	<u>IVE</u>
<u>2</u>	<u>EA</u>	<u>FIRE EXIT HARDWARE</u>	<u>9827-EO-F-LBR</u>		<u>626</u>	<u>VON</u>
<u>2</u>	<u>EA</u>	<u>SURFACE CLOSER</u>	<u>4040XP RW/PA</u> <u>- PUSH-SIDE</u>		<u>689</u>	<u>LCN</u>
<u>2</u>	<u>EA</u>	<u>KICK PLATE</u>	<u>8400 10" X 1" LDW B-CS</u>		<u>630</u>	<u>IVE</u>
<u>2</u>	<u>EA</u>	<u>FIRE/LIFE WALL MAG</u>	<u>SEM7850 (COORDINATE</u> <u>VOLTAGE AS REQ'D)</u> <u>- EXTENSIONS AS REQ'D</u>	<u>✓</u>	<u>689</u>	<u>LCN</u>
<u>1</u>	<u>EA</u>	<u>MEETING STILE</u>	<u>8217S</u>		<u>BK</u>	<u>ZER</u>
<u>1</u>	<u>EA</u>	<u>GASKETING</u>	<u>488S</u>		<u>BK</u>	<u>ZER</u>

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

Hardware Group No. 152

For use on Door #(s):

B100A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
2	EA	FIRE EXIT HARDWARE	9849-L-BE-F-17-LBL		626	VON
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	✓	689	LCN
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR).

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

Hardware Group No. 153

For use on Door #(s):

L119J

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	POWER TRANSFER	EPT10 CON	✓	689	VON
1	EA	FIRE EXIT HARDWARE	9849-EO-F-LBL		626	VON
1	EA	ELEC FIRE EXIT HARDWARE	RX-9849-EO-F-ALK-LBL-CON (HARDWIRED)	✓	626	VON
1	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	ASTRAGAL	PROVIDED BY DOOR SUPPLIER			
1	EA	GASKETING	488S		BK	ZER
1	EA	WIRE HARNESS	CON-XX/XXP (AS REQ'D) - ELECTRIFIED HARDWARE TO POWER TRANSFER (EVALUATE CONDITIONS AND MODIFY WIRE LENGTH AS REQ'D)	✓		SCH
1	EA	WIRE HARNESS	CON-6W - WIRE EXTENSION FROM POWER TRANSFER TO POWER SUPPLY	✓		SCH
1	EA	POWER SUPPLY	PS902 900-2RS - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READER BY OTHERS	✓		

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED. WHEN TOUCH BAR IS DEPRESSED, EGRESS IS ALLOWED, BUT THE INTERNAL ALARM SOUNDS. THE ALARM CAN BE ARMED OR DISARMED BY A KEYED CYLINDER IN EXIT DEVICE CROSS BAR OR MOMENTARILY SHUNTED BY PRESENTING A VALID CREDENTIAL TO THE READER ON THE EGRESS SIDE OF THE OPENING. THE DEVICE INCLUDES A DECAL READING "EMERGENCY EXIT ONLY. ALARM WILL SOUND". THE ALARM DEVICE IS TO BE HARDWIRED.

Hardware Group No. 154

For use on Door #(s):

E112C

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	PANIC HARDWARE	LD-XP98-EO		626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 155

For use on Door #(s):

C132A	C133C	C134A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	PANIC HARDWARE	LD-XP98-EO-SNB		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	DOOR WRAP	AS REQUIRED			DON
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK
		NOTE	BALANCE OF HARDWARE EXISTING			

NOTES:

1) FIELD VERIFY EXISTING CONDITIONS. VERIFY/COORDINATE PREPS ON EXISTING DOORS AND FRAMES. PROVIDE FIELD MODIFICATIONS AND/OR FILLERS TO EXISTING DOORS AND FRAMES AS NECESSARY TO ACCEPT NEW SPECIFIED HARDWARE.

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 156

For use on Door #(s):

M113A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	PANIC HARDWARE	LD-XP98-EO		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 157

For use on Door #(s):

E139E	E139F
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	MULLION	FIXED MULLION			
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
2	EA	PANIC HARDWARE	LD-XP98-EO		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	✓	689	LCN
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

ALL WIRING AND CONDUIT BY ELECTRICAL CONTRACTOR. COORDINATE ALL WIRING AND INSTALLATION WITH ELECTRICAL AND SECURITY CONTRACTORS.

MAGNETIC HOLD OPEN IS CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. ACTIVATION OF LOCKDOWN SYSTEM AND/OR LOSS OF POWER TO THE MAGNETIC HOLD OPEN WILL RELEASE THE MAGNETS CAUSING THE DOOR CLOSER TO CLOSE THE DOOR. DOORS CAN ALSO BE MANUALLY RELEASED FROM THE MAGNET.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 158

For use on Door #(s):

E139B	E139D
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	REMOVABLE MULLION	4954XP STAB		689	VON
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
2	EA	PANIC HARDWARE	LD-XP98-EO		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	✓	689	LCN
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

ALL WIRING AND CONDUIT BY ELECTRICAL CONTRACTOR. COORDINATE ALL WIRING AND INSTALLATION WITH ELECTRICAL AND SECURITY CONTRACTORS.

MAGNETIC HOLD OPEN IS CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. ACTIVATION OF LOCKDOWN SYSTEM AND/OR LOSS OF POWER TO THE MAGNETIC HOLD OPEN WILL RELEASE THE MAGNETS CAUSING THE DOOR CLOSER TO CLOSE THE DOOR. DOORS CAN ALSO BE MANUALLY RELEASED FROM THE MAGNET.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 158A

For use on Door #(s):

D102A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
<u>5</u>	<u>EA</u>	<u>HINGE</u>	<u>5BB1HW 4.5 X 4.5 NRP</u>		<u>652</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>ELECTRIFIED HINGE (HW)</u>	<u>73696 POE</u> <u>- PROVIDED BY INTEGRATOR</u>	✓	<u>652</u>	<u>MCK</u>
<u>1</u>	<u>EA</u>	<u>REMOVABLE MULLION</u>	<u>KR4954XP STAB</u>		<u>689</u>	<u>VON</u>
<u>1</u>	<u>EA</u>	<u>ELECTRONIC EXIT</u> <u>DEVICE TRIM (PoE)</u>	<u>CORBIN-RUSSWIN IN220 - PSA</u> <u>LEVER</u> <u>- PROVIDED BY INTEGRATOR</u>	✓	<u>626</u>	<u>C-R</u>
<u>2</u>	<u>EA</u>	<u>PANIC HARDWARE</u>	<u>LD-XP98-EO</u>		<u>626</u>	<u>VON</u>
<u>1</u>	<u>EA</u>	<u>CYLINDER</u>	<u>KEYED TO EXISTING YALE KEY</u> <u>SYSTEM</u> <u>- COORDINATE WITH OWNER</u>		<u>626</u>	<u>YAL</u>
<u>1</u>	<u>EA</u>	<u>MORTISE CYLINDER</u>	<u>KEYED TO EXISTING YALE KEY</u> <u>SYSTEM</u> <u>- COORDINATE WITH OWNER</u>		<u>626</u>	<u>YAL</u>
<u>2</u>	<u>EA</u>	<u>SURFACE CLOSER</u>	<u>4040XP RW/PA</u> <u>- PUSH-SIDE</u>		<u>689</u>	<u>LCN</u>
<u>2</u>	<u>EA</u>	<u>KICK PLATE</u>	<u>8400 10" X 2" LDW B-CS</u>		<u>630</u>	<u>IVE</u>
<u>2</u>	<u>EA</u>	<u>FIRE/LIFE WALL MAG</u>	<u>SEM7850 (COORDINATE</u> <u>VOLTAGE AS REQ'D)</u> <u>- EXTENSIONS AS REQ'D</u>	✓	<u>689</u>	<u>LCN</u>
<u>2</u>	<u>EA</u>	<u>SILENCER</u>	<u>SR64</u>		<u>GRY</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>POE WIRE HARNESS</u> <u>(HINGE TO LOCK X HINGE</u> <u>TO CEILING)</u>	<u>94212/3 X 94217</u> <u>- PROVIDED BY INTEGRATOR</u>	✓		<u>MCK</u>

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

ALL WIRING AND CONDUIT BY ELECTRICAL CONTRACTOR. COORDINATE ALL WIRING AND INSTALLATION WITH ELECTRICAL AND SECURITY CONTRACTORS.

MAGNETIC HOLD OPEN IS CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. ACTIVATION OF LOCKDOWN SYSTEM AND/OR LOSS OF POWER TO THE MAGNETIC HOLD OPEN WILL RELEASE THE MAGNETS CAUSING THE DOOR CLOSER TO CLOSE THE DOOR. DOORS CAN ALSO BE MANUALLY RELEASED FROM THE MAGNET.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 159

For use on Door #(s):

H106B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	REMOVABLE MULLION	4954XP STAB		689	VON
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
2	EA	PANIC HARDWARE	LD-XP98-EO		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
2	EA	WALL STOP	WS406/407CCV		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 160

For use on Door #(s):

H106A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	REMOVABLE MULLION	KR4954XP STAB		689	VON
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
2	EA	PANIC HARDWARE	LD-XP98-EO		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 8" X 2" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 161

For use on Door #(s):

L119A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	REMOVABLE MULLION	4954 STAB		689	VON
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	PANIC HARDWARE	LD-98-L-NL-17		626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
		NOTE	CARD READER BY OTHERS	✓		

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 162

For use on Door #(s):

G112E

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	POWER TRANSFER	EPT10	✓	689	VON
1	EA	ELEC FIRE EXIT HARDWARE	XP98-L-F-M996-17-FS	✓	626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POWER SUPPLY	PS902 900-4R-FA - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READER BY OTHERS	✓		

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE TRIM ALLOWING ACCESS. DOOR TO REMAIN UNLOCKED UPON LOSS OF POWER OR ACTIVATION OF THE FIRE ALARM AND LOCKED UPON ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 163

For use on Door #(s):

E122B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	FIRE EXIT HARDWARE	XP98-EO-F		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 164

For use on Door #(s):

G208B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100SE		630	GLY
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
1	EA	WEATHER RING	8310-801		PLA	LCN
1	EA	RELAY/DOOR SEQUENCER	8310-845	✓	689	LCN
1	EA	ACTUATOR, WALL MOUNT	8310-853T	✓	630	LCN
1	EA	FLUSH MOUNT BOX	8310-867F	✓	689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-4RL - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER LISTED FOR DOOR G208A WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR AT THIS TIME WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE EXTERIOR AND INTERIOR DOOR SIMULTANEOUSLY.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE EXTERIOR AND INTERIOR DOOR SIMULTANEOUSLY.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 165

For use on Door #(s):

E123A	E123B	E123C	G208C	G208D	G208E
G208F	G208G	G208H	G208J		

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA THE ACCESS CONTROL SYSTEM.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 166

For use on Door #(s):

E101A	E123D	G208A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-NL-OP-110MD		626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 NL		630	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND FOR DOOR G208B ONLY WILL ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 167

For use on Door #(s):

M103A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-NL-OP-110MD		626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 NL		630	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP HEDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 168

For use on Door #(s):

F103A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY TWP CON	✓	628	IVE
1	EA	REMOVABLE MULLION	KR4954 STAB		689	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-98-EO-CON	✓	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-98-NL-OP-110MD-CON	✓	626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	DOOR PULL	VR910 NL		630	IVE
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	MULLION SEAL	8780N		BK	ZER
2	EA	WIRE HARNESS	CON-XX/XXP (AS REQ'D) - ELECTRIFIED HARDWARE TO POWER TRANSFER (EVALUATE CONDITIONS AND MODIFY WIRE LENGTH AS REQ'D)	✓		SCH
2	EA	WIRE HARNESS	CON-6W - WIRE EXTENSION FROM POWER TRANSFER TO POWER SUPPLY	✓		SCH
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	POWER SUPPLY	PS904 900-4RL - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

NOTES:

1) POWER SUPPLY SHARED WITH DOOR F103B.

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY RETRACT THE PANIC DEVICE LATCH ALLOWING ACCESS.

DEVICES ARE ALSO CAPABLE OF BEING ELECTRONICALLY DOGGED DOWN FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE REQUEST TO EXIT FEATURE OF THE DEVICE TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACTS DURING VALID EGRESS. DOOR CONTACTS MONITOR WHETHER THE DOORS ARE OPENED, CLOSED OR HELD OPEN TOO LONG. DOORS TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 169

For use on Door #(s):

L126E

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY		628	IVE
1	EA	REMOVABLE MULLION	4954 STAB		689	VON
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	PANIC HARDWARE	LD-98-NL-OP-110MD		626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 NL		630	IVE
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	MULLION SEAL	8780N		BK	ZER
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. FREE EGRESS AT ALL TIMES.

Hardware Group No. 170

For use on Door #(s):

F103B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY TWP CON	✓	628	IVE
1	EA	REMOVABLE MULLION	4954 STAB		689	VON
2	EA	ELEC PANIC HARDWARE	RX-QEL-98-EO-CON	✓	626	VON
2	EA	DOOR PULL	VR910 DT		630	IVE
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	MULLION SEAL	8780N		BK	ZER
2	EA	WIRE HARNESS	CON-XX/XXP (AS REQ'D) - ELECTRIFIED HARDWARE TO POWER TRANSFER (EVALUATE CONDITIONS AND MODIFY WIRE LENGTH AS REQ'D)	✓		SCH
2	EA	WIRE HARNESS	CON-6W - WIRE EXTENSION FROM POWER TRANSFER TO POWER SUPPLY	✓		SCH
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

NOTES:

1) POWER SUPPLY LISTED WITH DOOR F103A.

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED VIA THE ACCESS CONTROL SYSTEM.

DEVICES ARE ALSO CAPABLE OF BEING ELECTRONICALLY DOGGED DOWN FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE REQUEST TO EXIT FEATURE OF THE DEVICE TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACTS DURING VALID EGRESS. DOOR CONTACTS MONITOR WHETHER THE DOORS ARE OPENED, CLOSED OR HELD OPEN TOO LONG. DOORS TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 171

For use on Door #(s):

L126B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	MULLION	FIXED MULLION			
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
2	EA	FIRE EXIT HARDWARE	XP98-EO-F		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	✓	689	LCN
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR) AND LOCKDOWN SYSTEM.

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM AND/OR LOCKDOWN SYSTEM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 172

For use on Door #(s):

B108A	B108B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	FIRE RATED REMOVABLE MULLION	KR9954XP STAB		689	VON
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
2	EA	FIRE EXIT HARDWARE	XP98-EO-F		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7850 (COORDINATE VOLTAGE AS REQ'D) - EXTENSIONS AS REQ'D	✓	689	LCN
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE WALL MAGNETS SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR) AND LOCKDOWN SYSTEM.

MAGNETIC HOLD OPENS ARE CONTINUOUSLY ENERGIZED ALLOWING THE DOORS TO BE HELD OPEN UNDER NORMAL BUILDING CONDITIONS. WHEN THE FIRE ALARM AND/OR LOCKDOWN SYSTEM IS ACTIVATED, POWER TO THE MAGNETIC HOLD OPEN IS DISCONNECTED CAUSING THE DOOR CLOSER TO CLOSE THE DOORS.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 173

For use on Door #(s):

L120A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	FIRE RATED REMOVABLE MULLION	9954XP STAB		689	VON
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
2	EA	FIRE EXIT HARDWARE	XP98-EO-F		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100SE		630	GLY
2	EA	FIRE/LIFE CLOSER	4414ME	✓	689	LCN
2	EA	MOUNTING PLATE	4410ME-18G		689	LCN
1	EA	TRANSFORMER	4410ME-3210	✓		LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE LIFE SAFETY ELECTRONIC DOOR CLOSER SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR) AND LOCKDOWN SYSTEM.

DOORS NORMALLY HELD OPEN BY ELECTRONIC DOOR CLOSER. ELECTRONIC DOOR CLOSER IS WIRED TO THE FIRE ALARM AND LOCKDOWN SYSTEM. WHEN SYSTEM IS ACTIVATED, THE ELECTRONIC DOOR CLOSER RELEASES, AND THE DOOR CLOSES AND LOCKS. DOORS CAN ALSO BE MANUALLY RELEASED.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 174

For use on Door #(s):

L120B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	FIRE RATED REMOVABLE MULLION	KR9954XP STAB		689	VON
2	EA	FIRE EXIT HARDWARE	XP98-EO-F		626	VON
1	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100SE		630	GLY
2	EA	FIRE/LIFE CLOSER	4414ME	✓	689	LCN
2	EA	MOUNTING PLATE	4410ME-18G		689	LCN
1	EA	TRANSFORMER	4410ME-3210	✓		LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

THE LIFE SAFETY ELECTRONIC DOOR CLOSER SHALL BE WIRED TO THE FIRE ALARM PANEL THROUGH A SET OF NORMALLY-CLOSED, DRY CONTACTS (SUPPLIED BY THE FIRE ALARM CONTRACTOR) AND LOCKDOWN SYSTEM.

DOORS NORMALLY HELD OPEN BY ELECTRONIC DOOR CLOSER. ELECTRONIC DOOR CLOSER IS WIRED TO THE FIRE ALARM AND LOCKDOWN SYSTEM. WHEN SYSTEM IS ACTIVATED, THE ELECTRONIC DOOR CLOSER RELEASES, AND THE DOOR CLOSSES AND LOCKS. DOORS CAN ALSO BE MANUALLY RELEASED.

Hardware Group No. 175

For use on Door #(s):

L119F	L119G	L119H
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	FIRE RATED REMOVABLE MULLION	9954 STAB		689	VON
2	EA	ELEC FIRE EXIT HARDWARE	RX-98-EO-F-ALK (9-VOLT BATTERY)	✓	626	VON
2	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED. WHEN TOUCH BAR IS DEPRESSED, EGRESS IS ALLOWED, BUT THE INTERNAL ALARM SOUNDS. THE ALARM CAN BE ARMED OR DISARMED BY A KEYED CYLINDER IN EXIT DEVICE CROSS BAR. THE DEVICE INCLUDES A DECAL READING "EMERGENCY EXIT ONLY. ALARM WILL SOUND". THE ALARM DEVICES ARE NOT TO BE HARDWIRED.

Hardware Group No. 176

For use on Door #(s):

L119E

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
2	EA	POWER TRANSFER	EPT10 CON	✓	689	VON
1	EA	FIRE RATED REMOVABLE MULLION	KR9954 STAB		689	VON
1	EA	ELEC FIRE EXIT HARDWARE	RX-98-EO-F-ALK-CON (HARDWIRED)	✓	626	VON
1	EA	ELEC FIRE EXIT HARDWARE	RX-98-L-F-M996-17-FSE-ALK-CON (HARDWIRED)	✓	626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
3	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	GASKETING	488S		BK	ZER
2	EA	WIRE HARNESS	CON-XX/XXP (AS REQ'D) - ELECTRIFIED HARDWARE TO POWER TRANSFER (EVALUATE CONDITIONS AND MODIFY WIRE LENGTH AS REQ'D)	✓		SCH
2	EA	WIRE HARNESS	CON-6W - WIRE EXTENSION FROM POWER TRANSFER TO POWER SUPPLY	✓		SCH
1	EA	POWER SUPPLY	PS902 900-2RS - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READER BY OTHERS	✓		

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOORS NORMALLY CLOSED AND LOCKED. WHEN TOUCH BAR IS DEPRESSED, EGRESS IS ALLOWED, BUT THE INTERNAL ALARM SOUNDS. THE ALARM CAN BE ARMED OR DISARMED BY A KEYED CYLINDER IN EXIT DEVICE CROSS BAR OR MOMENTARILY SHUNTED BY PRESENTING A VALID CREDENTIAL TO THE READER ON THE EGRESS SIDE OF THE OPENING. PRESENTING A VALID CREDENTIAL TO THE READER ON THE INGRESS SIDE OF THE OPENING WILL MOMENTARILY UNLOCK THE TRIM ALLOWING ACCESS. THE DEVICE INCLUDES A DECAL READING "EMERGENCY EXIT ONLY. ALARM WILL SOUND". THE ALARM DEVICES ARE TO BE HARDWIRED.

Hardware Group No. 177

For use on Door #(s):

D145A	G112A	G112B	G112C	L125B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG.

Hardware Group No. 178

For use on Door #(s):

E122A	H108B	M125B	M125C
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY		628	IVE
1	EA	MULLION	FIXED MULLION			
2	EA	PANIC HARDWARE	LD-98-EO		626	VON
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG.

Hardware Group No. 178A

For use on Door #(s):

H108B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
<u>2</u>	<u>EA</u>	<u>CONT. HINGE</u>	<u>112XY</u>		<u>315AN</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>MULLION</u>	<u>FIXED MULLION</u>			
<u>2</u>	<u>EA</u>	<u>PANIC HARDWARE</u>	<u>LD-98-EO</u>		<u>626</u>	<u>VON</u>
<u>2</u>	<u>EA</u>	<u>OH STOP</u>	<u>100S</u>		<u>630</u>	<u>GLY</u>
<u>2</u>	<u>EA</u>	<u>SURFACE CLOSER</u>	<u>4040XP EDA</u>		<u>689</u>	<u>LCN</u>
<u>2</u>	<u>EA</u>	<u>DOOR SWEEP</u>	<u>8198BK</u>		<u>BK</u>	<u>ZER</u>
<u>1</u>	<u>EA</u>	<u>THRESHOLD</u>	<u>566A</u>		<u>A</u>	<u>ZER</u>
<u>2</u>	<u>EA</u>	<u>DOOR CONTACT</u>	<u>679-05HM</u>	✓	<u>BLK</u>	<u>SCE</u>
		<u>NOTE</u>	<u>WEATHERSTRIPPING BY</u> <u>DOOR/FRAME MFG.</u>			
<u>OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT</u> <u>LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.</u>						
<u>DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN</u> <u>TOO LONG.</u>						

Hardware Group No. 179

For use on Door #(s):

G207K	G207L	L126C	L126D	L126G	L126H
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY		628	IVE
1	EA	REMOVABLE MULLION	4954 STAB		689	VON
2	EA	PANIC HARDWARE	LD-98-EO		626	VON
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	MULLION SEAL	8780N		BK	ZER
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY			
			DOOR/FRAME MFG.			
OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.						
DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG.						

Hardware Group No. 180

For use on Door #(s):

G207M	L126F	M118B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY		628	IVE
1	EA	REMOVABLE MULLION	KR4954 STAB		689	VON
2	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP HEDA		689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	MULLION SEAL	8780N		BK	ZER
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG.

Hardware Group No. 181

For use on Door #(s):

G111A	G111B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
		NOTE	HARDWARE BY DOOR MANUFACTURER			

Hardware Group No. 182

For use on Door #(s):

E200A	E200B	E200C	E200D	E200E	E200F
E200G	E200H	E200J	E200K	E200L	E200M
E200N	E200P				

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
		NOTE	HARDWARE BY GATE MANUFACTURER			

Hardware Group No. 183

For use on Door #(s):

C105A	C108C	C108E	C111B	E101B	E101D
G205B	G205C	G206A	H201B	H201C	H201D
H201E	L125A	L126A	M107B	M107C	M107D
M113B	M113C	M113D	M113E	M113F	M117B
M118C	M118D	M125B	M125A	M125D	M125E

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
		NOTE	HARDWARE BY DOOR MANUFACTURER			

Hardware Group No. 201

For use on Door #(s):

G117A	H106A	H114A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	PASSAGE LATCH	PB 5401LN		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 202

For use on Door #(s):

J104A	J105A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	PASSAGE LATCH	PB 5401LN		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	SET	GASKETING	870AA-S		AA	ZER
1	EA	DOOR BOTTOM	364AA-Z49		AA	ZER
1	EA	THRESHOLD	164A		A	ZER

Hardware Group No. 203

For use on Door #(s):

G107A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	PASSAGE LATCH	PB 5401LN		626	YAL
1	EA	OH STOP	100S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. 204

For use on Door #(s):

J106A	J108A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	PASSAGE LATCH	PB 5401LN		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 205

For use on Door #(s):

G122A	G122C	G122D
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	DUMMY PUSH BAR	350		626	VON
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

Hardware Group No. 206

For use on Door #(s):

G122B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	DUMMY PUSH BAR	350		626	VON
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100SE		630	GLY
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
1	EA	ACTUATOR, JAMB MOUNT	8310-818T	✓	630	LCN
1	EA	FLUSH JAMB MOUNT BOX	8310-819F	✓	PLA	LCN
1	EA	RELAY/DOOR SEQUENCER	8310-845	✓	689	LCN
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

ACTUATOR BUTTON IS ENABLED WHEN THE OPERATOR IS TURNED ON. PUSHING ENABLED ACTUATOR BUTTON WILL CAUSE THE AUTOMATIC OPERATOR TO MOMENTARILY OPEN BOTH THE INTERIOR AND EXTERIOR DOOR SIMULTANEOUSLY. FREE EGRESS AT ALL TIMES.

Hardware Group No. 207

For use on Door #(s):

G105A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		626	IVE
1	EA	PRIVACY LOCK W/INDICATOR	PBR 8802FL IND		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 208

For use on Door #(s):

H103A	J107A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		626	IVE
1	EA	PRIVACY LOCK W/INDICATOR	PBR 8802FL IND		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 209

For use on Door #(s):

G118A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		626	IVE
1	EA	PRIVACY LOCK W/INDICATOR	PBR 8802FL IND		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 210

For use on Door #(s):

G104A	G106A	G106B	G108A	G109A	G111A
G112A	G114A	G125A	H105A	H107A	H108A
H109A	H110A	H112A	H113A	H116A	H117A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 211

For use on Door #(s):

J101A	J102B	J102B	J110A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	SET	GASKETING	870AA-S		AA	ZER
1	EA	DOOR BOTTOM	364AA-Z49		AA	ZER
1	EA	THRESHOLD	164A		A	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 212

For use on Door #(s):

G117B	G127A	G128A	G129A	G202A	G203A
G204A	G206A	G207A			

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 213

For use on Door #(s):

G116A	G130A	G209A	H104A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 214

For use on Door #(s):

J109A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB61P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	OH STOP	100S		630	GLY
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 215

For use on Door #(s):

G211A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 216

For use on Door #(s):

J203A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 217

For use on Door #(s):

J201A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
<u>1</u>	<u>EA</u>	<u>GASKETING</u>	<u>488S</u>		<u>BK</u>	<u>ZER</u>
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 218

For use on Door #(s):

G124A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 219

For use on Door #(s):

J202A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 220

For use on Door #(s):

G121A	G121B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB51P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP HW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	WALL STOP	WS406/407CCV		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 221

For use on Door #(s):

H102A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 222

For use on Door #(s):

G210A	G213A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	CONST LATCHING BOLT	FB51P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 223

For use on Door #(s):

J102C

J102C

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	SET	AUTO FLUSH BOLT	FB41P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	COORDINATOR	COR X FL		628	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	MEETING STILE	383AA		AA	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 224

For use on Door #(s):

G113A	J114A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	ELECTRONIC LOCK (PoE)	CL33134-PZD-IN220-IP-B-LC - PROVIDED BY INTEGRATOR	✓	626	C-R
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. INSIDE LEVER ALWAYS ALLOWS FREE EGRESS. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK.

Hardware Group No. 225

For use on Door #(s):

G101G

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	STOREROOM LOCK	PB 5405LN - KEYED TO EXISTING YALE KEY SYSTEM, COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE (POE)	4200 (FAIL-SECURE)	✓	630	TRN
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	DESK MOUNT BUTTON	660-PB	✓	628	SCE
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	INTERCOM SYSTEM BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO THE READER OR PRESSING PUSH BUTTON AT RECEPTION DESK WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS. DOOR TO REMAIN LOCKED UPON LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 226

For use on Door #(s):

G103A	H101A
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	INSTITUTIONAL LOCK	PB 5430LN - KEYED TO EXISTING YALE KEY SYSTEM, COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE (POE)	4200 (FAIL-SECURE)	✓	630	TRN
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-1630 - PULL-SIDE		689	LCN
1	EA	TOP JAMB MTG PLATE	4040XP-18TJ		689	LCN
1	EA	ENTRY BUZZER	623GR	✓	626	SCE
1	EA	DESK MOUNT BUTTON	660-PB	✓	628	SCE
		NOTE	CARD READERS BY OTHERS	✓		

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

UNLOCKED HOURS: DOOR NORMALLY CLOSED AND LOCKED AND ENTRY BUZZER ON SCHOOL CORRIDOR SIDE SHALL BE ENABLED BY ACCESS CONTROL SYSTEM. PRESSING ENTRY BUZZER ON SCHOOL CORRIDOR SIDE WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS FROM SCHOOL CORRIDOR INTO OFFICE. OFFICE SIDE ALWAYS LOCKED PREVENTING FREE PASSAGE FROM OFFICE INTO THE SCHOOL. PRESENTING A VALID CREDENTIAL TO THE READER ON SCHOOL OFFICE SIDE, OR PUSH BUTTON AT RECEPTION DESK, WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS FROM OFFICE INTO SCHOOL. DOOR TO REMAIN LOCKED UPON LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM.

LOCKED HOURS: DOOR NORMALLY CLOSED AND LOCKED AND ENTRY BUZZER ON SCHOOL CORRIDOR SIDE SHALL BE DISABLED BY ACCESS CONTROL SYSTEM. THUS LOCKED IN BOTH DIRECTIONS. PRESENTING A VALID CREDENTIAL TO THE READER ON EITHER SIDE OR PUSH BUTTON AT RECEPTION DESK, WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS. DOOR TO REMAIN LOCKED UPON LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM.

Hardware Group No. 227

For use on Door #(s):

H115A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	INSTITUTIONAL LOCK	PB 5430LN - KEYED TO EXISTING YALE KEY SYSTEM, COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE (POE)	4200 (FAIL-SECURE)	✓	630	TRN
1	EA	SURFACE CLOSER	4040XP RW/PA - PULL-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
		NOTE	CARD READERS BY OTHERS	✓		
<p>OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.</p> <p>DOOR NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO EITHER READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE ALLOWING ACCESS/EGRESS. DOOR TO REMAIN LOCKED UPON LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM.</p>						

Hardware Group No. 228

For use on Door #(s):

G120A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	FIRE EXIT HARDWARE	98-L-BE-F-17		626	VON
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. [228A](#)

For use on Door #(s):

[G208A](#)

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	FIRE EXIT HARDWARE	98-L-BE-F-17		626	VON
1	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER

Hardware Group No. 229

For use on Door #(s):

J115A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
2	EA	POWER TRANSFER	EPT10 CON	✓	689	VON
1	EA	ELEC FIRE EXIT HARDWARE	QEL-9827-L-DT-F-LBR-17-CON	✓	626	VON
1	EA	ELEC FIRE EXIT HARDWARE	QEL-9827-L-NL-F-LBR-17-CON	✓	626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	MEETING STILE	8217S		BK	ZER
2	EA	WIRE HARNESS	CON-XX/XXP (AS REQ'D) - ELECTRIFIED HARDWARE TO POWER TRANSFER (EVALUATE CONDITIONS AND MODIFY WIRE LENGTH AS REQ'D)	✓		SCH
2	EA	WIRE HARNESS	CON-6W - WIRE EXTENSION FROM POWER TRANSFER TO POWER SUPPLY	✓		SCH
1	EA	POWER SUPPLY	PS902 900-2RS-FA - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READER BY OTHERS	✓		
<p>OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.</p> <p>DOORS NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY RETRACT THE PANIC DEVICE LATCH ALLOWING ACCESS.</p> <p>DEVICES ARE ALSO CAPABLE OF BEING ELECTRONICALLY DOGGED DOWN FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.</p> <p>DOORS TO REMAIN LOCKED WITH LOSS OF POWER, ACTIVATION OF THE FIRE ALARM OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.</p>						

Hardware Group No. 230

For use on Door #(s):

J114C

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	POWER TRANSFER	EPT10	✓	689	VON
1	EA	ELEC FIRE EXIT HARDWARE	XP98-L-F-M996-17-FS	✓	626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	POWER SUPPLY	PS902 900-4R-FA - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	CARD READER BY OTHERS	✓		

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE TRIM ALLOWING ACCESS. DOOR TO REMAIN UNLOCKED UPON LOSS OF POWER OR ACTIVATION OF THE FIRE ALARM AND LOCKED UPON ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 231

For use on Door #(s):

J103A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
5	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	ELECTRIFIED HINGE (HW)	73696 POE - PROVIDED BY INTEGRATOR	✓	652	MCK
1	EA	FIRE RATED REMOVABLE MULLION	KR9954XP STAB		689	VON
1	EA	ELECTRONIC EXIT DEVICE TRIM (PoE)	CORBIN-RUSSWIN IN220 - PSA LEVER - PROVIDED BY INTEGRATOR	✓	626	C-R
2	EA	FIRE EXIT HARDWARE	XP98-EO-F		626	VON
1	EA	CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	MORTISE CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
2	EA	SURFACE CLOSER	4040XP RW/PA - PUSH-SIDE		689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
2	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488S		BK	ZER
1	EA	MEETING STILE	8217S		BK	ZER
1	EA	POE WIRE HARNESS (HINGE TO LOCK X HINGE TO CEILING)	94212/3 X 94217 - PROVIDED BY INTEGRATOR	✓		MCK

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

LOCKSET IS NORMALLY SECURE. PRESENTING VALID CREDENTIAL TO CARD READER WILL MOMENTARILY UNLOCK LOCK AND ALLOW ENTRY. VALID TOGGLE CREDENTIAL CAN PROVIDE PASSAGE STATUS. DURING LOCKDOWN THE STATUS WILL CHANGE TO LOCK. FREE EGRESS AT ALL TIMES.

Hardware Group No. 232

For use on Door #(s):

G102A	G102B	G102C	G102D	<u>G102E</u>	<u>G102F</u>
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA THE ACCESS CONTROL SYSTEM.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 233

For use on Door #(s):

G102F

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-NL-OP-110MD		626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 NL		630	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND FOR DOOR G102E ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 234

For use on Door #(s):

G102E

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100SE		630	GLY
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
2	EA	ACTUATOR, JAMB MOUNT	8310-818T	✓	630	LCN
2	EA	SURFACE MOUNT BOX	8310-819S	✓	PLA	LCN
1	EA	POWER SUPPLY	PS902 900-4RL - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER LISTED FOR DOOR G102F WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR AT THIS TIME WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR. PUSH INTERIOR ACTUATOR AT ANY TIME WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE AND SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE. PUSHING EITHER AUTO OPERATOR ACTUATOR WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 234A

For use on Door #(s):

G102A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
<u>1</u>	<u>EA</u>	<u>CONT. HINGE</u>	<u>112XY</u>		<u>628</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>PANIC HARDWARE</u>	<u>LD-98-NL-OP-110MD</u>		<u>626</u>	<u>VON</u>
<u>1</u>	<u>EA</u>	<u>RIM CYLINDER</u>	<u>KEYED TO EXISTING YALE KEY SYSTEM</u> <u>- COORDINATE WITH OWNER</u>		<u>626</u>	<u>YAL</u>
<u>1</u>	<u>EA</u>	<u>ELECTRIC STRIKE</u>	<u>4850-PoE</u>	✓	<u>630</u>	<u>TRN</u>
<u>1</u>	<u>EA</u>	<u>DOOR PULL</u>	<u>VR910 NL</u>		<u>630</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>OH STOP</u>	<u>100SE</u>		<u>630</u>	<u>GLY</u>
<u>1</u>	<u>EA</u>	<u>SURF. AUTO OPERATOR</u>	<u>4642 WMS</u>	✓	<u>689</u>	<u>LCN</u>
<u>2</u>	<u>EA</u>	<u>ACTUATOR, JAMB MOUNT</u>	<u>8310-818T</u>	✓	<u>630</u>	<u>LCN</u>
<u>2</u>	<u>EA</u>	<u>SURFACE MOUNT BOX</u>	<u>8310-819S</u>	✓	<u>PLA</u>	<u>LCN</u>
<u>1</u>	<u>EA</u>	<u>POWER SUPPLY</u>	<u>PS902 900-4RL</u> <u>- COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER</u>	✓		<u>VON</u>
		<u>NOTE</u>	<u>CARD READER BY OTHERS</u>	✓		
		<u>NOTE</u>	<u>WEATHERSTRIPPING BY DOOR/FRAME MFG.</u>			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR AT THIS TIME WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR. PUSH INTERIOR ACTUATOR AT ANY TIME WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE AND SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE. PUSHING EITHER AUTO OPERATOR ACTUATOR WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 235

For use on Door #(s):

G101E

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100SE		630	GLY
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
2	EA	ACTUATOR, JAMB MOUNT	8310-818T	✓	630	LCN
2	EA	SURFACE MOUNT BOX	8310-819S	✓	PLA	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-4RL - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER LISTED FOR DOOR G101F WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR AT THIS TIME WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR. PUSH INTERIOR ACTUATOR AT ANY TIME WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE AND SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE. PUSHING EITHER AUTO OPERATOR ACTUATOR WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 235A

For use on Door #(s):

G101A

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
<u>1</u>	<u>EA</u>	<u>CONT. HINGE</u>	<u>112XY</u>		<u>628</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>PANIC HARDWARE</u>	<u>LD-98-NL-OP-110MD</u>		<u>626</u>	<u>VON</u>
<u>1</u>	<u>EA</u>	<u>RIM CYLINDER</u>	<u>KEYED TO EXISTING YALE KEY SYSTEM</u> <u>- COORDINATE WITH OWNER</u>		<u>626</u>	<u>YAL</u>
<u>1</u>	<u>EA</u>	<u>ELECTRIC STRIKE</u>	<u>4850-PoE</u>	✓	<u>630</u>	<u>TRN</u>
<u>1</u>	<u>EA</u>	<u>DOOR PULL</u>	<u>VR910 NL</u>		<u>630</u>	<u>IVE</u>
<u>1</u>	<u>EA</u>	<u>OH STOP</u>	<u>100SE</u>		<u>630</u>	<u>GLY</u>
<u>1</u>	<u>EA</u>	<u>SURF. AUTO OPERATOR</u>	<u>4642 WMS</u>	✓	<u>689</u>	<u>LCN</u>
<u>2</u>	<u>EA</u>	<u>ACTUATOR, JAMB MOUNT</u>	<u>8310-818T</u>	✓	<u>630</u>	<u>LCN</u>
<u>2</u>	<u>EA</u>	<u>SURFACE MOUNT BOX</u>	<u>8310-819S</u>	✓	<u>PLA</u>	<u>LCN</u>
<u>1</u>	<u>EA</u>	<u>DOOR SWEEP</u>	<u>8198AA</u>		<u>AA</u>	<u>ZER</u>
<u>1</u>	<u>EA</u>	<u>THRESHOLD</u>	<u>566A</u>		<u>A</u>	<u>ZER</u>
<u>1</u>	<u>EA</u>	<u>DOOR CONTACT</u>	<u>679-05HM</u>	✓	<u>BLK</u>	<u>SCE</u>
<u>1</u>	<u>EA</u>	<u>MOTION SENSOR</u>	<u>SCANII</u>	✓	<u>BLK</u>	<u>SCE</u>
<u>1</u>	<u>EA</u>	<u>POWER SUPPLY</u>	<u>PS902 900-4RL</u> <u>- COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER</u>	✓		<u>VON</u>
		<u>NOTE</u>	<u>CARD READER BY OTHERS</u>	✓		
		<u>NOTE</u>	<u>WEATHERSTRIPPING BY DOOR/FRAME MFG.</u>			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR AT THIS TIME WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR. PUSH INTERIOR ACTUATOR AT ANY TIME WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE AND SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE. PUSHING EITHER AUTO OPERATOR ACTUATOR WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE DOOR.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 236

For use on Door #(s):

G123B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100SE		630	GLY
1	EA	SURF. AUTO OPERATOR	4642 WMS	✓	689	LCN
1	EA	ACTUATOR, JAMB MOUNT	8310-818T	✓	630	LCN
1	EA	FLUSH JAMB MOUNT BOX	8310-819F	✓	PLA	LCN
1	EA	RELAY/DOOR SEQUENCER	8310-845	✓	689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-4RL - COORDINATE POWER SUPPLY REQUIREMENTS W/SECURITY PROVIDER	✓		VON
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER LISTED FOR DOOR G123A WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR AT THIS TIME WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE EXTERIOR AND INTERIOR DOOR SIMULTANEOUSLY.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE. PUSHING EXTERIOR AUTO OPERATOR ACTUATOR WILL SIGNAL AUTO OPERATOR TO MOMENTARILY OPEN THE EXTERIOR AND INTERIOR DOOR SIMULTANEOUSLY.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 237

For use on Door #(s):

G101A	G101B	G101C	G101D	G101E	G101F
G123C	G123D				

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 DT		630	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA THE ACCESS CONTROL SYSTEM.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 238

For use on Door #(s):

G101E	G123A	J103B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-NL-OP-110MD		626	VON
1	EA	RIM CYLINDER	KEYED TO EXISTING YALE KEY SYSTEM - COORDINATE WITH OWNER		626	YAL
1	EA	ELECTRIC STRIKE	4850-PoE	✓	630	TRN
1	EA	DOOR PULL	VR910 NL		630	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
1	EA	MOTION SENSOR	SCANII	✓	BLK	SCE
		NOTE	CARD READER BY OTHERS	✓		
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR NORMALLY CLOSED AND LOCKED VIA ACCESS CONTROL SYSTEM. PRESENTING A VALID CREDENTIAL TO THE READER WILL MOMENTARILY UNLOCK THE ELECTRIC STRIKE (ALLOWING ACCESS) AND FOR DOORS G101E AND G123B ONLY WILL ACTIVATE EXTERIOR AUTO OPERATOR ACTUATOR.

ELECTRIC STRIKE IS ALSO CAPABLE OF BEING ELECTRONICALLY UNLOCKED FOR CERTAIN TIMES OF THE DAY VIA THE ACCESS CONTROL SYSTEM, THUS IN PUSH/PULL MODE.

THE MOTION SENSOR TO SHUNT THE ALARM OUTPUT OF THE DOOR CONTACT DURING VALID EGRESS. DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG. DOOR TO REMAIN LOCKED WITH LOSS OF POWER OR ACTIVATION OF LOCKDOWN SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 239

For use on Door #(s):

G120B	H118B
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Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	LD-98-EO		626	VON
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
1	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG.

Hardware Group No. 240

For use on Door #(s):

J114B

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY		628	IVE
1	EA	MULLION	FIXED MULLION			
2	EA	PANIC HARDWARE	LD-98-EO		626	VON
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	DOOR SWEEP	8198AA		AA	ZER
1	EA	THRESHOLD	566A		A	ZER
2	EA	DOOR CONTACT	679-05HM	✓	BLK	SCE
		NOTE	WEATHERSTRIPPING BY DOOR/FRAME MFG.			

OPERATIONAL DESCRIPTION: COORDINATE SYSTEM OPERATION AND COMPONENT LOCATIONS WITH THE OWNER, THE ARCHITECT, AND ALL RELATED TRADES.

DOOR CONTACT MONITORS WHETHER THE DOOR IS OPENED, CLOSED OR HELD OPEN TOO LONG.

Hardware Group No. 241

For use on Door #(s):

G131A	G131C	G201A	K103B	G203B	G204B
G203C					

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
			HARDWARE BY DOOR MANUFACTURER			

Hardware Group No.242

For use on Door #(s):

G150

Each to have:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
			<u>HARDWARE BY DOOR MANUFACTURER</u>			

END OF SECTION

SECTION 28 10 00 - ACCESS CONTROL SYSTEM

(ADDENDUM 002)

PART 1 - GENERAL

1.1 SUMMARY

- A. Scope: Work of this Section includes all labor, materials, and software required for extending the electronic access control system within the building.
 - 1. The family of intelligent controllers and peripheral interface devices must provide an open architecture family of products that enables a choice of host software system vendor without replacement of hardware.
- B. The software for the expanded control system shall be bid out as a separate project as basis for new facility / campus-wide platform.
- C. The existing access control system, comprised of Vanderbilt hardware and software at shall be completely incorporated into the expanded system through upgrade/conversion and cardholder database import as a part of this project.
- D. Related Documents: The Contract Documents, as defined in Division 1, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.
- E. Related Sections:
 - 1. Section 08 71 00: Door Hardware
 - 2. Division 26: Electrical
 - 3. Section 27 10 00: Structured Communications Cabling System
- F. Upon completion of the project by this Contract, the System cardholder database and schedules will be self-managed by Owner using the separately bid software interface.
- G. Contractor or subcontractor assigned the work of this section shall be a manufacturer authorized dealer and installer.

1.2 REFERENCES

- A. American National Standards Institute (ANSI)
- B. International Fire Code
- C. NFPA 70 National Electric Code
- D. International Organization for Standardization (ISO)
- E. NEMA: Electrical equipment shall comply with applicable portions of NEMA.
- F. FCC: All assemblies shall be in compliance with FCC emission standards.
 - 1. Microprocessor based controller: Part 15, Subpart F, Class A.
 - 2. Proximity Card Reading Sensors: Part 15, Subpart F (field disturbance sensors).
 - 3. Dial-up modems: Part 68.
 - 4. UL-1012 and CSA: All power supplies shall be in compliance with Underwriters Laboratories standard 1012 and CSA standards for power supplies.
 - 5. UL-294: The system shall comply with Underwriter Laboratories standard 294 for Access Control Systems.

1.3 SUBMITTALS

- A. General: Provide the following according to the Conditions of the Contract, Division 1 and Division 26 Specification Sections to the Contracting Officer and/or Owner's Representative.
 - 1. Product Data: Submit manufacturer's data on Access Control System components including, but not limited to, electrical specifications, mechanical specifications, rough-in

diagrams, and instructions for installation, operation and maintenance, suitable for inclusion in Operation & Maintenance manuals.

2. Shop Drawings: Provide shop drawings showing equipment locations and arrangements for the Access Control System to include, but not be limited to, central controllers, reader modules, card reader extenders, proximity card reading sensors, power supplies, switches, door wiring configurations and ancillary equipment. All drawings must be submitted in hard copy and electronic format.
3. One Line Diagram: Submit a one-line diagram of the system configuration proposed. Submittals indicating typical riser diagrams are not acceptable. All drawings must be submitted in hard copy and electronic format.
4. Operations & Maintenance Manual: Submit for prior approval, three (3) copies of manufacturer's manual for programming and operating the system and its related components.

1.4 QUALITY ASSURANCE

- A. Manufacturer: Manufacturer of products defined in this section must have:
 1. Industry experience: Company must have at least 10 years' experience in manufacturing and servicing access management systems.
 2. ISO 9001 Certification: Manufacturing process of company must meet stringent standards of ISO 9001 Certification.
- B. Systems Integrator / Distributor:
 1. Company shall have a minimum of 5 (five) years system design, engineering supervision, and installation experience in the Access Control industry.
 2. Company that is factory trained and authorized to install manufacturer products.
- C. System Checkout:
 1. Pre-testing: All components and assemblies of the control unit are to be pre-tested at the factory prior to shipment.
 2. Burn-in: 720 hours or 30 days at normal operating conditions or equivalency.
 3. On-site testing: Manufacturer trained and authorized Systems Integrator shall functionally test each component in the system after installation to verify proper operation and confirm that the wiring and dressing conform to the wiring documentation.
 4. Service facility: Systems Integrator shall have service facilities within 100 miles of the installation.

1.5 WARRANTY

- A. Access Cards or Keyfobs: No less than 5 (five) years.
- B. System Components: One (1) year from final acceptance of each system component.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Power: All ACS equipment shall operate on 120VAC. Any special power treatment required, such as filtering or spike elimination that may be required for proper operation and protection of the ACS, shall be provided with the system.
- B. Backup Power: ACS equipment shall be supplied from a building's standby (interruptable, 10 seconds maximum dropout) power system. Local UPS or battery backup shall not be required for devices connected to the standby power system.
- C. Hardware: Provide a distributed access control system as required for a complete operating system as described herein and as shown on the Drawings.

2.2 MANUFACTURER

- A. Provide all system access control software and related hardware as standard catalog product offering of a single manufacturer.
- B. Exception: Controlled devices, such as electric locks, door actuators, sensors, etc., are specified elsewhere.
- C. This specification is based on Mercury Security

2.3 MATERIALS AND COMPONENTS

- A. Access Control Management Software Platform
 - 1. To be bid out in a separate package.
- B. Intelligent System Controller
 - 1. The Linux based intelligent controller must provide decision making, event reporting, and database storage as a hardware platform. Two reader interfaces must provide control for two doors in addition to supporting an additional 62 doors, paired and or alternate reader configurations with peripheral interface devices.
 - 2. The controller must communicate with the host via on-board 10BaseT/100BaseTX Ethernet port and support TLS encryption as a minimum security implementation.
 - 3. The intelligent controller must be capable of elaborate processes and procedures without host intervention. Once configured, the intelligent controller must function independently of the host, and must be capable of controlling access, managing alarms, interfacing with an array of hardware devices, all while providing the decision-making oversight that each system configuration requires.
 - 4. The intelligent controller must provide centralized biometric template management and support a wide range of reader technologies, including OSDP, Wiegand, magnetic stripe and biometric.
 - 5. Two physical barriers must be controlled. Each reader port must accommodate a read head that utilizes OSDP (RS-485), OSDP SC, Wiegand, magnetic stripe, or F2F protocol/electrical signaling standards, one or two wire LED controls, and buzzer control.
 - 6. Controller must support, as a minimum the following open standards, PSIA Area Control, SNMPv3/v2c, OSDP and OSDP SC.
 - 7. The controller must utilize a cryptographic module, like OpenSSL FIPS Object Module RE, that is validated to FIPS 140-2 thus providing a certified implementation of TLS.
 - 8. Features and Functions
 - a. The interface is for use in low voltage, Class 2 Circuits only.
 - b. The installation of this device must comply with all local fire and electrical codes.
 - c. Primary Power: 12 to 24 Vdc \pm 10 %, 500 mA maximum (reader and USB ports not included)
 - d. Reader Ports 600 mA maximum (add 600 mA to primary power current)
 - e. Micro USB Port 5 Vdc, 500 mA maximum (add 270 mA to primary power current)
 - f. Memory and Clock Backup Battery: 3 Volt Lithium, type BR2330 or CR2330
 - g. microSD Card: Format: microSD or microSDHC; 2GB to 8GB
 - h. Host Communication: Ethernet: 10-BaseT/100Base-TX and Micro USB port (2.0) with optional adapter: pluggable model USB2-OTGE100
 - i. Serial I/O Device One each: 2-wire RS-485, 2,400 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit
 - j. Inputs: Eight unsupervised/supervised, standard EOL: 1k/1k ohm, 1%, ¼ watt Two unsupervised dedicated for cabinet tamper and UPS fault monitoring

- k. Outputs: Four relays, Form-C with dry contacts Normally open contact (NO) contact: 5 A @ 30 Vdc resistive Normally closed contact (NC) contact: 3 A @ 30 Vdc resistive
- 9. Built-In Reader Interface
 - a. Supports Data1/Data0, Clock/Data and Lenel OSDP-compatible RS-485 readers and keypads
 - b. 4 Form-C relay outputs, 5 A at 30 VDC
 - c. Door contact supervision (open/closed) and REX push-button monitor for each door
 - d. Strike control and auxiliary output for each door
 - e. Bicolor reader status LED support plus beeper control, or 2-wire LED support
 - f. On-board regulator allows 12 VDC reader power from 24 VDC power source
- 10. Product shall be Mercury LP Series
- C. Reader Interface Module
 - 1. Features and Functions
 - a. Power: 12 Vdc \pm 10 % regulated, 300 mA maximum each reader (jumper selectable) (input voltage (VIN) must be greater than 20 Vdc) or 12 to 24 Vdc \pm 10 % (input voltage (VIN) passed through), 300 mA maximum each reader
 - b. Data Inputs: TTL compatible, F/2F or 2-wire RS-485
 - c. RS-485 Mode: 9,600 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit. Maximum cable length: 2000 ft. (609.6 m)
 - d. LED Output: TTL levels, high>3 V, low<0.5 V, 5 mA source/sink maximum
 - e. Buzzer Output: Open collector, 12 Vdc open circuit maximum, 40 mA sink maximum
 - 2. Product shall be Mercury LP Series or MR Series
- D. Input Control Module
 - 1. Features and Functions
 - a. The peripheral interface device shall be used to monitor sixteen (16) inputs.
 - b. The peripheral interface device shall be able to utilize a cryptographic module that can encrypt/decrypt communication with the intelligent controller, supporting AES encryption using a minimum 256 bit key length.
 - c. The peripheral interface device shall utilize a crypto memory chip that provides hardened protection of secrets such keys.
 - d. Primary Power:
 - 1) 12-24Vdc \pm 10%, 350mA maximum
 - 2) 12Vdc at 300mA nominal
 - 3) 24Vdc at 220mA nominal
 - e. Communication: 2-wire RS-485, 4,000 feet using Belden 9841
 - f. Inputs: sixteen (16) general purpose programmable type and two dedicated for tamper and power monitor
 - g. Outputs: two (2) relays – Form-C, 5 Amp, 28Vdc
 - h. Temperature: 0 to 70 degrees Centigrade operational, -55 to 85 degrees Centigrade storage
 - i. Humidity: 10 to 95 percent RHNC
 - j. Offline mode operation
 - 1) Relay Mode
 - a) Programmable for offline conditions

2. Product shall be Mercury MR Series
- E. Output Control Module
 1. Features and Functions
 - a. The peripheral interface device shall be used to provide sixteen (16) dry contact outputs to auxiliary equipment such as locks or to activate alarms.
 - b. The peripheral interface device shall be able to utilize a cryptographic module that can encrypt/decrypt communication with the intelligent controller, supporting AES encryption using a minimum 256 bit key length.
 - c. The peripheral interface device shall utilize a crypto memory chip that provides hardened protection of secrets such keys.
 - d. Primary Power:
 - 1) 12-24Vdc $\pm 10\%$, 1100 mA maximum
 - 2) 12Vdc at 850mA nominal
 - 3) 24Vdc at 450mA nominal
 - e. Communication: 2-wire RS-485, 4,000 feet using Belden 9841
 - f. Inputs: two (2) dedicated for tamper and power monitor
 - g. Outputs: sixteen (16) relays – Form-C, 5 Amp at 28Vdc
 - h. Temperature: 0 to 70 degrees Centigrade operational, -55 to 85 degrees Centigrade storage
 - i. Humidity: 10 to 95 percent RHNC
 - j. Offline mode operation
 - 1) Relay Mode
 - a) Programmable for offline conditions
 2. Product shall be Mercury MR Series
- F. Digital Proximity Card Reader
 1. Features and Functions
 - a. Compatibility: compatible with industry standard 125 kHz proximity and 13.56 MHz contactless technologies
 - b. Easy migration
 - c. Optional GSA approved PIV support
 - d. Modular design: allows easy removal or addition of keypad in the field
 - e. Read range: up to 8 in. (203 mm), depending on card technology
 - f. Integrated tamper detection
 - g. Tri-state LED (red, green, amber): Visual indicator and audio feedback representing status and activity information
 - h. Accommodates interior, exterior, metal and non-metal installation environments
 - i. Suitable for installation on door frames, mullions, or wall mounting
 - j. Lifetime warranty against defective workmanship and materials
 2. Contractor shall be responsible to confirm the mounting style (mullion or single-gang) of the reader prior to installation at each instance.
 3. Approved Products
 - a. Allegion aptiQ Multi-Technology Reader models MT11 / MT15
 - b. Assa Abloy HID multiCLASS SE models RP15 / RP40

G. Access Card Credentials

1. Existing 125 kHz, 26-bit proximity access cards in use by Owner.
2. Provide Digital Proximity Access Cards (Card). The card shall be an ISO compliant, single-coil passive proximity card that supports multiple technologies on one card, including: smart card, proximity, bar code, and photo ID. Design shall be capable of having imaging on both sides and hole punch horizontal or vertical for using the card as a badge.
3. Each card shall have the capability to be programmed to operate universally at different locations.
 - a. Active circuit type cards (those requiring batteries) shall not be acceptable.
 - b. Coordinate ordering of proximity cards with the Owner and/or Owner's Representative to ensure proper site and facility coding, as well as card number series allocation.
4. Capacities:
 - a. Card shall have up to 84 programmable bits of Wiegand formatted information for universal compatibility with all Wiegand interface reader applications.
 - b. Cards shall have numeric encoded data embedded in an integrated circuit within the card and shall have a permanent identification number printed on it.
 - c. Each card shall be encoded so that it is totally unique and is not duplicated anywhere in the world.
5. Specifications:
 - a. MIFARE / ISO14443 compliant, 8kbit/1Kbyte, 16sectors
 - b. Slot punched
 - c. Composite PET/PVC construction
 - d. Dimensions: Standard size and thickness of 3.375 in. x 2.125 in. x 0.070 in thick.
 - e. Environmental:
 - 1) Temperature: -50° to 160° F(-45° to 70° C).
 - 2) Humidity: 5% to 95%.
 - f. Regulatory: N/A (Card is totally passive requiring no approval.)
 - g. Power:
 - 1) Source: Passive-powered by digital proximity reader.
 - 2) Consumption: Not detectable.
 - h. Communication: Via low power radio frequency, providing read ranges up to 22 inches depending on the selected Reader.
6. Approved Products:
 - a. Allegion aptiQ 13.56 MHz smart credential model 9551 (card) / 9651 (keyfob)
 - b. Assa Abloy HID FlexSmart model 1436 (card) / 1434 (keyfob)

H. Door Position Switches/Contacts

1. Hermetically sealed magnetic reed switch.
2. Contact & magnet housing shall snap-lock into a 3/4" hole.
3. Voltage: 100 V AC/DC max.
4. Current: 0.5 A max.
5. Power: 7.5 W max.
6. Loop type: Closed – N/O
7. Mounting: Recess mounted

8. Contractor shall use 45-degree condulets to enclose and protect cabling from door contacts/switches. Condulets shall be placed as close to the contact/switch as possible.
9. Approved Products:
 - a. Recessed Magnetic Door Contact, manufactured by Schlage.
 - b. Surface Magnetic Door Contact, manufactured by Schlage (existing doors / retrofits only)
 - c. For overhead doors, provide Overhead Door Floor Contact manufactured by Schlage.
- I. **Electro-Magnetic Gate Lock**
 1. **Description: Surface mounted electro-magnetic gate lock for access control with integrated handles**
 2. **Voltage: 24VDC**
 3. **Finish: Silver**
 4. **Housing Material: Aluminum**
 5. **Max Pulling Force: 300 kg**
 6. **Accessories: Provide 24VDC power supply as necessary.**
 7. **Acceptable Products: Locinex MAG-3000 series or approved equivalent**
- J. Wire and Cable:
 1. General: Stranded copper. Size conductors as indicated but not less than recommended by system manufacturer.
 2. Comply with Section 26 05 19, "Wires and Cables" except as indicated.
 3. Cable for Low-Voltage Control and Signal Circuits: Unshielded, twisted-pair cable, except where manufacturer recommends shielded cable.
 4. Reader Interface Locations:
 - a. Install RS-485 serial data grade #24 or #22 AWG, 2 conductor stranded shielded twisted pair cable homerun to system controller for data.
 5. Proximity Card Reader Locations:
 - a. Install #22 AWG, 6 conductor stranded shielded twisted pair cable homerun to reader interface for data.
 - b. Install #18 AWG, 4 conductor stranded shielded twisted pair cable homerun to reader interface for future request-to-exit and door contacts.
 6. Electric Door Strike Locations: Install 2 conductor stranded unshielded twisted pair cable homerun to access control panel only at installed electric strike locations, sized as required to accommodate voltage drop at required distance, not less than #16 AWG.
 7. Ethernet network data cables: per Section 27 10 00.
- K. Raceway:
 1. Comply with Section 26 05 33.13 "Conduit", Section 26 05 33.23 "Surface Raceway Systems", and Section 26 05 33.16 "Junction Boxes".
 2. Cable trays, where provided, shall be used for support of cables.
 3. Refer to general notes and specifications regarding areas where installed cabling must be concealed in an acceptable raceway or conduit (not exposed).
- L. Refer to Part 4 for schedule of components per Door Hardware Set.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to bidding, examine the project for nature, scope, and intent of all work to be performed. Submission of a bid or proposal will constitute that examination has been made, and any difficulties foreseen identified and noted.
- B. Any claims for labor, work, materials, or equipment for difficulties encountered which should have been foreseen, shall not be recognized; and will be taken care of by the contractor at no additional cost to the Owner.

3.2 DELIVERY

- A. Upon delivery to the sight, Contractor shall inspect all products and materials for any damage. Acceptance of the units constitutes that the inspection has occurred and no damaged or unacceptable products were found, and any damage or unacceptable products would be the responsibility of the contractor.
- B. Begin installation of electronic components only when all wet work is completed in each installation area.
- C. Anchor components securely in place, plumb, level, and accurately aligned. Provide separators and isolators to prevent corrosion and electrolytic deterioration.

3.3 PREPARATION

- A. Furnish any inserts required for building into concrete, masonry, and other work, to support and attach work of this section. Furnish in ample time to comply with schedule of work into which inserts are built.
- B. Verify that power and outlets are in correct locations.
- C. Verify that building structure is properly prepared for mounting, attachment, and support of equipment.
- D. Report in writing to the Architect any prevailing conditions that will adversely affect satisfactory execution of Work in this Section.
- E. Care shall be exercised at all times to protect property. Ladders shall not be placed against wallpapered or finished surfaces, equipment, or furnishings. Desks or countertops shall not be used in lieu of ladders.
- F. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the Owner.

3.4 INSTALLATION – GENERAL

- A. Prior to installation of systems components and devices, verify all required preparations have properly occurred and that substrates are acceptable for installation.
 - 1. Verify all rough-ins and field dimensions.
 - 2. Report any discrepancies or unsatisfactory conditions.
 - a. Do not begin work until unsatisfactory conditions have been corrected.
 - b. Consultant reserves the right to review proposed methods of construction/installation, reject proposed methods, and have the installation done in a satisfactory method at the Contractor's cost.
 - c. Installation constitutes acceptance of responsibility for performance.
- B. Install work in accordance with manufacturer's recommendations, instructions and final shop drawings.
 - 1. Installer shall be a certified representative of the manufacturer.
- C. Begin installation of electronic components only when the following is met, in each installation area:
 - 1. All wet work is completed.

2. Area is dust free
3. All work is completed in regard to painting
- D. Anchor components securely in place, plumb, level, and accurately aligned. Provide separators and isolators to prevent corrosion and electrolytic deterioration.
- E. Protect installed equipment from damage and soilage.
- F. For card readers that are located in equipment traffic areas, and that are exposed to damage due to collision or impact from forklifts, or manually moved carts, carriers, or other equipment used by the owner, Contractor shall fabricate, provide and install protective bollards, railings, coverings etc. to ensure that all card readers installed are properly protected from such damage. Contractor shall provide shop drawings of planned protection for specific card reader installations to project consultant for approval prior to installation.
- G. Touch up minor scratches and abrasions with manufacturer's touch-up paint.
- H. Furnish and install all fastenings, plates and other incidental items required for complete and operational installation.
- I. Provide required electrical work in accordance with code requirements.
- J. Circuit breakers serving security system components shall be provided with locking devices.
- K. Surface mounted raceway is not permitted in finished spaces unless otherwise noted on drawings.

3.5 WIRING

- A. Clearly identify points of connection for wiring from building power system to work of this Section and requirements for connection to materials and equipment supplied under Division 26.
- B. Install all wiring connecting all system components and controlled and monitored devices.
- C. Install all transformers, relays, and other accessories.
- D. Install all cable and perform all cable splicing and equipment terminations.
- E. Contractor shall use 45-degree condulets to enclose and protect cabling from door contacts/switches. Condulets shall be placed as close to the contact/switch as possible.
- F. Pull continuously between connections where possible.
- G. Install electronic systems wiring and cabling in conduit or raceway, as noted on project drawings and as specified in Division 26.
 1. Pulling cables and wires:
 - a. Do not force or pressure in a manner, which will stretch, break or damage jacket.
 - 1) Use an inert anti-friction material to assist in pulling wire.
 - 2) Pull all cables and wires to be installed in a raceway all at one time.
- H. Identify system all system components, wiring, cabling, and terminals with permanent machine-printed labels.
- I. Provide grounding as required by device manufacturer.

3.6 SYSTEM PROGRAMMING AND ADMINISTRATION TRAINING

- A. The Contractor shall work with the owner and his representative to insure that the new components will be properly programmed.

3.7 FINAL TESTING AND ACCEPTANCE

- A. The Contractor shall develop a Final Test and Acceptance (FTA) Plan. The plan shall identify each new system component provided in the work, intent of test, method or methods of test and expected results. Each component listed in the plan shall include space for test part signatures, brief comments, time of test and pass/fail check boxes. The FTA plan shall be submitted to the owner's representative 30 days prior to the scheduled final test.

- B. Provide manufacturer's supervision of final testing of each system.
- C. Each system must test free from interference, opens, grounds, and short circuits.

3.8 OPERATIONAL DEMONSTRATION TEST (BURN-IN)

- A. Following completion of the Final Test, the system shall undergo a thirty (30) day Operational Demonstration Test (ODT) or Burn-In period. This operational demonstration period shall start when all specified systems and equipment have been installed and "Substantial Completion" is reached, with only a moderate number of punch list items remaining. During this period, the system shall be operated under a normal facility traffic load for no less than 30 days. If any item or system fails during the ODT, the 30-day burn-in period shall be suspended for that item until repaired or replaced. Once repaired or replaced, the burn-in period shall recommence. Final system acceptance of the entire project shall be withheld until after successful completion of this operational demonstration period for all systems and components.

3.9 CLEANING, TOUCH-UP AND PROTECTION

- A. Cleaning and Touchup: Immediately after installation, including the completion of wiring and testing, clean all work and touchup all damaged factory finishes.
- B. Protection: Provide protective covers, fenders, and barriers as necessary to maintain Work of this Section in same condition as installed.

3.10 ACCEPTANCE

- A. System Warranty shall not start until Acceptance. Acceptance shall be withheld until the following activities have been successfully completed:
 - 1. Acceptance of all submittals.
 - 2. Delivery of final documentation.
 - 3. Successful Final Test and Inspection
 - 4. Successful Operational Demonstration Test
 - 5. Successful training and demonstration, including operation of systems using the manuals.
 - 6. Purging of Contractor User privileges and return of all key card media.

PART 4 - SCHEDULE

4.1 HARDWARE SETS

- A. Refer to Door Hardware Schedule and Specification 08 71 00 for electronic hardware and equipment list.
 - 1. Provide multi-tech card reader where indicated in specification and on plans. Coordinate mullion mount and surface mount types.
 - 2. Provide all equipment as noted for Access Controls Integrator, including but not limited to Electronic Lock (PoE), Electrified Hinge (HW), and PoE Wire Harness. Coordinate all requirements with Door Hardware sets.
 - 3. Coordinate Power Supply requirements with Door Hardware Schedule prior to Submittal.
- B. All wiring and terminations shall be provided by this Section.
- C. Locate all reader interfaces and associated power supplies centrally to the area being served, coordinate with existing modules.
- D. Typical Door Set Operation
 - 1. Door(s) shall be normally locked from secure side. Door(s) may be unlocked for entry either by presentation of valid credential to card reader, or by application of an unlock schedule in management software.
 - 2. Where door operators are shown on the plans: Tie card reader, electronic hardware, and automatic door operator via relay such that door operator is disabled when door is in secure/locked state; door operator shall be enabled only when access control system unlocks door hardware, permitting free opening of door.

E. Door Release

1. Locate door release push buttons as indicated on plans for manual door lock release. Confirm exact location with Owner and Architect/Engineer, and coordinate requirements for concealed rough-in with related trades. Switches shall be wired in parallel such that either switch opens door. Refer to Door Hardware schedule for operation and equipment.

F. Building Lockdown

1. Lockdown push button to activate the emergency building lockdown sequence. Each switch shall be wired to independent inputs on control modules.
2. Operational Sequence:
 - a. Upon activation of emergency building lockdown sequence, the access control system (using the input/output expansion module and additional relay(s) as required) shall secure electric hardware on all building doors controlled by reader interface modules.
 - b. Initiate the closing of rolling fire doors to prevent passage between spaces on each side.
 - c. Open/interrupt the electromagnetic door holder circuit provided by Section 28 31 00 Fire Alarm System, which shall release all magnetically-held doors (fire-rated and non-fire-rated) to the closed and secured position.
 - d. Reset of the emergency building lockdown condition shall be acknowledged and reset by authorized personnel via the Access Control System.
3. Push button shall be momentary switch, turn to reset, blue housing, red mushroom push button operator, lift cover with alarm, furnished with custom label plate to indicate function. Label "LOCKDOWN". Device height of 8" or less.
 - a. Wall mount (with horn): STI Model SS24A1LD-EN or approved equal.
 - b. Provide (4) wall mount push buttons for bidding purposes.
4. Reception desk pushbutton shall be momentary switch, under desk mounting, furnished with custom label plate to indicate function. Label "LOCKDOWN".
 - a. Honeywell 270R or approved equal.
 - b. Provide (2) desk push buttons for bidding purposes.

END OF SECTION