

Hudsonville Public Schools



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DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS

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INVITATION TO BID

PART 1 - GENERAL

1.01 WORK INCLUDED: DISTRICT RADIO SYSTEM EXPANSION

- A. Hudsonville Public Schools (Owner) is seeking bids to expand their current two way radio system including equipment and installation services. Proposed systems shall be configured and installed to service Owner's needs across multiple instructional facilities, and as described herein.
- B. Project: DISTRICT RADIO SYSTEM EXPANSION
- C. Owner: Hudsonville Public Schools
3886 Van Buren Street
Hudsonville, Michigan 49426
- D. Designer: Communications by Design, Inc.
- E. Sites of Work:
 - 1. Alward Elementary
3811 Port Sheldon Street
Hudsonville, Michigan 49426
 - 2. 5/6 Building at Georgetown
8175 36th Avenue
Hudsonville, Michigan 49426
 - 3. Georgetown Elementary
3909 Baldwin Street
Hudsonville, Michigan 49426
 - 4. Water Tower Locations
 - 1. City of Hudsonville Water Tower, 3084 Highland Dr
Hudsonville, MI 49426 (Next to Todd Wenzel off I-196)
Behind Todd Wenzel (City of Hudsonville) 42.8507789, -85.8585368
 - 2. Georgetown Township Water Tower (no designated address, but located behind 3468 Bauer Rd Jenison, MI 49428)
Bauer/36th (Georgetown Twp) 42.9210444, -85.8678942

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 17, 2023
 - 2. Pre Bid Meeting: March 22, 2023 at 4:00PM
 - 3. Intent to Bids Due: March 31, 2023, by 5:00pm
 - 4. Question and Clarification Deadline: March 31, 2023, by 5:00pm
 - 5. Public Bids Due: April 7, 2023, by 4:00pm

1.02 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.

1.03 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: March 22, 2023, at 4:00pm
- C. Location: Hudsonville Public Schools
3886 Van Buren Street
Hudsonville, Michigan 49426
- D. Participants must check in at the building office.

- E. Any drawings identified in the table of contents herein will be distributed and reviewed at this conference.
- F. Physical building inspections of sites of work will be provided for at this time.

1.04 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 7, 2023, at 4:00pm
- C. Bid Opening Location: Hudsonville Public Schools
3886 Van Buren Street
Hudsonville, Michigan 49426
- D. Faxed or electronically delivered bids will not be accepted.

1.05 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

1.06 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.

1.07 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.

1.08 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.

1.09 DEFINITIONS

- A. "Owner" is intended to mean Hudsonville Public Schools, a Michigan Constitutional Body Corporate.
- 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 00300
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 March 31, 2023. Only bidders returning a completed "Intent to Bid Form" will be directly 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 27 53 19 – Radio Systems

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. Insure 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: DISTRICT RADIO SYSTEM EXPANSION
TECHNOLOGY BID #3004

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

DUE: April 7, 2023, by 4:00pm

BID FORM

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

BID FROM: _____

PROJECT: DISTRICT RADIO SYSTEM EXPANSION
TECHNOLOGY BID #3004

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.

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 and/or dismissal of consideration of bid submitted.

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 _____, 2023.

In the County of _____ State of _____

By _____
Notary Public Signature

Seal or Stamp:

My commission expires on: _____

AFFIDAVIT OF COMPLIANCE – IRAN ECONOMIC SANCTIONS ACT
Michigan Public Act No. 517 of 2012

The undersigned, the owner or authorized officer of the below named contractor (the “Contractor”), pursuant to the compliance certification requirement provided in the **HUDSONVILLE PUBLIC SCHOOLS** (the “School District”) Request For Proposals For Video Monitoring Renovations (the “RFP”), hereby certifies, represents and warrants that the Contractor (including its officers, directors and employees) is not an “Iran linked business” within the meaning of the Iran Economic Sanctions Act, Michigan Public Act No. 517 of 2012 (the “Act”), and that in the event Contractor is awarded a contract as a result of the aforementioned RFP, the Contractor will not become an “Iran linked business” at any time during the course of performing the Work or any services under the contract.

The Contractor 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 School District’s investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a request for proposal for three (3) years from the date the it is determined that the person has submitted the false certification.

CONTRACTOR:

BIDDER’S FIRM NAME _____

BY (SIGNATURE) _____

PRINTED NAME AND TITLE _____

STATE OF MICHIGAN)
)SS
COUNTY OF)

Subscribe and sworn before me on this _____ Seal:

day of _____, 20____, a Notary Public

in and for _____ County,

Notary Public

My Commission expires _____

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/>
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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: _____

[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. If portions of separate bids are deemed compatible and compliant with the intent of the project, and a combination of partial bids is deemed to be in the Owner's best interest, and the Owner reasonably expects willing and compliant bidders will cooperate with others for the benefit of the Owner during implementation of the system, the Owner reserves the right to award portions of the project to multiple bidders which will cooperate 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.

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 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 has 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.

3.04 MODIFICATION AND WITHDRAWAL

- A. Bids may be withdrawn and/or changed any time prior to the bid opening. Bids may not be withdrawn or changed after the bid opening, and shall be deemed a firm offer continuing for ninety (90) calendar days. Bids received after the time and date for the public opening 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 workstation. Electronic media shall contain separate folders to organize response documentation as described herein. Files submitted on USB shall be **Adobe Acrobat** "PDF" format (SCHEDULE OF VALUES is additionally required to be on the disk in the appropriate folder as a 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. Iranian Economic Sanctions Form
 - d. REFERENCES
 - e. CONTRACT EXCEPTIONS
 - f. SCHEDULE(s) OF VALUES
 - g. 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 27 53 19
RADIO SYSTEMS

PART 1 - GENERAL

1.01 DESCRIPTION OF PROJECT

- A. Contractors shall propose systems and/or components to be deployed using standard procedures and technology components and as specified herein. The system components shall be installed and connected to the owner's existing physical infrastructure and as specified herein. Contractor shall be responsible for a fully functional and operational system. No components, cables or connections shall be provided by Owner for the system unless specifically identified herein.
- B. Contractor shall provide all transportation and delivery services in a timely manner to individual work location(s) at each site of work in preparation for installation activity.

1.02 EXISTING SYSTEM INFORMATION

- A. Hudsonville Public Schools currently has an existing Motorola radio system consisting of portable handheld radios, repeaters/antennas, microphones and associated software. This project will be an expansion of the existing system.
- B. The two water locations have two (2) repeaters/antennas each with Capacity Plus licensing. There is also another repeater located at Riley Street Middle School also licensed for Capacity Plus.

1.03 WARRANTY

- A. Installation and equipment shall be free from defect and/or failure for a period of two (2) years. Any replacement, upgrade or fix, including labor for any non-conforming or non-operational component of the system shall be updated fixed and/or replaced at no cost to the Owner during the warranty period.

1.04 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.

1.05 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.
- B. Shop drawings and diagrams shall be submitted by Bidder for approval by Designer with Bid.
 - 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.
- 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.

1.06 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

1.07 CONTRACTOR

- A. 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. Contractor shall have offices or primary work locations for related personnel in physical proximity to sites of work that can reasonably be expected to allow service response times required for warranty and as described herein.
- F. The Contractor shall have a proven track record. This must be shown by the inclusion of references of at least three (3) projects involving similar systems completed by the Contractor in the prior two (2) years on

unaltered forms with the sealed Bid as provided herein. Bid 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.

PART 2 - MATERIALS

2.01 MANUFACTURERS

A. Acceptable Manufacturers:

1. Motorola

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 Administration access to all components shall be protected by unique and secure log on (User ID and Password).

2.05 System administrator shall be capable of complete equipment back-up and full restoration from a previously saved configuration.

2.06 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.

2.07 REPEATER AND ANTENNA

A. Two (2) UHF Repeater sites with multiple talk paths per site shall be provided and installed.

1. Two (2) Motorola SLR 5700 shall be installed per site.
 - a. Each repeater must support a minimum of two talk paths.
2. Including appropriate Gain Antennae, with associated new cabling,

connectors, cable management, mounting equipment and all hardware.

- a. The intent is for Contractor to install new antenna on two local water towers located in the community, and as agreed upon with relevant local entities and the Owner. It is the Owner has obtained a valid lease agreement or written approval prior to installation.
 3. Electrical surge protection and proper grounding equipment shall be supplied to protect equipment from atmospheric and electrical supply voltage spikes.
 4. Contractor shall test and optimize radio system for standard operations and feature specifics.
 5. All licensing for the antennas/repeaters shall be Motorola Capacity Plus.
- B. Repeaters shall be provided to allow for adequate coverage of building frequency for single channel radios in each building. Where a building does not require a repeater for entire building coverage of its designated channel, no repeater will be required. Where buildings are of sufficient size to require a repeater to adequately allow coverage across the entire facility of that facilities channel(s), all necessary repeaters shall be provided by contractor.

2.08 PORTABLE RADIOS

- A. Seven (7) 3-Watt Portable Multi-Channel Radios shall be provided and installed.
 1. Motorola SL7550e or Equal
 2. Including recharging cables, power cables, and all necessary accessories for a fully functional installation.
 3. Mobile radios shall meet or exceed the following specifications:
 - a. Numeric Display
 - b. 24 Channel Capacity
 - c. Frequency – UHF 403-512 MHz
 - d. MIL-STD 810 Rated
 - e. Needs to be licensed for Motorola Capacity Plus
- B. Fifty-five (55) 3-Watt Portable Single-Chanel Radios shall be

RADIO SYSTEMS

provided and installed.

1. Motorola SL3500e or Equal
2. Including recharging cables, power cables, and all necessary accessories for a fully functional installation.
3. Mobile radios shall meet or exceed the following specifications:
 - a. Numeric Display
 - b. Single Channel Capacity
 - c. Frequency – UHF 403-470 MHz
 - d. MIL-STD 810 Rated
 - e. Needs to be licensed for Motorola Capacity Plus

2.09 LICENSES

- A. All FCC licenses have been obtained and secured.
- B. All new repeaters and radios shall be licensed for Motorola Capacity Plus.

2.10 ALLOWANCES

- A. Contractor shall include allowances for contract service reimbursements as required below in base bid lump sum amount(s).
 1. Allowance shall be made in the amount of \$10,000.00 for contract services related to electrical power backup, outlet renovation and relocation as deemed required by Owner.
 2. Allowance shall be made in the amount of \$5,000.00 for diagnostic and rework for optimal configuration of the existing system dispatch locations.
 3. Allowances shall be made in the amount of \$10,000.00 for radio equipment battery charging stations as required by Owner.
- B. Contract services shall be provided and sourced at Owner's discretion, direction and convenience with full cooperation by Contractor, and paid for from successful bidder's contract in the amount(s) provided for herein.
- C. 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.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Contractor shall conduct a detailed walk through of all facilities to verify mounting and physical installation requirements.
- B. Contractor to review all existing programming including but not limited to:
 - 1. Capacity Plus Channel routing
 - 2. Individual repeater and radio configurations
 - 3. System optimization
 - 4. Optional systems features enabled and disabled
- C. Contractor shall conduct a preliminary installation and configuration meeting at the convenience of the Owner to discuss all detailed and final Owner plans for applications and devices to insure proper final configuration for all parameters including, but not limited to:
 - 1. Individual radio programming
 - 2. Security configuration
 - 3. Physical layout and connection schemes and configurations
 - 4. Applications intended devices.
 - 5. Confirm device naming and identification scheme.
 - a. Physical labeling
 - b. Electronic / configuration management information.
 - 6. Management and problem diagnostic options.
 - 7. Equipment mounting details and configuration
 - 8. Electrical power coordination
- D. Contractor shall insure all submittals and shop drawings have been provided to, and approval has been obtained from Owner and Designer prior to commencement of any final installation activities.
 - 1. Additionally, a detailed installation plan shall be provided for Owner and Designer approval prior to the commencement of any final installation activities. This plan shall included, but not be limited to

the following:

- a. Coordinated schedule.
- b. Physical layout and connection schemes and configurations

3.02 DEMOLITION

- A. Contractor shall remove Owner existing 2-way mobile radios, base station radios, existing transmitter(s) and antenna's including all cables and accessories and return to Owner for final disposition as directed by Owner and Designer.
- B. Owner is expected to collect portable radios, and select other building radio equipment from Owner personnel.
- C. Trade-in credits shall be provided as a voluntary alternate for all such materials. Bidders shall NOT provide trade-in credits as part of the base bid.

3.03 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. All equipment provided by contractor shall be fully configured and installed for the Owner's applications based on an installation plan provided by Contractor and meeting approval of Owner and Designer prior to the commencement of work.
- C. 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.
- D. All equipment and materials shall be installed in a neat and workmanlike manner. Best practices installation principles shall be used throughout the project.
- E. The Contractor shall furnish, set in place, and physically install all equipment necessary for a fully compliant and operational system as specified herein.
- F. Reconfigure and reprogram the existing and new system

equipment to meet Owner requirements and Manufacturer best practices.

- G. Contractor shall fully cooperate with Owner for detailed software/firmware configuration and system integration activities.
- H. 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 at Owner designated and provided secure locations until such time those items are installed according to the specifications.
 - 3. Transport equipment to the Owner's installation location(s).
 - 4. Physically assemble, install, configure and test based on an approved test plan all equipment and components, maintaining accurate inventory records and status documents and discarding packaging as may be directed by Owner.
 - 5. Label all system devices as may be appropriate and required by Owner and Designer using approved Brady labels.
 - 6. Work includes extending connection and interconnection cables from equipment, as required, to Owner identified connection ports at all locations.
 - a. Work includes supply and installation of new connection/patch cables to all devices for a fully functional and compliant system. Some devices may require special care and suitable tools to complete such connection or re-connection of cables.
 - b. Coordinate all patching plans and specific cable lengths used with Owner and Designer. Patch cables shall not be excessive in length for the connections made.
 - c. Any network patch cables shall be Category 6 cable.
 - 7. Work includes removal and, at the Owner's discretion, disposal of all old and unused patch cords and rack and hardware components that will not be in use for the new systems being deployed.
 - 8. Complete system administrator training programs as specified herein.
 - 9. Work shall be performed to meet local, state and federal codes and industry standards including proper grounding and bonding

of installed equipment.

10. Complete Repeater installation, programming, tuning and testing.
11. Complete programming, testing and tuning of portable and mobile radios.
12. Complete programming, testing and tuning of dispatch (Smart PTT) stations.
13. Collection and removal of all existing radios, radio equipment, supporting components and cabling.
14. All training as defined herein.

I. Sites of Work:

1. Alward Elementary
3811 Port Sheldon Street
Hudsonville, Michigan 49426
2. 5/6 Building at Georgetown
8175 36th Avenue
Hudsonville, Michigan 49426
3. Georgetown Elementary
3909 Baldwin Street
Hudsonville, Michigan 49426

4. Water Tower Locations

1. City of Hudsonville Water Tower, 3084 Highland Dr
Hudsonville, MI 49426 (Next to Todd Wenzel off I-196)
Behind Todd Wenzel (City of Hudsonville) 42.8507789, -85.8585368
2. Georgetown Township Water Tower (no designated address, but located behind 3468 Bauer Rd Jenison, MI 49428)
Bauer/36th (Georgetown Twp) 42.9210444, -85.8678942

- I. 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.

- J. Contractor shall fully install and configure all network infrastructure for complete, compliant and final Owner applications and requirements including all physical labeling for asset management.

3.04 TESTING

- A. In an effort to insure 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. Such request shall include a written proposed test plan for complete system functionality.
 - 2. Within reasonable time after receipt of request and proposed test plan, Designer will provide amendment(s) to the proposed test plan, 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:
- D. 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.

3.05 DOCUMENTATION

- A. 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. Manufacturer's warranty.
 6. Maintenance contract terms.
 7. Verification of maintenance contract engagement.
 8. Telephone numbers for service and support.
 9. Detailed technical support and service procedure instructions.
 10. 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.
 11. 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.
 12. 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.

3.06 TRAINING

- A. 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 two (2), 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. Component replacement procedure.
 4. Review of system alerts, logs and monitoring of configuration parameters including, but not limited to, configuration changes and device status.
 5. Complete review and administration review and training for any management system provided.
- B. Contractor shall provide training for users of the new radio equipment. Such training shall be scheduled at the convenience of the Owner and conducted to review all typical operational parameters of the equipment, including, but not limited to how the system functions within the Owners new Communications Protocols and Standards. Training shall be of a minimum of 30 minutes in length and repeated at each site of work.
- C. Contractor shall submit a written training plan, course description(s) and syllabus to Owner and Designer for approval. Owner and/or Designer may require amendments(s) to training plan, course description and syllabus prior to training being scheduled.

3.07 SCHEDULE, MEETINGS AND PLANS

A. Schedule

1. Final Vendor Presentations: April 10, 2023
2. Contractor Chosen: April 13, 2023
3. Work Commences: As soon as possible
4. Substantial Completion: 60 Days after issue of Purchase Order
5. Project Close-out: 2 Weeks after Substantial Completion or dependent on AIA billing cycle after Substantial Completion.

- 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 maintenance manager on site.
- D. Project progress meetings may be held to coordinate project work. Selected bidder shall be required to attend project meetings or calls as necessary to facilitate successful project completion.

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 include, 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.

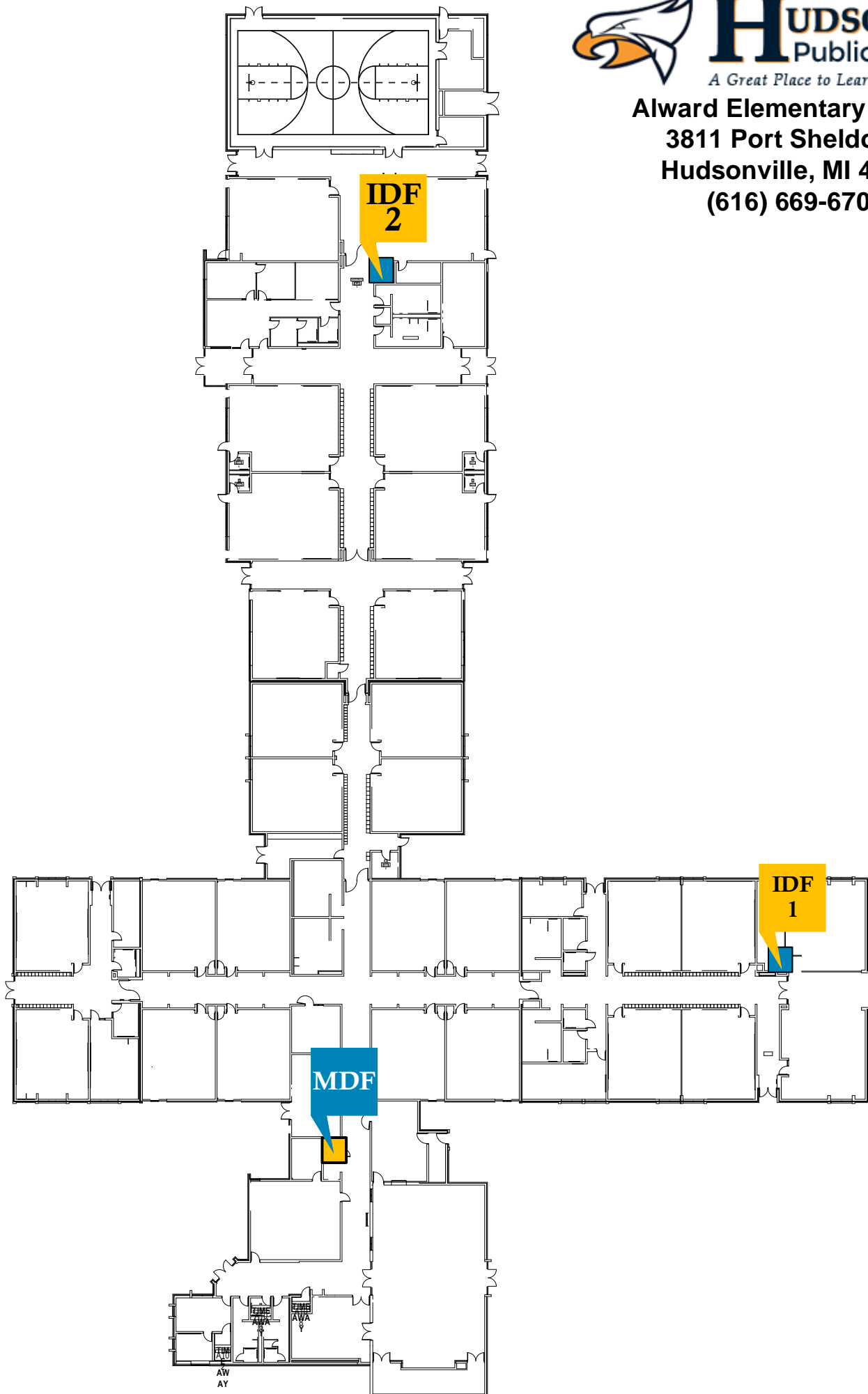
END OF SECTION

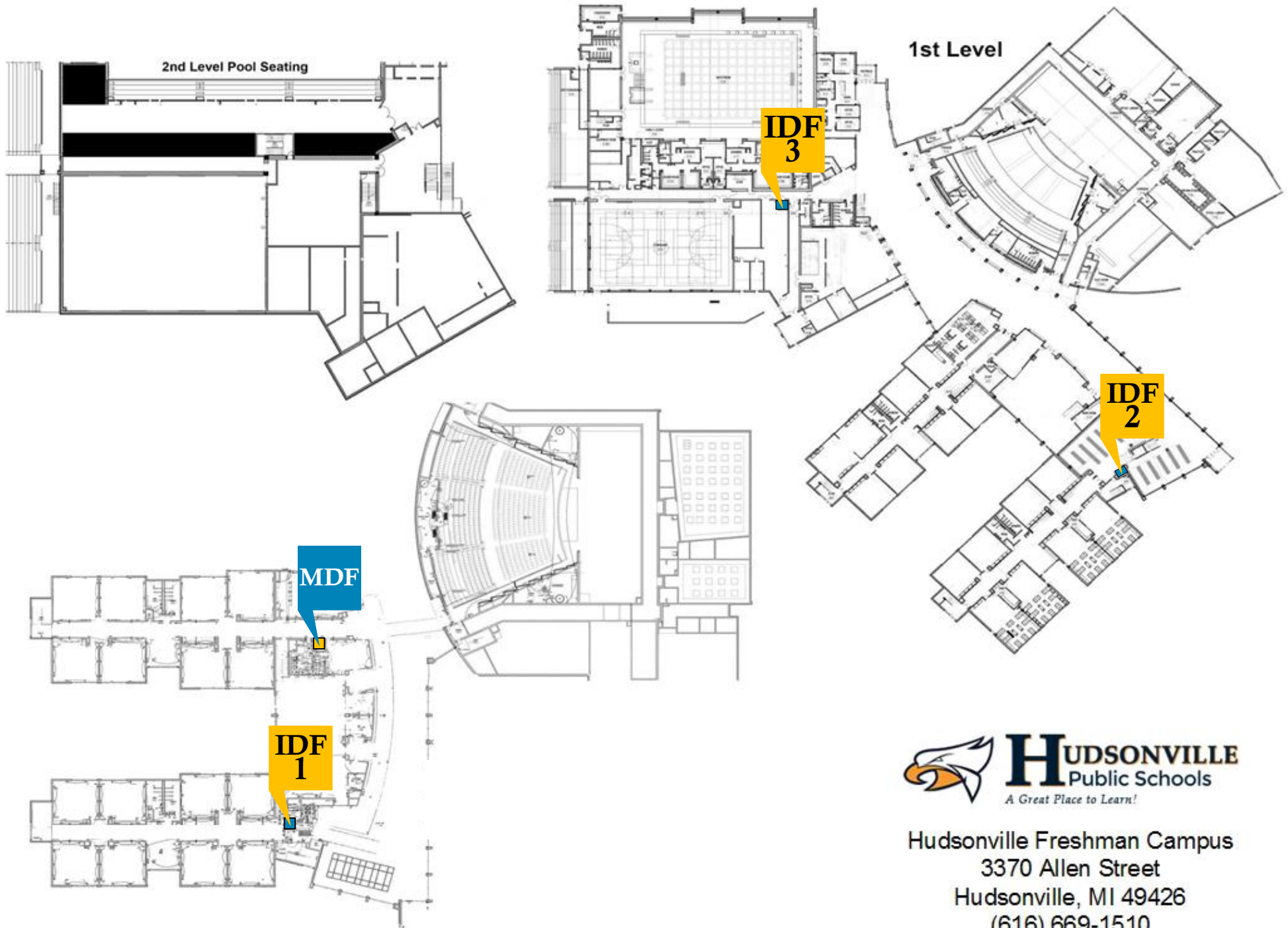
Hudsonville Schools

Network Closet Locations

TITLE	DRAWN BY	DATE	REVISED
Phone Extensions/Hudsonville Room NumbersPublic Schools –	Troy Geesin	01/6/2016	3/16/2023 - CM

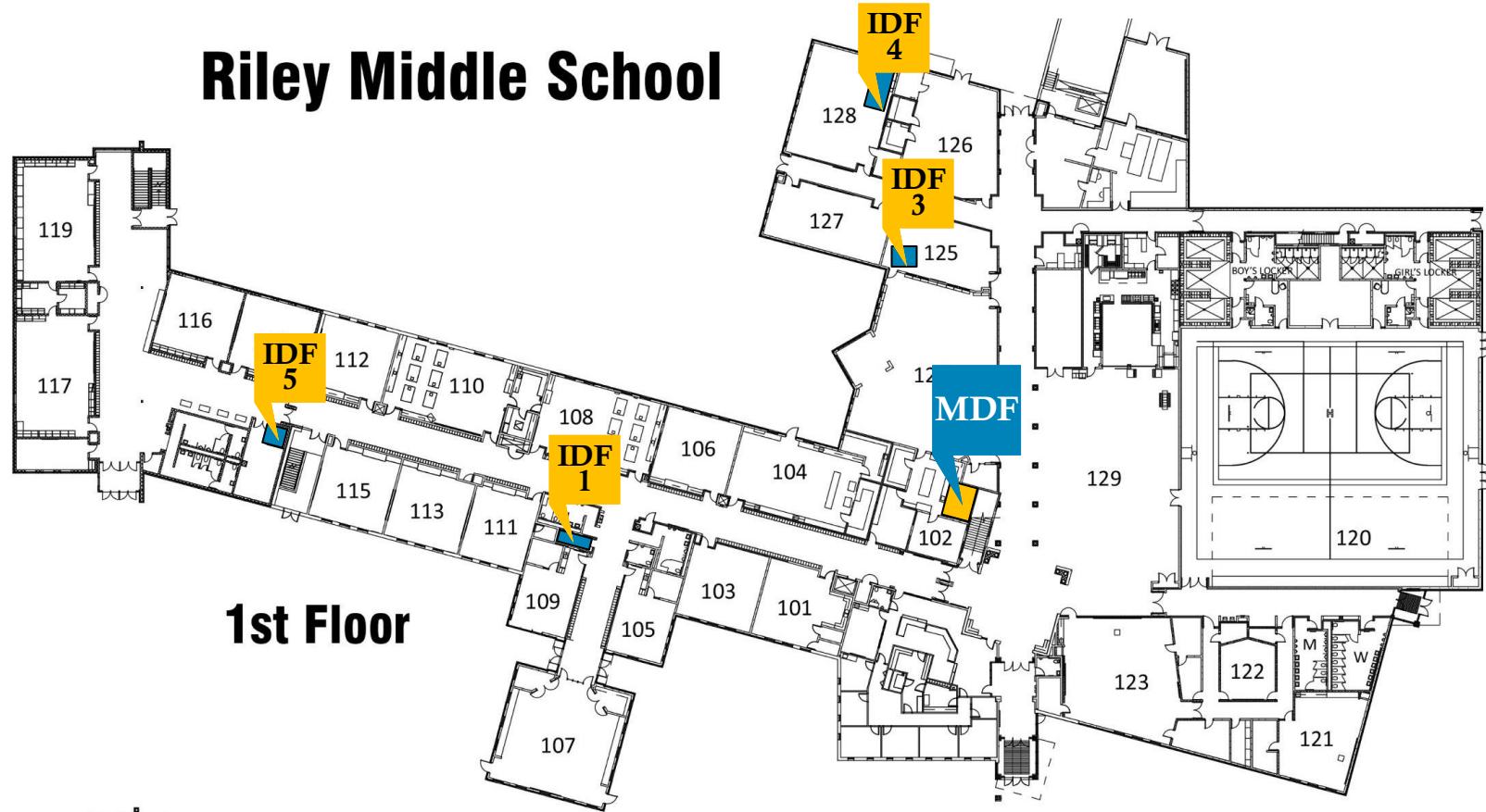
Alward Elementary School
3811 Port Sheldon St
Hudsonville, MI 49426
(616) 669-6700



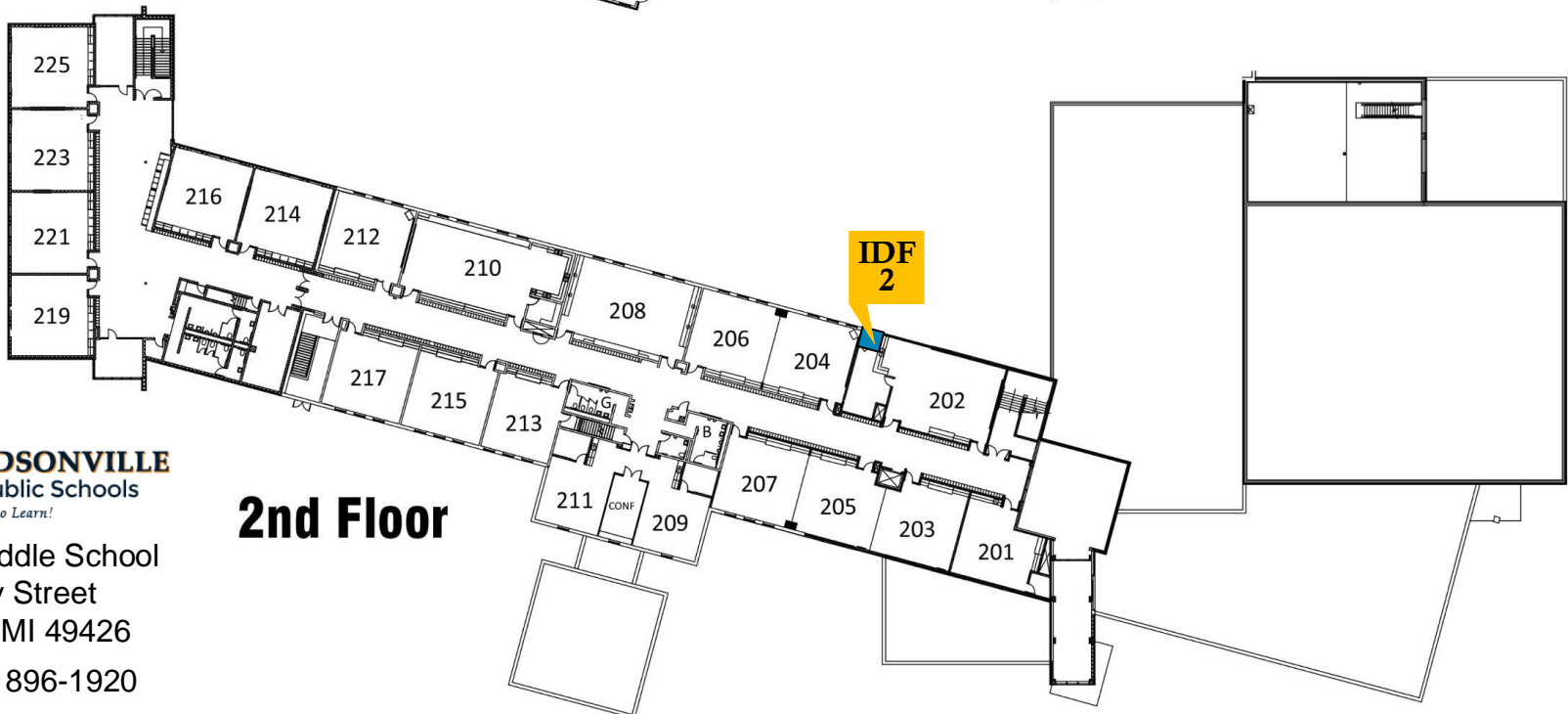


Hudsonville Freshman Campus
3370 Allen Street
Hudsonville, MI 49426
(616) 669-1510

Riley Middle School



1st Floor



2nd Floor

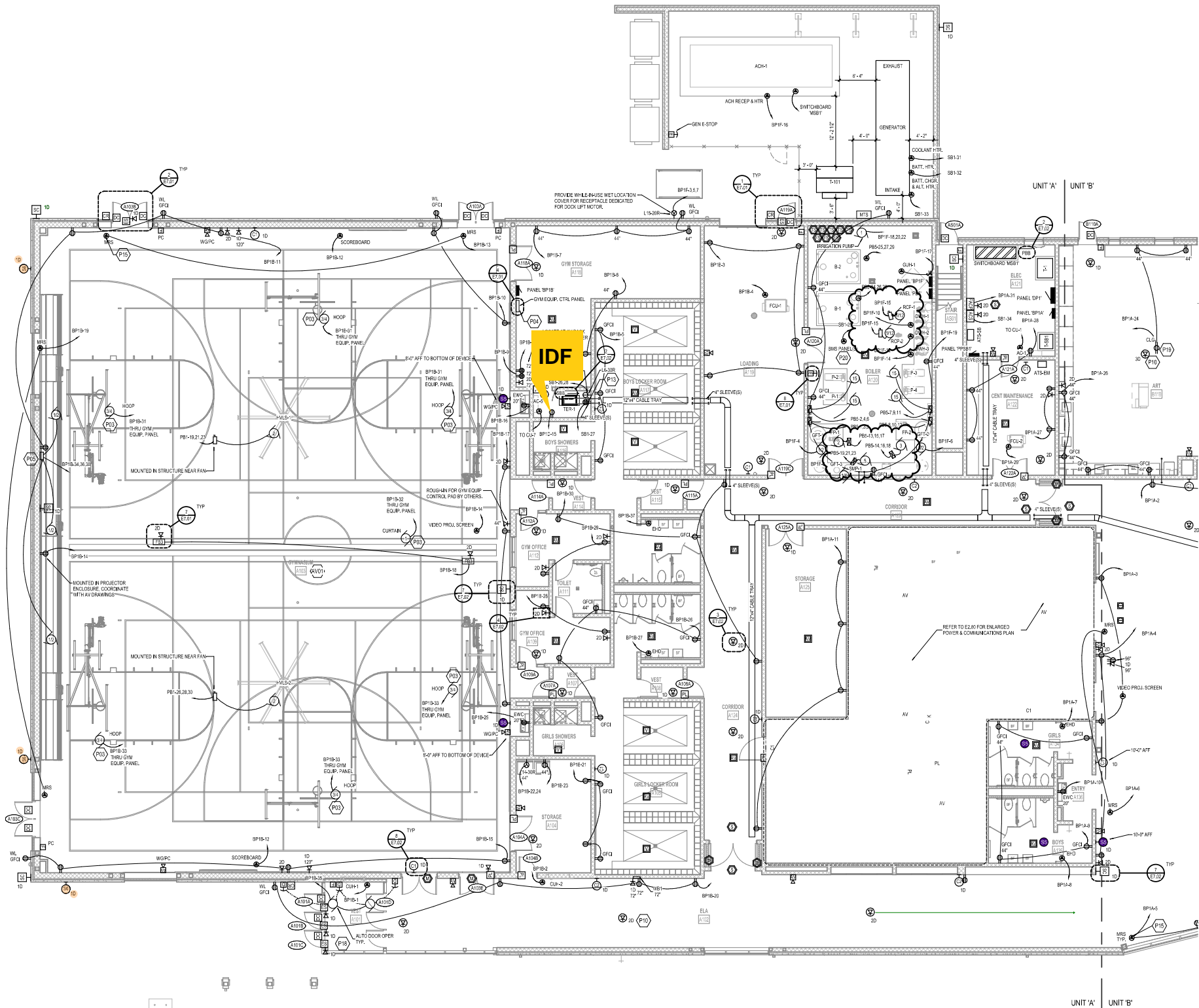


Riley Street Middle School
2745 Riley Street
Hudsonville, MI 49426
Phone: (616) 896-1920

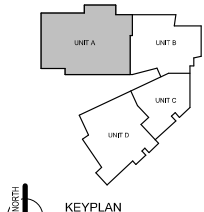
5-6 Buiding at Georgetown

- POWER & COMMUNICATION GENERAL NOTES
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E01.1.
 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 20" HVC POWER FROM DEDICATED 20A-1P BRANCH CIRCUIT (WITH BREAKER, LOCKING MECHANISM IN LOCAL 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 CONTROL 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.
 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.
P03	E.C. SHALL PROVIDE AND INSTALL 4" SQUARE JUNCTION BOX WITHIN 2'-0" OF 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.
P04	8-RELAY GYM EQUIPMENT CONTROL PANEL REQUIRED TO SUPPORT (8) HOOP WHICH MOTORS AND (1) OR RISER CURTAIN MOTOR. USE (1) RELAY PER DEVICE. POWER EACH PANEL WITH (1) 120V SINGLE PHASE CIRCUIT AS INDICATED IN PANEL SCHEDULE. REFER TO MANUFACTURER'S INSTRUCTIONS FOR FURTHER DETAILS.
P05	E.C. SHALL PROVIDE AND INSTALL NON-FLUSH 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 CONNECTION RIDGE JUNCTION BOX. PROVIDE BLANK FACEPLATE FOR UNUSED LOCATIONS. TYPICAL FOR ALL.
P13	RECEPTACLES ON STANDBY POWER SHALL BE YELLOW. TYPICAL FOR ALL.
P14	INSTALL LOCKER 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.
P16	ALL ACCESS CONTROL CONDUITS TO NEAREST CABLE TRAY. TERMINATE CABLEING IN JUNCTION BOX RECESSED ABOVE DOOR IN HANDICAP 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 PROJECTION WITH OWNER'S TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.
P20	COORDINATE WITH CONTROL 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
05.28.2021	BULLETIN 008
06.16.2021	BULLETIN 010
07.31.2021	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. 5-5085

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UNIT 'A' FIRST FLOOR POWER & COMMUNICATIONS PLAN

E2.1A

5-6 Buiding at Georgetown

- POWER & COMMUNICATION GENERAL NOTES
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E1.01.
 2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE PRESTRESSING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
 3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBUSTION PRESSURE DAMPERS. PROVIDE DEDICATED 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). TERMINATED W/ BOX-COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR W/ 10 FEET OF EACH DAMPER (UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET) AND 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 RUNWAY 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.
 6. REFER TO AV DRAWINGS FOR ADDITIONAL PATHWAY AND ROLLOUT REQUIREMENTS.

ELECTRICAL KEYNOTES	
AW01	REFER TO AV DRAWINGS FOR ADDITIONAL SCOPE. COORDINATE ALL ROUGH-IN LOCATIONS WITH AV DRAWINGS.
P10	ALL LOW VOLTAGE CABLES 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 CABLES IN SURFACE MOUNT BOX WITH MODULAR CONNECTOR INSIDE JUNCTION BOX. PROVIDE BLANK FACEPLATE FOR UNUSED LOCATIONS. TYPICAL FOR ALL.
P15	MOTORIZED ROLLER SHUTTERS 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 428.
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 OWNERS / TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.



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



KEYPLAN

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
05.26.2021	BULLETIN 008
09.28.2021	BULLETIN 018

DRAWN	JFB
REVIEWED	AAB

PROJECT NO. 5-5065

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UNIT 'B' FIRST FLOOR POWER & COMMUNICATIONS PLAN

E2.1B

5-6 Buiding at Georgetown



- 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 FOR PENETRATIONS TO MEET ALL APPLICABLE CODES.
 3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION PRESSURE DAMPERS. PROVIDE SIGNAL POWER FROM DEDICATED 240V 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 FUSEL SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER SMOKE 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 ON CONTROLLED UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATIONS AND COORDINATE WITH MECHANICAL TEMPERATURE CONTROLS CONTRACTOR'S SHOP DRAWINGS.
 5. PROVIDE BOX-COVER FUSEL DECONNECT SWITCH ON BUILDING INTERIOR IN ACCESSIBLE LOCATION FOR EACH SMALL 1/2" 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 ALL DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

ELECTRICAL KEYNOTES	
P01	DEVICES INSTALLED IN BACK OF CASEWORK FOR AN RACK BY OWNERS TECHNOLOGY CONSULTANT FOR EDUCATIONAL AV EQUIPMENT. COORDINATE WITH OWNERS TECHNOLOGY CONTRACTOR FOR PLACEMENT OF DEVICES.
P10	ALL LOW VOLTAGE CABLE 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 CABLE 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 OR 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 CABLE 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 GROUPS.
P19	COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNERS TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.

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

ISSUANCES	
10.31.2020	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 018
10.26.2021	BULLETIN 019

DRAWN	JFB
REVIEWED	AAB

PROJECT NO. 5-5085

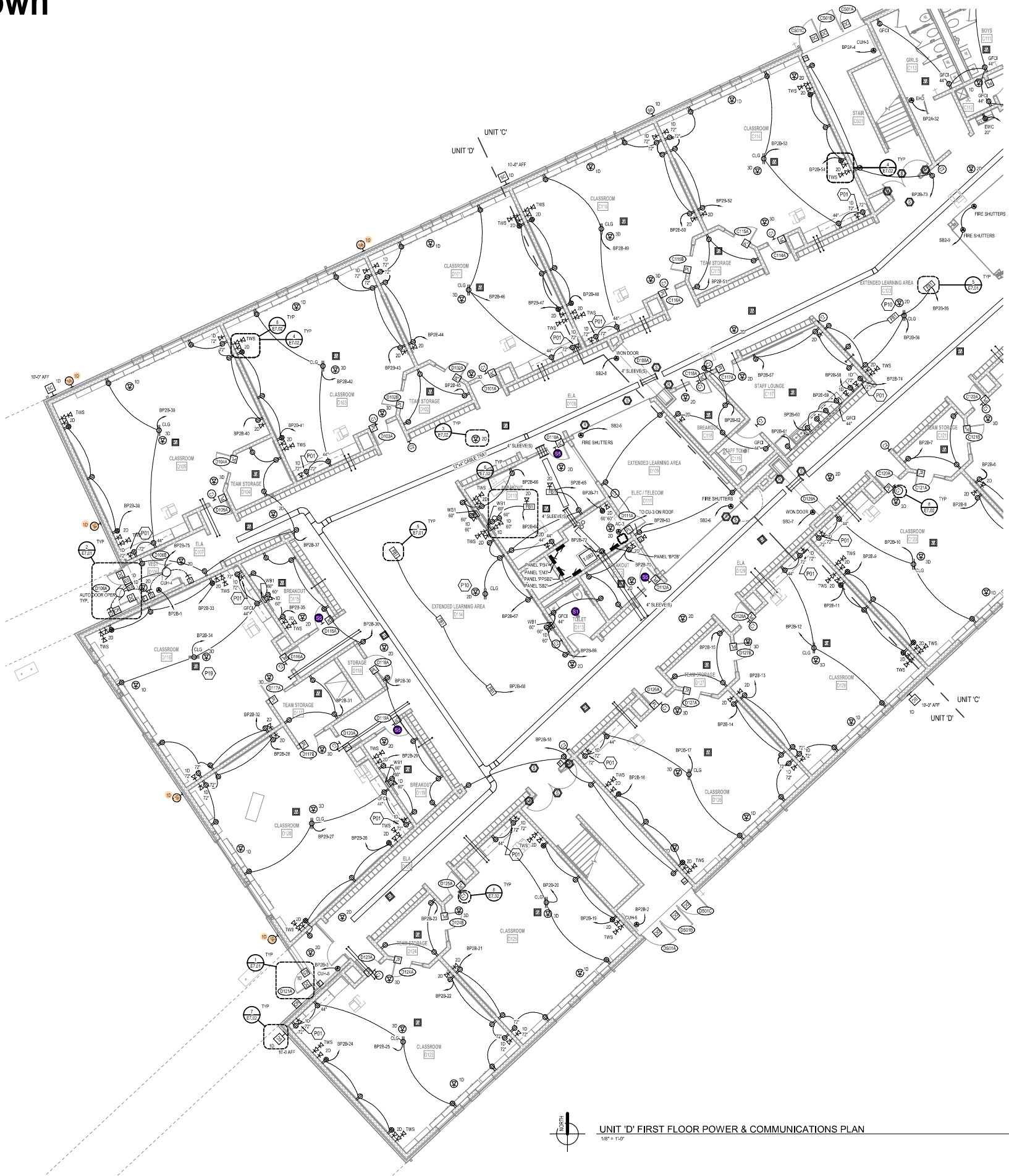
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UNIT C FIRST FLOOR POWER & COMMUNICATIONS PLAN

E2.1C

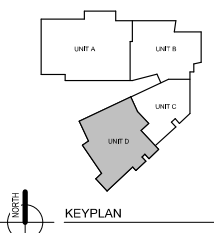
5-6 Buiding at Georgetown



- POWER & COMMUNICATION GENERAL NOTES
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E2.01.
 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 BACK DAMPERS AND COMBINATION PRESSURE DAMPERS. PROVIDE TENING POWER FROM DEDICATED BRANIP BRANCH CIRCUIT (WITH BREAKER LOCKING MECHANISM) IN LOCAL PANELS AND 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 SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANCHOR SMOKE DETECTOR WITHIN 5 FEET AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPERS 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 RUNWAY TUBING 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 BRANIP 1/2" MP 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 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 CEILINGS. PRIOR TO INSTALL, COORDINATE LOCATION OF NETWORK ACTIVATIONS WITH OWNER'S TECHNOLOGY CONTRACTOR (FOR ACCESS POINTS, SECURITY CEMERALS, AV EQUIPMENT, ETC.). TERMINATE CABLING 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 OWNER'S TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.

UNIT 'D' 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
04.16.2021	BULLETIN 006
05.11.2021	BULLETIN 007
10.26.2021	BULLETIN 019

DRAWN	JFB
REVIEWED	AAB

PROJECT NO. 5-5085

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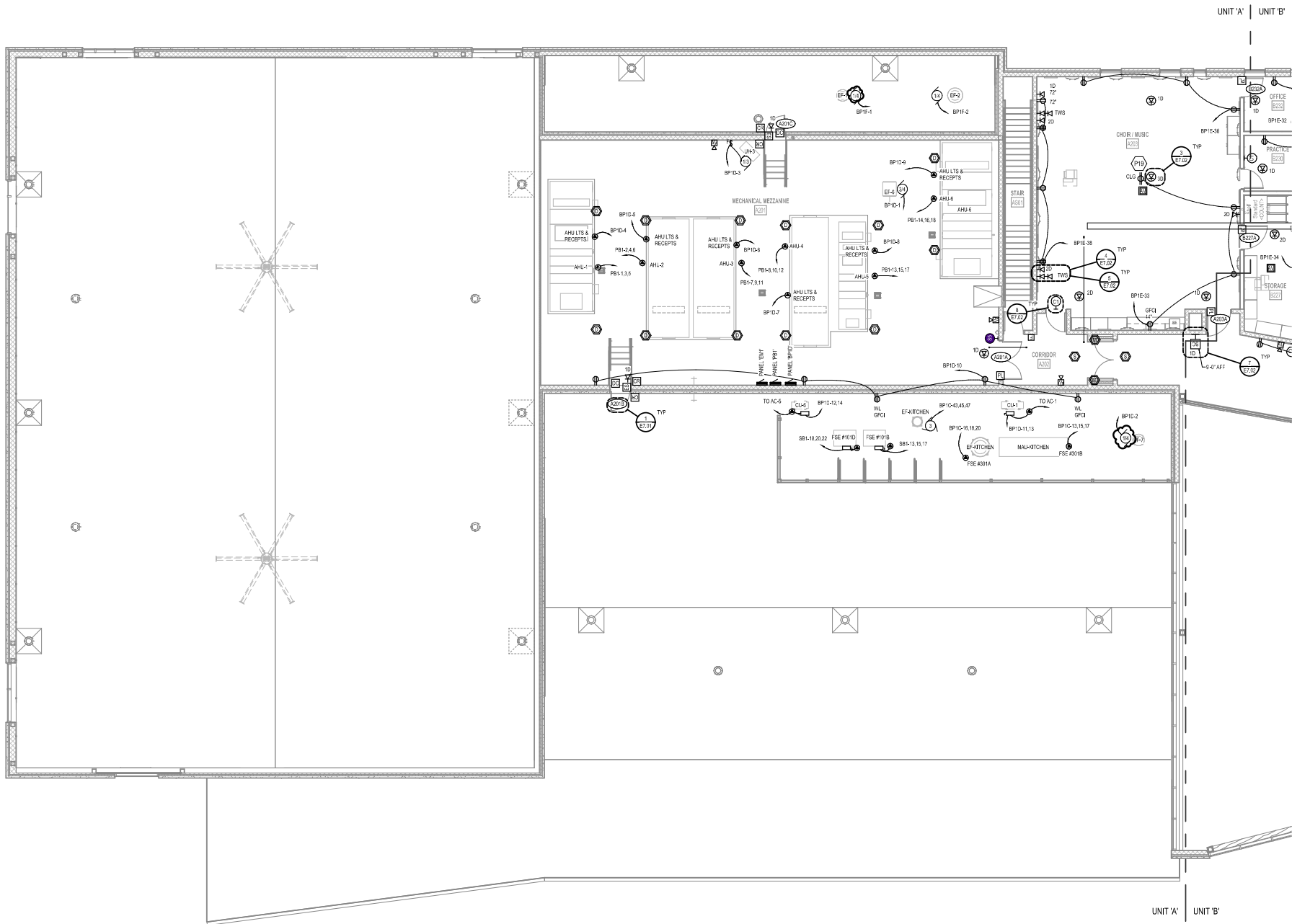
UNIT 'D' FIRST FLOOR POWER & COMMUNICATIONS PLAN

E2.1D

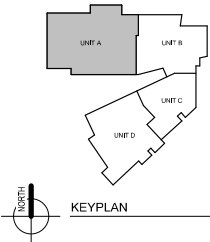
5-6 Buiding at Georgetown

- 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 SWAY BRANCH CIRCUIT WITH FUSELESS CIRCUIT BREAKER IN LOCAL PANELBOARD 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 DAMPERS IN CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
 4. PROVIDE FUSE SINGLE GANG BOXES IN WALLS FOR HVAC TEMPERATURE CONTROL DEVICES, AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RUNAWAY FROM BOX TO CORRESPONDING TEMPERATURE CONTROL SYSTEM DEVICE OR CONTROL UNIT. REFER TO MECHANICAL DRAWINGS FOR PROPOSED LOCATION 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 (<12HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR (AND 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 ALL DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

ELECTRICAL KEYNOTES	
P19	COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNERS TECHNOLOGY CONTRACTOR, TYPICAL FOR ALL.



UNIT 'A' SECOND 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
04/16/2021	BULLETIN 006

DRAWN	JFB
REVIEWED	AAB
PROJECT NO.	5-5085

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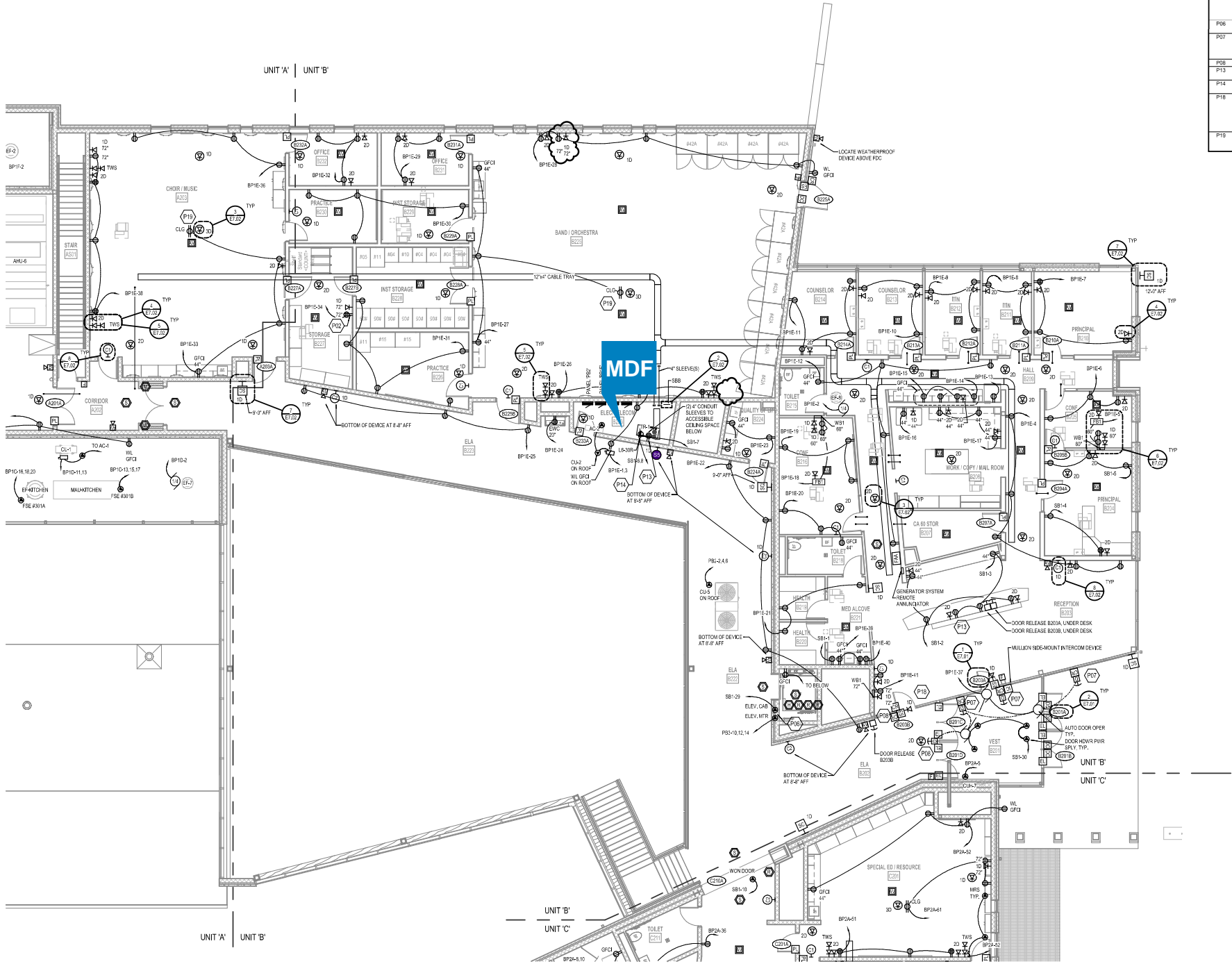
UNIT 'A' SECOND FLOOR
POWER & COMMUNICATIONS
PLAN

E2.2A

5-6 Buiding at Georgetown

- 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 WIRE/STIRRING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
 3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION RES SMOKE DAMPERS. PROVIDE 120V POWER FROM REDUCED VOLT BRANCH CIRCUIT (WITH RESINATED LOCUS MECHANISM) IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUPED BY EACH CIRCUIT). TERMINATED IN BOX-COVERED TABLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM OUT SMOKE DETECTOR WITHIN 5 FEET OF EACH DAMPER UNLESS COVERED BY ANOTHER OUT DETECTOR WITHIN 5 FEET AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPERS IN CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
 4. PROVIDE FLUSH SINGLE GANG BOXES IN WALLS FOR 1/4" TEMPERATURE CONTROL DEVICES AT LEAST ONE PER OCCUPABLE ROOM OR SPACE. INSTALL 1/2" CONDUIT RADIANT 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 (< 10 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE LINE 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 ON ADA PUSHBUTTON.
	P13 RECEPTACLES ON STAND-POWER SHALL BE YELLOW. TYPICAL FOR ALL.
	P14 INSTALL 15-30W RECEPTACLE INSIDE 4-POST RACK FOR UPS. UPS PROVIDED BY OWNER.
	P16 ALL ACCESS CONTROL CONDUITS TO NEAREST CABLE TRAY. TERMINATE CABLE 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 PROJECTION WITH OWNER'S TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.



UNIT 'B' SECOND FLOOR POWER & COMMUNICATIONS PLAN

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

ISSUANCES	
10/31/2020	BIDS & CONSTRUCTION
11/18/2020	ADDENDUM 001
11/25/2020	ADDENDUM 004
04/16/2021	BULLETIN 006
05/11/2021	BULLETIN 007
05/26/2021	BULLETIN 008
09/28/2021	BULLETIN 018

DRAWN	JFB
REVIEWED	AAB

PROJECT NO. 5-5065

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UNIT 'B' SECOND FLOOR
POWER & COMMUNICATIONS
PLAN

E2.2B

5-6 Buiding at Georgetown



- 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 WIRESTOPPING 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 DRY-BRANCH CIRCUIT (WITH FUSE/RESETTING 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 DAMPERS 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 RUNAWAY 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 (1-12 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR (LAW WHERE MORE THAN ONE UNIT BE 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 ALL 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 47" 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 LE-30R RECEPTACLE INSIDE 4-POST RACK FOR UPS. UPS PROVIDED BY OWNER.
P16	ALL ACCESS CONTROL CONDUITS TO NEAREST CABLE TRAY. TERMINATE CABLE 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 DASHES.
P19	COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTOR WITH OWNERS TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.

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
04.16.2021	BULLETIN 006
05.26.2021	BULLETIN 008
10.26.2021	BULLETIN 019

DRAWN	JFB
REVIEWED	AAB

PROJECT NO. 5-5065

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UNIT 'C' SECOND FLOOR
POWER & COMMUNICATIONS
PLAN

E2.2C

5-6 Buiding at Georgetown



- POWER & COMMUNICATION GENERAL NOTES**
1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E2.1.
 2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS FOR PENETRATIONS TO MEET ALL APPLICABLE CODES.
 3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF ROOF DRAINERS AND COMBINATION WIND/RAINFALL DRAINERS. PROVIDE 120VAC POWER FROM DEDICATED 20AMP BRANCH CIRCUIT WITH BREAKER LOCATED MECHANISM IN LOCAL PANEL(S) FOR EACH DRAINER. EACH AREA DRAINER MAY BE GROUPED ON EACH CIRCUIT. TERMINATED IN BOX-COVER FUSIBLE SWITCH AT EACH DRAINER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITHIN 5 FEET OF EACH DRAINER UNLESS COVERED BY ANOTHER DUCT DETECTOR WITHIN 5 FEET AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DRAINER W/ CORRESPONDING HVAC UNIT PER CODE REQUIREMENTS.
 4. PROVIDE FUSE 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 FAN, FAN COIL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.
 6. REFER TO AV DRAWINGS FOR ADDITIONAL PATHWAY AND ROUGH-IN REQUIREMENTS.

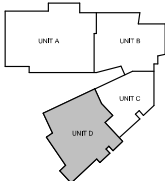
ELECTRICAL KEYNOTES	
P01	DEVICES INSTALLED IN BACK OF CASEWORK FOR AV RACK BY OWNER'S TECHNOLOGY CONSULTANT FOR EDUCATIONAL AV EQUIPMENT. COORDINATE WITH OWNER'S TECHNOLOGY CONTRACTOR FOR PLACEMENT OF DEVICES.
P02	LOCATION OF AV RACK BY OWNER'S TECHNOLOGY CONSULTANT FOR EDUCATIONAL AV EQUIPMENT. COORDINATE WITH OWNER'S TECHNOLOGY CONTRACTOR FOR PLACEMENT OF DEVICES.
P13	RECEPTACLES ON STAND-ALONE POWER SHALL BE YELLOW. TYPICAL FOR ALL.
P14	INSTALL 1/2" CONDUIT INSIDE 4-POST RACK FOR UPS. UPS PROVIDED BY OWNER.
P18	COORDINATE LOCATION OF CEILING RECEPTACLE AND NETWORK ACTIVATIONS FOR PROJECTION WITH OWNER'S TECHNOLOGY CONTRACTOR. TYPICAL FOR ALL.

EQUIPMENT PLATFORM POWER & COMMUNICATIONS PLAN

1/8" = 1'-0"

UNIT 'D' SECOND FLOOR POWER & COMMUNICATIONS PLAN

1/8" = 1'-0"



KEYPLAN

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

ISSUANCES	
10/31/2020	BIDS & CONSTRUCTION
11/18/2020	ADDENDUM 001
11/25/2020	ADDENDUM 004
05/11/2021	BULLETIN 007
10/28/2021	BULLETIN 019

DRAWN	JFB
REVIEWED	AAB

PROJECT NO. 5-5065

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UNIT 'D' SECOND FLOOR
POWER & COMMUNICATIONS
PLAN

E2.2D