A D D E N D U M 2

All sketches and modifications are to be incorporated into final bid documents.
This Addendum consists of the following Parts:

Part 1 Division #0, Bidding and Contract Requirements

1. Specification Index
    a. Division 28 – Electronic Safety & Security – Add Specification Section 281519 FL – Access Control Remote Devices after Specification Section 280513 Conductors and Cables for Electronic Safety and Security.
2. Specification Section 011000 – DESCRIPTION OF WORK:
    a. Add 1.14.A.5 as follows:
    "5. Noise producing work, including cutting and drilling and all excavation work using machinery, that exceeds New York State Education Department 60 DB as noted on CC001, `or is objectionable by the building administration, shall be performed when school is not in session; either early morning or later in the day. Coordinate with the Construction Manager for scheduling all noise-producing work."
3. Specification Section 013300 – SUBMITTAL REQUIREMENTS:
    a. Replace the entire section included in the bid documents with the attached Section 013300 "Submittal Requirements" included in this addendum.

Part 2 Technical Changes, Architectural, Structural and Civil

1. Specification Section 087100 Door Hardware
    a. Replace entire specification section with attached Specification Section 087100 Door Hardware.
2. Specification Section 281519 FL Access Control Remote Devices
    a. Add entire attached section to overall Specifications

Part 4 Drawing Changes, Architectural and Civil

1. Drawing A902 Door Schedules and Details
    a. Add hardware set **04** to Door #263E
    b. Remove any reference to Door #313B

Part 6 Drawing Changes, Mechanical and Electrical

2. M501 VRF RISER DIAGRAMS
    a. Clarified model number of DOAS split condensing unit to match the schedules on M601.
    b. Modified refrigerant pipe size for DOAS split condensing units.
3. E300 ELECTRICAL BASEMENT POWER PLAN
    a. Cafeteria servery panelboard route has been added.
4. E301 ELECTRICAL FIRST FLOOR NEW WORK PLAN
    a. Cafeteria servery panelboard route has been added.
5. E310 ELECTRICAL CAFETERIA & LIBRARY POWER PART PLAN
    a. Cafeteria servery panelboard has been added.

b. Servery equipment power has been added.

6. E501 ELECTRICAL ONE-LINE DIAGRAM
   a. Cafeteria servery panelboard has been added.
7. E602 ELECTRICAL SCHEDULES
   a. Cafeteria servery equipment panelboard has been added.

Part 7 Clarifications

1. Question: Who is responsible for furnishing and installing all electronic door hardware listed in specification sections 087100 and 087101? No electrical requirements are indicated on the electrical drawings in reference to this equipment. If the EC has any responsibility, please advise the locations and electrical requirements needed.
   a. Answer: Contract #1- General Contractor is responsible for furnishing and installing all **wireless** electronic door hardware, gateways and related equipment as listed in the specifications. Drawings E301 through E303 clearly indicate Ceiling Data Points/Gateways – locations to be located by security system integrator. CAT6 cable requirements as noted, supplied and installed by Electrical Contract

Part 8 List of Included Documents

Specification Section 013300 – SUBMITTAL REQUIREMENTS	9 pages
Specification Section 087100 Door Hardware	30 pages
Specification Section 281519 FL – Access Control Remote Devices	8 pages
Drawing M501 VRF RISER DIAGRAMS	1 page
Drawing E300 ELECTRICAL BASEMENT POWER PLAN	1 page
Drawing E301 ELECTRICAL FIRST FLOOR NEW WORK PLAN	1 page
Drawing E310 ELECTRICAL CAFETERIA & LIBRARY POWER PART PLAN	1 page
Drawing E501 ELECTRICAL ONE-LINE DIAGRAM	1 page
Drawing E602 ELECTRICAL SCHEDULES	1 page

**** END OF ADDENDUM NO 2 ****

SECTION 013300 - SUBMITTAL REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.

B. Related Sections include, but are not limited to, the following:

1. Division 01 Section "Scheduling and Progress" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
2. Division 01 Section "Closeout Procedures" for submitting warranties ,Project Record Documents and operation and maintenance manuals.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information that requires Architect's responsive action.

B. Informational Submittals: Written information that does not require Architect's approval. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

A. General: Electronic copies of CAD Background Drawings of the Contract Drawings will available from the Architect for use in preparing submittals. Refer to “Request for Electronic Files/CAD File Protocols” attached to the end of this Section for procedures for ordering and transfer of files and for Architect’s limitations of liability for transfer.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
3. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
4. Submit product data, shop drawings and samples relating to a complete assembly at one time. Partial submittals will be returned without action.
5. Interrelated color selections will not be made until all pertinent samples are received by the Architect.

C. Submittals Schedule:

1. Comply with requirements in Division 01 Section ""Scheduling and Progress" for list of submittals and time requirements for scheduled performance of related construction activities.

D. Processing Time: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.

1. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.
2. The average review time required by the Architect for a submittal will be fifteen (15) business days for processing solely by the Architect's office and twenty (20) business days for processing when review by Architect's consultant is required.

E. Identification: Place a permanent label or title block on each submittal for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Provide a space approximately 4 by 5 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.

F. Paper and Physical Sample Submittals: Place Architect's Submittal Cover Sheet, which is included at the end of this section, on each submittal for identification. Complete all required information before submitting to Architect. Submittals received without Submittal Cover Sheet or with incomplete information on cover sheet will be returned for resubmission.

1. Include Contractor's stamp indicating information complies with Contract Document requirements.
2. Submittals indicating less than complete review by Contractor will be returned for Contractor's compliance without Architect's review.
3. Transmit all submittals to Architect with a copy to the Construction Manager unless otherwise indicated. Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
    a. When submittal requires review of data by Structural Engineer or Mechanical or Electrical Engineers, submit a copy directly to such engineer with a copy to the Architect and the Construction Manager.

G. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.

3. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software or electronic form acceptable to Construction Manager.

H. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.

I. Architect's Re-review of Submittals: When resubmittals are required due to Contractor's failure to properly coordinate submittals, including coordination with other Prime Contractors, Contractor shall reimburse the Owner for fees paid to the Architect for re-review of submittals through a credit change order, in accordance with the Architect's current fee schedule.

J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

K. Use for Construction: Use only final submittals with mark indicating action taken by Architect in connection with construction.

1. The Contractor shall perform no portion of its work requiring submittal and review of shop drawings, product data, samples or similar submittals until the respective submittal has been approved by the Architect. Such work shall be in accordance with approved submittals.
2. The Contractor shall supply shop drawings to other Contractors engaged by the Owner to perform work in connection with the project to ensure proper coordination of its work with theirs.
3. Do not proceed with installation until an applicable copy of the submittal is in the installer's possession.
4. Do not permit use of unmarked copies of submittals in connection with construction.

L. Project Information Management System: The submittal process will be implemented through the use of the Construction Manager's digital processing and tracking software "Procore". Use this Project Information Management (PIM) software to transmit all submittals. Contractors must participate in and become capable in using this system

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.

1. Post electronic submittals as PDF electronic files directly to Construction Manager's Project Information Management (PIM) web based software specifically established for Project.
   a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
3. Mark each copy of each submittal to show which products and options are applicable. Strike extraneous information prior to submittal
4. Include the following information, as applicable:
    a. Manufacturer's written recommendations.
    b. Manufacturer's product specifications.
    c. Manufacturer's installation instructions.
    d. Standard color charts.
    e. Manufacturer's catalog cuts.
    f. Wiring diagrams showing factory-installed wiring.
    g. Printed performance curves.
    h. Operational range diagrams.
    i. Standard product operating and maintenance manuals.
    j. Compliance with recognized trade association standards.
    k. Compliance with recognized testing agency standards.
    l. Application of testing agency labels and seals.
    m. Notation of coordination requirements.

5. Submittals: Submit pdf electronic file.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Standard information prepared without specific reference to the Project is not considered a Shop Drawing. Verify field measurements prior to preparation of shop drawings.

1. Preparation: Include the following information, as applicable:
    a. Dimensions.
    b. Identification of products.
    c. Fabrication and installation drawings.
    d. Roughing-in and setting diagrams.
    e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
    f. Shopwork manufacturing instructions.
    g. Schedules.
    h. Compliance with specified standards.
    i. Notation of coordination requirements.
    j. Notation of dimensions established by field measurement.

2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.

3. Number of Copies: Submit pdf electronic file, unless paper copies are specifically required by Architect.

D. Samples: Prepare physical units of materials or products, including the following:

1. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
2. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
3. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
    a. If variation in color, pattern, texture, or other characteristic is inherent in the product represented by a Sample, submit at least three sets of paired units that show approximate limits of the variations.
    b. Refer to individual Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.

4. Number of Samples for Initial Selection: Submit one full set of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect, will return submittal with options selected.
5. Number of Samples for Verification: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.
    a. Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.

6. Schedule: Include significant sample submittals in the Contractor's Construction Schedule.
7. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

E. Mockups: Mock-ups and field samples specified in individual Sections are full-size, physical example assemblies to illustrate finishes and materials. Mockups are used to verify selections made under Sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction,

coordination, testing, or operation; they are not Samples. Mockups establish the standard by which the Work will be judged.

1. Comply with submittal requirements to fullest extent possible. Process transmittal forms to provide record of activity.

F. Submittals Schedule: Comply with requirements in Division 01 Section "Scheduling and Progress."

2.2 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by other Specification Sections.

1. Number of Copies: Submit pdf electronic file.
2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
3. Test and Inspection Reports: Comply with requirements in Division 1 Section "Testing Laboratory Services."

B. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.

D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.

F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.

G. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.

H. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.

I. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements.

J. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

K. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.

L. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

M. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

1. Name of evaluation organization.
2. Date of evaluation.
3. Time period when report is in effect.
4. Product and manufacturers' names.
5. Description of product.
6. Test procedures and results.
7. Limitations of use.

N. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements in Division 1 Section "Project Closeout."

O. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

P. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:

1. Preparation of substrates.
2. Required substrate tolerances.

3. Sequence of installation or erection.
4. Required installation tolerances.
5. Required adjustments.
6. Recommendations for cleaning and protection.

Q. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:

1. Name, address, and telephone number of factory-authorized service representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

R. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

S. Material Safety Data Sheets: Submit information directly to Construction Manager. If submitted to Architect, Architect will not review this information but will return it with no action taken.

1. Submit MSDS’s for all products used during construction whether incorporated in the Work or used in the performance of the Work.
2. Construction Manager will compile a central file of MSDS’s on the site, which will be available to workers and others in accordance with “Right to Know” legislation.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field verify all dimensions. Mark with approval stamp before submitting to Architect.

B. Approval Stamp: Stamp each submittal and submittal cover sheet with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Except for submittals for information or similar purposes, where action and return is required or requested, Architect will review each submittal, mark to indicate action taken, and return.

1. Compliance with specified characteristics is Contractor's responsibility.

C. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

1. Contractor may proceed with fabrication on "REVIEWED" or "FURNISH AS NOTED" shop drawings provided that the Contractor adheres to the corrections noted.
2. Contractor may not proceed with fabrication on shop drawings noted "REVISE AND RESUBMIT" or "REJECTED" until "REVIEWED" or "FURNISH AS NOTED" stamp is received on resubmitted drawing.
   a. Do not permit submittals marked "Revise and Resubmit," or "Rejected," to be used at Project site, or elsewhere where Work is in progress.

3. Other Action: Where submittal is primarily for information or record purposes, special processing or other activity, submittal will be returned, marked "Action Not Required."

D. Informational Submittals: Architect will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

E. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION 013300

ATTACHMENTS:
SUBMITTAL COVER SHEET
REQUEST FOR ELECTRONIC FILES/CAD FILE PROTOCOLS

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware
2. Electronic access control system components
3. Field verification, preparation and modification of existing doors and frames to receive new door hardware.

B. Section excludes:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors

C. Related Sections:

1. Division 01 Section "Alternates" for alternates affecting this section.
2. Division 06 Section "Rough Carpentry"
3. Division 06 Section "Finish Carpentry"
4. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
5. Division 08 Sections:

    a. "Metal Doors and Frames"
    b. "Flush Wood Doors"
    c. "Stile and Rail Wood Doors"
    d. "Interior Aluminum Doors and Frames"
    e. "Aluminum-Framed Entrances and Storefronts"
    f. "Stainless Steel Doors and Frames"
    g. "Special Function Doors"
    h. "Entrances"

6. Division 09 sections for touchup, finishing or refinishing of existing openings modified by this section.
7. Division 26 "Electrical" sections for connections to electrical power system and for low-voltage wiring.
8. Division 28 "Electronic Safety and Security" sections for coordination with other components of electronic access control system and fire alarm system.

1.02 REFERENCES

A. UL - Underwriters Laboratories

1. UL 10B - Fire Test of Door Assemblies

2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies
4. UL 305 - Panic Hardware

B. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Keying Systems and Nomenclature
4. Installation Guide for Doors and Hardware

C. NFPA – National Fire Protection Association

1. NFPA 70 – National Electric Code
2. NFPA 80 – 2016 Edition – Standard for Fire Doors and Other Opening Protectives
3. NFPA 101 – Life Safety Code
4. NFPA 105 – Smoke and Draft Control Door Assemblies
5. NFPA 252 – Fire Tests of Door Assemblies

D. ANSI - American National Standards Institute

1. ANSI A117.1 – 2017 Edition – Accessible and Usable Buildings and Facilities
2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems
4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors
5. ANSI/SDI A250.8 - Standard Steel Doors and Frames

1.03 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.
2. Prior to forwarding submittal:

a. Comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, "EXAMINATION" article, herein.
b. Review drawings and Sections from related trades to verify compatibility with specified hardware.
c. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.

B. Action Submittals:

1. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:

a. Wiring Diagrams: For power, signal, and control wiring and including:

1) Details of interface of electrified door hardware and building safety and security systems.
2) Schematic diagram of systems that interface with electrified door hardware.
3) Point-to-point wiring.
4) Risers.

3. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.

    a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule:

    a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work critical in Project construction schedule.
    b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
    c. Indicate complete designations of each item required for each opening, include:
        1) Door Index: door number, heading number, and Architect's hardware set number.
        2) Quantity, type, style, function, size, and finish of each hardware item.
        3) Name and manufacturer of each item.
        4) Fastenings and other pertinent information.
        5) Location of each hardware set cross-referenced to indications on Drawings.
        6) Explanation of all abbreviations, symbols, and codes contained in schedule.
        7) Mounting locations for hardware.
        8) Door and frame sizes and materials.
        9) Degree of door swing and handing.
        10) Operational Description of openings with electrified hardware covering egress, ingress (access), and fire/smoke alarm connections.

5. Key Schedule:

    a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
    b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
    c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
    d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
    e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.

f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

C. Informational Submittals:

1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
2. Provide Product Data:

a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
b. Include warranties for specified door hardware.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:

a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
b. Catalog pages for each product.
c. Final approved hardware schedule edited to reflect conditions as installed.
d. Final keying schedule
e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
f. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.

E. Inspection and Testing:

1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional testing and inspection for:

a. fire door assemblies, in compliance with NFPA 80.
b. required egress door assemblies, in compliance with NFPA 101.

1.04 QUALITY ASSURANCE

A. Qualifications and Responsibilities:

1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project’s vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.
3. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:

a. For door hardware: DHI certified AHC or DHC.
b. Can provide installation and technical data to Architect and other related subcontractors.
c. Can inspect and verify components are in working order upon completion of installation.
d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect and electrical engineers.

4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

B. Certifications:

1. Fire-Rated Door Openings:

a. Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction.
b. Provide only items of door hardware that are listed products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

2. Smoke and Draft Control Door Assemblies:

a. Provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105
b. Comply with the maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.

3. Electrified Door Hardware

a. Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

4. Accessibility Requirements:

a. Comply with governing accessibility regulations cited in "REFERENCES" article 087100, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.

C. Pre-Installation Meetings

1. Keying Conference

a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
2) Preliminary key system schematic diagram.
3) Requirements for key control system.
4) Requirements for access control.
5) Address for delivery of keys.

2. Pre-installation Conference

    a. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
    b. Inspect and discuss preparatory work performed by other trades.
    c. Inspect and discuss electrical roughing-in for electrified door hardware.
    d. Review sequence of operation for each type of electrified door hardware.
    e. Review required testing, inspecting, and certifying procedures.
    f. Review questions or concerns related to proper installation and adjustment of door hardware.

3. Electrified Hardware Coordination Conference:

    a. Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping.
B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.
C. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
D. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
E. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
F. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

1.06 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.
B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.
E. Existing Openings: Where existing doors, frames and/or hardware are to remain, field verify existing functions, conditions and preparations and coordinate to suit opening conditions and to provide proper door operation.

1.07 WARRANTY

A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.

    1. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.
    2. Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's published listings.

        a. Mechanical Warranty
            1) Locks
                a) Schlage L Series: 3 years
                b) Schlage ND Series: 10 years
            2) Exit Devices
                a) Von Duprin: 3 years
            3) Closers
                a) LCN 4000 Series: 30 years

        b. Electrical Warranty
            1) Locks
                a) Schlage: 1 year
            2) Exit Devices
                a) Von Duprin: 1 year
            3) Closers
                a) LCN: 2 years

1.08 MAINTENANCE

A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
B. Turn over unused materials to Owner for maintenance purposes.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. The Awarding Authority has determined that certain products will be selected for their unique characteristics and particular project suitability to ensure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: "No Substitute."

    1. Where "No Substitute" is noted, submittals and substitution requests for other products will not be considered.

B. Approval of manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable Manufacturers" in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.
C. Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.

D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

A. Fabrication

1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer's recognized installation standards for application intended.
2. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
3. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with "Metal Doors and Frames", "Flush Wood Doors", "Stile and Rail Wood Doors" to ensure proper reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.

B. Modification and Preparation of Existing Doors: Where existing door hardware is indicated to be removed and reinstalled.

1. Provide necessary fillers, Dutchmen, reinforcements, and fasteners, compatible with existing materials, as required for mounting new opening hardware and to cover existing door and frame preparations.
2. Use materials which match materials of adjacent modified areas.
3. When modifying existing fire-rated openings, provide materials permitted by NFPA 80 as required to maintain fire-rating.

C. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

D. Cable and Connectors:

1. Where scheduled in the hardware sets, provide each item of electrified hardware and wire harnesses with number and gage of wires enough to accommodate electric function of specified hardware.
2. Provide Molex connectors that plug directly into connectors from harnesses, electric locking and power transfer devices.
3. Provide through-door wire harness for each electrified locking device installed in a door and wire harness for each electrified hinge, electrified continuous hinge, electrified pivot, and electric power transfer for connection to power supplies.

2.03 CONTINUOUS HINGES

A. Manufacturers:

1. Scheduled Manufacturer:

a. Ives

2. Acceptable Manufacturers:

    a. Select
    b. Roton

B. Requirements:

1. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
2. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum.
3. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
4. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
5. On fire-rated doors, provide aluminum geared continuous hinges classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
6. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
7. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

2.04 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

    a. Von Duprin 98/35A series

2. Acceptable Manufacturers and Products:

    a. Precision APEX series
    b. Falcon 24/25 series

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide smooth touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
4. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
5. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
6. Provide exit devices with weather resistant components that can withstand harsh conditions of various climates and corrosive cleaners used in outdoor pool environments.
7. Provide flush end caps for exit devices.
8. Provide exit devices with manufacturer's approved strikes.

9. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
10. Mount mechanism case flush on face of doors or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
11. Provide cylinder or hex-key dogging as specified at non fire-rated openings.
12. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
13. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
14. Provide electrified options as scheduled.
15. Top latch mounting: double- or single-tab mount for steel doors, face mount for aluminum doors eliminating requirement of tabs, and double tab mount for wood doors.
16. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

2.05 ELECTRONIC ACCESS CONTROL WIRELESS MORTISE LOCK

A. Manufacturer and Products:

1. Scheduled Manufacturer and Product:

    a. Schlage LEB Series to be furnished by Security Integrator

2. Acceptable Manufacturers and Products:

    a. No Substitute

B. Requirements: Provide wireless electronic locksets that comply with the following requirements.

1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1 Operational, Grade 1 Security at locks with non-interchangeable cores, and manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance. Cylinders: Refer to "KEYING" article, herein.
2. Provide heavy-duty, handed, field-reversible mortise locks.
3. Backset: 2-3/4-inch (70 mm).
4. Latchbolt: 3/4-inch (19 mm) throw stainless steel latch bolt with anti-friction tongue.
5. Deadbolt: 1" throw stainless steel deadbolt to support Privacy and Apartment functions.
6. Chassis: Provide standard A115.1 preparation for mortise locks for 1-3/4-inch (44 mm) doors.
7. Applicable Standards:

    a. Listed, UL 294 - Standard of Safety for Access Control System Units.
    b. Compliant with ANSI Standard A156.25 and A156.13 Series 1000, Grade 1 strength and operational requirements.
    c. Compliant with ANSI/BHMA A156.25 Grade 1 Operation and Security Requirement.
    d. Certified to UL10C, FCC Part15, IC RSS-210, ADA, RoHS, ICC ANSI A117.1
    e. Compliant with FBC TAS 201, TAS 202, TAS 203 for door assemblies.
    f. Certified to FBC 3905, 12400 and 14482

8. Lockset Functions: Provide locks in functions as specified in hardware groups.

9. Emergency Override: Provide mechanical key override; cylinders: Refer to "KEYING" article, herein.
10. Levers:

    a. Provide levers operating independently of each other.
    b. Lever Design: As specified within hardware sets.

11. Power Supply:

    a. Provide lockset powered by four AA batteries
    b. Provide locksets with the ability to communicate battery status and battery voltage level by means of an application on mobile device, at the door, and remotely by integrated software.

12. Features: Provide locksets with the following features.

    a. Ability to communicate unit's communication status via LED
    b. Capable of being programmed via Mobile or Web based App to lock via BLE or via integrated SW partner system via BLE Gateway or existing building Wi-Fi
    c. Visual tri-colored LED indicator that indicate activation, operational systems status, system error conditions and low power conditions as determined by integrated software partner.
    d. Audible feedback that can be enabled or disabled.
    e. Tamper-resistant screws: Single tamper-resistant torx screw on inside escutcheon.
    f. Capable of reacting to a lockdown command in under 5 seconds when used with a software partner that has integrated this feature.
    g. Suitable for both interior and exterior deployment.
    h. Employ Wi-Fi communications to permit remote view of audits and alerts, as well as provide automatic daily updates to lock configuration and user access rights.

13. Adaptability:

    a. Open Architecture: Provide locksets manufactured with open architecture characteristics capable of handling new and existing access control software and credential reading technology. Can be supported by cloud-based web and mobile apps without the need for an integrated software partner.

14. Switches: Provide locksets with the following built-in switches:

    a. Door Position Switch
    b. Interior Cover Tamper Guard
    c. Request to Exit
    d. Deadbolt Position where listed in the hardware sets.
    e. Interior Push Button where listed in the hardware sets.

15. Credentials: Provide integral credential reader modules in the following configurations:

    a. NFC, including peer-peer compatible, operable with both Android and IOS mobile devices
    b. 125 kHz contactless smart cards
        1) Compatibility: Schlage, XceedID, ISONAS, HID, GE/CASI, AWID

    c. 13.56 MHz contactless smart cards

1) Secure section (multi-technology and smart card) compatibility: Schlage MIFARE Classic, Schlage MIFARE DESFire EV1
2) 13.56 MHz Serial number only (multi-technology and smart card) compatibility: DESFire CSN, HID iCLASS CSN, MIFARE CSN, MIFARE DESFire EV1 CSN

d. Multi-technology contactless for applications requiring read capability for both 125 kHz proximity and 13.56 MHz contactless smart cards.
e. BLE

16. Records: Subject to the limitations of the attached access control system, the wireless locks possess enough storage capacity to support 5000 users and 2000 audits.
17. Verification time: less than or equal to 1 second for smart cards and proximity cards
18. “Gateway – The Manufacturer shall provide a wireless gateway allowing up to 10 wireless locks and other Manufacturer wireless devices to be connected in real-time with a physical access control system (PACS) via Ethernet or RS-485 protocol. Number as indicated on Drawings or as required for complete turnkey system. Basis of Design Product: Schlage ENGAGE Gateway, NO SUBSTTUTION”

2.06 ELECTRONIC ACCESS CONTROL WIRELESS CYLINDRICAL LOCK

A. Manufacturers:

1. Scheduled Manufacturer and Product:

a. Schlage NDEB series to be furnished by Security Integrator

2. Acceptable Manufacturers and Products:

a. No substitute

B. Requirements:

1. ANSI/BHMA A156.2 Series 4000, Grade 1.
2. Florida Building Code (ASTM E330, E1886, E1996) and Miami Dade (TAS 201, 202, 203) requirements for hurricanes.
3. Certified to UL10C 3-hour rating, ULC-S319, FCC Part15, ADA RoHS, ICC ANSI A117.1
4. Listed, UL 294 - The Standard of Safety for Access Control System Units.
5. Compliant with ANSI/BHMA A156.25 Operation and Security interior operating range of 32 degrees F (0 degrees C) to 120 degrees F(49 degrees C) for interior use only.
6. Compliant with ASTM E330 for door assemblies.
7. Compliant with ICC / ANSI A117.1, NFPA 101, NFPA 80 and IBC Chapter 10 Cylinders: Refer to "KEYING" article, herein.
8. Provide cylindrical locksets exceeding the ANSI/BHMA A156.2 Grade 1 performance standards for strength, security, and durability in the categories below:

a. Abusive Locked Lever Torque Test – minimum 3,100 inch-pounds without gaining access
b. Offset lever pull – minimum 1,600-foot pounds without gaining access
c. Vertical lever impact – minimum 100 impacts without gaining access
d. Cycle Test - tested to minimum 16 million cycles with no visible lever sag or use of performance aids such as set screws or spacers.

9. Emergency Override: Provide mechanical key override; cylinders: Refer to "KEYING" article, herein.
10. Levers:

    a. Vandal Resistance: Exterior (secure side) lever rotates freely while door remains locked, preventing damage to internal locking components from vandalism by excessive force.
    b. Provide lever trim that operates independently of each other and is field reversible without tools.
    c. Style: As specified within hardware sets.

11. Power Supply: 4 AA batteries

    a. Provide battery powered wireless electronic products with the ability to communicate battery status and battery voltage level by means of a mobile app at door and remotely by Partner integrated software.

12. Features:

    a. Ability to communicate unit's communication status.
    b. Visual LED indicators that indicate activation, operational systems status, system error conditions and low power conditions.
    c. Audible feedback that can be enabled or disabled.
    d. Suitable for both interior and exterior deployment.
    e. Employ Wi-Fi communications to permit remote view of audits and alerts, as well as provide automatic daily updates to lock configuration and user access rights.

13. Adaptability:

    a. Open Architecture: Provide locksets manufactured with open architecture characteristics capable of handling new and existing access control software and credential reading technology. Can be supported by cloud-based web and mobile apps without the need for an integrated software partner.

14. Switches:

    a. Door Position Sensor – magnet integrated into strike to eliminate additional door prep
    b. Interior Cover Tamper Guard
    c. Battery Status
    d. Request to Exit
    e. Interior Push Button

15. Credentials: Provide integral credential reader modules in the following configurations:

    a. NFC, including peer-peer compatible, operable with both Android and IOS mobile devices
    b. 125 kHz contactless smart cards
        1) Compatibility: Schlage, XceedID, ISONAS, HID, GE/CASI, AWID

    c. 13.56 MHz contactless smart cards
        1) Secure section (multi-technology and smart card) compatibility: Schlage MIFARE Classic, Schlage MIFARE DESFire EV1
        2) 13.56 MHz Serial number only (multi-technology and smart card) compatibility: DESFire CSN, HID iCLASS CSN, MIFARE CSN, MIFARE DESFire EV1 CSN

d. Multi-technology contactless for applications requiring read capability for both 125 kHz proximity and 13.56 MHz contactless smart cards.
e. BLE

16. Records: Subject to the limitations of the attached access control system, the wireless locks possess enough storage capacity to support 5000 users and 2000 audits.
17. Verification time: less than or equal to 1 second for smart cards and proximity cards

2.07 OFFLINE CONTROLLER

1. ACCESS CONTROL REMOTE DEVICES: Refer to Section 281519 for specifications.

2.08 ELECTRIC STRIKES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Von Duprin 6000 Series

2. Acceptable Manufacturers and Products:

a. Folger Adam 300 Series
b. HES 1006 Series

B. Requirements:

1. Provide electric strikes designed for use with type of locks shown at each opening.
2. Provide electric strikes UL Listed as burglary resistant that are tested to a minimum endurance test of 1,000,000 cycles.
3. Where required, provide electric strikes UL Listed for fire doors and frames.
4. Provide transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

2.09 PASSIVE INFRARED MOTION SENSORS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Schlage SCAN II Series

2. Acceptable Manufacturers and Products:

a. RCI 915 Series
b. Securitron XMS Series
c. Security Door Controls MD-31D Series

B. Requirements:

1. Provide motion sensors as specified in hardware groups.

2.10 POWER SUPPLIES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Schlage/Von Duprin PS900 Series

2. Acceptable Manufacturers and Products:

a. Precision ELR series
b. Sargent 3500 series

B. Requirements:

1. Provide power supplies approved by manufacturer of supplied electrified hardware.
2. Provide appropriate quantity of power supplies necessary for proper operation of electrified locking components as recommended by manufacturer of electrified locking components with consideration for each electrified component using power supply, location of power supply, and approved wiring diagrams. Locate power supplies as directed by Architect.
3. Provide regulated and filtered 24 VDC power supply, and UL class 2 listed.
4. Provide power supplies with the following features:

a. 12/24 VDC Output, field selectable.
b. Class 2 Rated power limited output.
c. Universal 120-240 VAC input.
d. Low voltage DC, regulated and filtered.
e. Polarized connector for distribution boards.
f. Fused primary input.
g. AC input and DC output monitoring circuit w/LED indicators.
h. Cover mounted AC Input indication.
i. Tested and certified to meet UL294.
j. NEMA 1 enclosure.
k. Hinged cover w/lock down screws.
l. High voltage protective cover.

2.11 CYLINDERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Schlage Everest 29 R

2. Acceptable Manufacturers and Products:

a. No Substitute

B. Requirements:

1. Provide cylinders/cores compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset; manufacturer's series as indicated. Refer to "KEYING" article, herein.
2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.

    a. Conventional Patented Restricted Small Format: cylinder with small format interchangeable cores (SFIC) with restricted, patented keyway.

3. Patent Protection: Cylinders/cores requiring use of restricted, patented keys, patent protected.
4. Nickel silver bottom pins.

2.12 KEYING

A. Scheduled System:

1. Existing factory registered system:

    a. Provide cylinders/cores keyed into Owner's existing factory registered keying system. Comply with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

B. Requirements:

1. Construction Keying:

    a. Replaceable Construction Cores.
        1) Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
            a) 5 construction control keys
            b) 10 construction change (day) keys.
        2) Owner or Owner's Representative will replace temporary construction cores with permanent cores.

2. Permanent Keying:

    a. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
        1) Master Keying system as directed by the Owner.

    b. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
    c. Provide keys with the following features:
        1) Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
        2) Patent Protection: Keys and blanks protected by one or more utility patent(s).

    d. Identification:
        1) Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
        2) Identification stamping provisions must be approved by the Architect and Owner.

3) Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
4) Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
5) Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.

e. Quantity: Furnish in the following quantities.
1) Change (Day) Keys: 3 per cylinder/core.
2) Permanent Control Keys: 3.
3) Master Keys: 6.

2.13 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. LCN 4010/4110 series

2. Acceptable Manufacturers and Products:

a. Corbin-Russwin DC8000 series
b. Sargent 281 series

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. Certify surface mounted mechanical closers to meet fifteen million (15,000,000) full load cycles. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2-inch (38 mm) diameter with 11/16-inch (17 mm) diameter double heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers. When closers are parallel arm mounted, provide closers which mount within 6-inch (152 mm) top rail without use of mounting plate so that closer is not visible through vision panel from pull side.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI/BHMA Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).

10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.14 DOOR TRIM

A. Manufacturers:

1. Scheduled Manufacturer:

a. Ives

2. Acceptable Manufacturers:

a. Trimco
b. Burns

B. Requirements:

1. Provide push plates, push bars, pull plates, pulls, and hands-free reversible door pulls with diameter and length as scheduled.

2.15 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer:

a. Ives

2. Acceptable Manufacturers:

a. Burns
b. Trimco

B. Requirements:

1. Provide protection plates with a minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes plates 2 inches (51 mm) less width of door on single doors, pairs of doors with a mullion, and doors with edge guards. Size plates 1 inch (25 mm) less width of door on pairs without a mullion or edge guards.
3. At fire rated doors, provide protection plates over 16 inches high with UL label.

2.16 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers:

a. Glynn-Johnson

2. Acceptable Manufacturers:

    a. Rixson
    b. Sargent
    c. ABH

B. Requirements:

1. Provide overhead stop at any door where conditions do not allow for a wall stop or floor stop presents tripping hazard.
2. Provide friction type at doors without closer and positive type at doors with closer.

2.17 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer:

    a. Ives

2. Acceptable Manufacturers:

    a. Trimco
    b. Burns

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide concave type where lockset has a push button of thumbturn.
2. Where a wall stop cannot be used, provide universal floor stops.
3. Where wall or floor stop cannot be used, provide overhead stop.
4. Provide roller bumper where doors open into each other and overhead stop cannot be used.

2.18 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer:

    a. Zero International

2. Acceptable Manufacturers:

    a. National Guard
    b. Reese

B. Requirements:

1. Provide thresholds, weather-stripping, and gasketing systems as specified and per architectural details. Match finish of other items.

2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.
4. Size thresholds 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width unless otherwise specified in the hardware sets or detailed in the drawings.

2.19 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer:

a. Ives

2. Acceptable Manufacturers:

a. Burns
b. Rockwood
c. Trimco

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.20 FINISHES

A. Finish of all hardware shall be as specified within hardware sets.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.
B. Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.
C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
D. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
4. Installation Guide for Doors and Hardware: DHI TDH-007-20

B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.
C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.
D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.
H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated.
I. Lock Cylinders:

1. Install construction cores to secure building and areas during construction period.
2. Replace construction cores with permanent cores as indicated in keying section.
3. Furnish permanent cores to Owner for installation.

J. Wiring: Coordinate with Division 26, ELECTRICAL and Division 28 ELECTRONIC SAFETY AND SECURITY sections for:

1. Conduit, junction boxes and wire pulls.
2. Connections to and from power supplies to electrified hardware.
3. Connections to fire/smoke alarm system and smoke evacuation system.
4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
5. Connections to panel interface modules, controllers, and gateways.
6. Testing and labeling wires with Architect's opening number.

K. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
L. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.
M. Closer/Holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.
N. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.
O. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

P. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.
Q. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
R. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
S. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

3.03 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

    1. Spring Hinges: Adjust to achieve positive latching when door can close freely from an open position of 30 degrees.
    2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
    3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.04 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.
B. Clean operating items per manufacturer's instructions to restore proper function and finish.
C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.05 DOOR HARDWARE SCHEDULE

A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.
B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application.
C. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special features, options, cylinders/keying, and other requirements.
D. Hardware Sets:

Abbreviation	Name
GLY	Glynn-Johnson Corp
IVE	H.B. Ives
LCN	Lcn Commercial Division
SCE	Schlage Electronic Security
SCH	Schlage Lock Company
VON	Von Duprin
ZER	Zero International Inc

66024 OPT0244629 Version 2
HARDWARE GROUP NO. 01
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	WIRELESS ELECTRONIC LOCK	NDEBHD ATH BATTERY OPERATED TO BE PROVIDED BY SECURITY INTEGRATOR		606	SCE
1	EA	SFIC EVEREST CORE	80-037 CKC EV29 R		606	SCH
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. REMOVE EXISTING LOCK AND REPLACE WITH NEW ACCESS CONTROL LOCK.
2. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING DOOR/FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO DOOR/FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 01.1
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		313AN	IVE
1	EA	WIRELESS ELECTRONIC LOCK	NDEBHD ATH BATTERY OPERATED TO BE PROVIDED BY SECURITY INTEGRATOR		606	SCE
1	EA	SFIC EVEREST CORE	80-037 CKC EV29 R		606	SCH
1	EA	SURFACE CLOSER	4011		696	LCN
1	EA	KICK PLATE	8400 8" B-CS		606	IVE
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 01.2 - Not Used

HARDWARE GROUP NO. 01.3
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		313AN	IVE
1	EA	WIRELESS ELECTRONIC LOCK	NDEBHD ATH BATTERY OPERATED TO BE PROVIDED BY SECURITY INTEGRATOR		606	SCE
1	EA	SFIC EVEREST CORE	80-037 CKC EV29 R		606	SCH
1	EA	OH STOP	90S		606	GLY
1	EA	SURFACE CLOSER	4011		696	LCN
1	EA	MOUNTING PLATE	4010-18 SRT		US4	LCN
1	EA	KICK PLATE	8400 8" B-CS		606	IVE
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 01A
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	WIRELESS ELECTRONIC LOCK	NDEBHD ATH BATTERY OPERATED TO BE PROVIDED BY SECURITY INTEGRATOR		606	SCE
1	EA	SFIC EVEREST CORE	80-037 CKC EV29 R		606	SCH
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. REMOVE EXISTING LOCK AND REPLACE WITH NEW ACCESS CONTROL LOCK.
2. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING DOOR/FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO DOOR/FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 02
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	STOREROOM MORT LOCK W/LED INDICATOR	LEBMS-ADDHD-07 BATTERY OPERATED TO BE PROVIDED BY SECURITY INTEGRATOR		606	SCE
1	EA	SFIC EVEREST CORE	80-037 CKC EV29 R		606	SCH
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. REMOVE EXISTING LOCK AND REPLACE WITH NEW ACCESS CONTROL LOCK.
2. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING DOOR/FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO DOOR/FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 03
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	ELECTRIC STRIKE	6300 FSE 12/24 VAC/VDC		630	VON
1	EA	WIRE HARNESS	CON-6W (WIRE LEADS FOR CONNECTION TO POWER)			SCH
1	EA	CONTROLLER	CTE-MTB15-485-B TO BE PROVIDED BY SECURITY INTEGRATOR		B	SCE
1	EA	MOTION SENSOR	SCANII 12/24 VDC		BLK	SCE
1	EA	POWER SUPPLY	PS902 KL900 120/240 VAC		LGR	SCE
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING DOOR/FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO DOOR/FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 03.1
Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		313AN	IVE
1	EA	FIRE EXIT HARDWARE	98-L-NL-F-07		630	VON
1	EA	SFIC RIM CYLINDER	80-159		606	SCH
1	EA	SFIC EVEREST CORE	80-037 CKC EV29 R		606	SCH
1	EA	ELECTRIC STRIKE	6300 FSE 12/24 VAC/VDC		630	VON
1	EA	SURFACE CLOSER	4111 EDA		696	LCN
1	EA	KICK PLATE	8400 8" B-CS		606	IVE
1	EA	WIRE HARNESS	CON-6W (WIRE LEADS FOR CONNECTION TO POWER)			SCH
1	EA	CONTROLLER	CTE-MTB15-485-B TO BE PROVIDED BY SECURITY INTEGRATOR		B	SCE
1	EA	MOTION SENSOR	SCANII 12/24 VDC		BLK	SCE
1	EA	POWER SUPPLY	PS902 KL900 120/240 VAC		LGR	SCE
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 03A
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	ELECTRIC STRIKE	6300 FSE 12/24 VAC/VDC		630	VON
1	EA	WIRE HARNESS	CON-6W (WIRE LEADS FOR CONNECTION TO POWER)			SCH
1	EA	CONTROLLER	CTE-MTB15-485-B TO BE PROVIDED BY SECURITY INTEGRATOR		B	SCE
1	EA	MOTION SENSOR	SCANII 12/24 VDC		BLK	SCE
1	EA	POWER SUPPLY	PS902 KL900 120/240 VAC		LGR	SCE
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING DOOR/FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO DOOR/FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 03B
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	REMOVABLE MULLION	KR4854 STAB		695	VON
1	EA	SFIC MORTISE CYL.	80-132		606	SCH
1	EA	SFIC EVEREST CORE	80-037 CKC EV29 R		606	SCH
1	EA	ELECTRIC STRIKE	6111 FSE DSLC CON 12/24 VAC/VDC		630	VON
1	EA	WIRE HARNESS	CON-6W (WIRE LEADS FOR CONNECTION TO POWER)			SCH
1	EA	CONTROLLER	CTE-MTB15-485-B TO BE PROVIDED BY SECURITY INTEGRATOR		B	SCE
1	EA	MOTION SENSOR	SCANII 12/24 VDC		BLK	SCE
1	EA	POWER SUPPLY	PS902 KL900 120/240 VAC		LGR	SCE
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING DOOR/FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO DOOR/FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 03C
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY TWP CON		313AN	IVE
1	EA	ELEC FIRE EXIT HARDWARE	RX-LC-9827-L-F-LBRAFL-M996-07-499F-FSE		606	VON
1	EA	ELEC FIRE EXIT HARDWARE	RX-LC-9827-L-NL-F-LBR-07-499F		606	VON
2	EA	SFIC RIM CYLINDER	80-159		606	SCH
2	EA	SFIC EVEREST CORE	80-037 CKC EV29 R		606	SCH
2	EA	SURFACE CLOSER	4111 EDA		696	LCN
2	EA	KICK PLATE	8400 8" B-CS		606	IVE
2	EA	WIRE HARNESS	CON-LENGTH TO SUIT (CONNECT POWER TRANSFER TO ELECTRIFIED LOCKING DEVICE)			SCH
2	EA	WIRE HARNESS	CON-6W (WIRE LEADS FOR CONNECTION TO POWER)			SCH
1	EA	CONTROLLER	CTE-MTB15-485-B TO BE PROVIDED BY SECURITY INTEGRATOR		B	SCE
1	EA	POWER SUPPLY	PS902 KL900 120/240 VAC		LGR	SCE
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 03D
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY		313AN	IVE
1	EA	REMOVABLE MULLION	KR4854 STAB		695	VON
2	EA	PANIC HARDWARE	LD-98-EO		606	VON
1	EA	SFIC MORTISE CYL.	80-132		606	SCH
2	EA	SFIC RIM CYLINDER	80-159		606	SCH
3	EA	SFIC EVEREST CORE	80-037 CKC EV29 R		606	SCH
1	EA	ELECTRIC STRIKE	6111 FSE DSLC CON 12/24 VAC/VDC		630	VON
2	EA	DOOR PULL	VR910 NL		630	IVE
2	EA	SURFACE CLOSER	4111 SCUSH		696	LCN
2	EA	KICK PLATE	8400 8" B-CS		606	IVE
2	EA	DOOR SWEEP	8197D		D	ZER
1	EA	WIRE HARNESS	CON-6W (WIRE LEADS FOR CONNECTION TO POWER)			SCH
1	EA	CONTROLLER	CTE-MTB15-485-B TO BE PROVIDED BY SECURITY INTEGRATOR		B	SCE
1	EA	MOTION SENSOR	SCANII 12/24 VDC		BLK	SCE
1	EA	POWER SUPPLY	PS902 KL900 120/240 VAC		LGR	SCE
1	EA	NOTE	BALANCE OF HARDWARE EXISTING			

NOTE:
1. CONTRACTOR TO FILL/PATCH ANY OLD HARDWARE PREPARATIONS IN EXISTING FRAME THAT WILL NO LONGER BE USED WITH NEW HARDWARE. CONTRACTOR IS RESPONSIBLE FOR ANY MODIFICATIONS TO FRAME AS REQUIRED TO MOUNT NEW DOOR HARDWARE, INCLUDING MORTISES, REINFORCEMENTS AND ALL PREPARATION OF THE EXISTING MATERIAL.

HARDWARE GROUP NO. 04
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 NRP		652	IVE
2	EA	MANUAL FLUSH BOLT	FB358		626	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	STOREROOM LOCK	ND80HD ATH		606	SCH
1	EA	SFIC EVEREST CORE	80-037 CKC EV29 R		606	SCH
1	EA	SURFACE CLOSER	4111 EDA		696	LCN
2	EA	WALL STOP	WS406/407CCV		605	IVE
2	EA	SILENCER	SR64		GRY	IVE

HARDWARE GROUP NO. AA
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1		NOTE	HARDWARE BY DOOR MANUFACTURER		

HARDWARE GROUP NO. EX-PR
Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	NOTE	EXISTING DOOR/FRAME AND HARDWARE TO REMAIN		

END OF SECTION

SECTION 281519 - ACCESS CONTROL REMOTE DEVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Reader interface module.
2. Intelligent controller.
3. Design of the gateway locations in the building and routing of the new system back to the controllers in the central district office.
4. Purchase and obtain all required hardware, software licenses and other required components to provide a turn-key access control system to interface with the school district’s existing security control system.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Coordination Meeting(s): For access control remote devices. Conduct meeting(s) at Project site before commencement of construction work.

1. Attendees: Installers, fabricators, representatives of manufacturers, representatives from telecommunications, Owner's security representatives, IT representatives, and administrants for field tests and inspections. Notify Architect and Construction Manager of scheduled meeting dates.

1.3 ACTION SUBMITTALS

A. Product Data: For each access control remote device.

B. Shop Drawings:

1. Project general notes.
2. Device layout.
3. Block diagram and cable/conduit routing.
4. System communications details.
5. System mounting details.
6. Secondary power calculations.

C. Field Quality-Control Submittals:

1. Field quality-control reports.

1.4 INFORMATIONAL SUBMITTALS

A. Manufacturers' Published Instructions: Record copy of official installation and testing instructions issued to Installer by manufacturer for the following:

1. Installation instructions for access control remote devices.
2. Manufacturer's recommended tests and inspections for access control remote devices.

1.5 CLOSEOUT SUBMITTALS

A. Software licenses.

1.6 QUALITY CONTROL

A. Delegated Design: Engage the school district’s authorized vendor and system integrator to design and layout the system components for an integrated turn-key system interfacing with the district’s existing security control system. Delegated design firm shall design the location of all the gateways and system components to tie the system back to the controllers in the central office.

1. Delegated Design Firm: A + Technology and Security Solutions, Bay Shore, NY www.aplustechnology.com.

1.7 WARRANTY

A. Warranty: Manufacturer shall warrant the product is free from defects in material and workmanship under normal use and service with proper maintenance for one year from the date of factory shipment

PART 2 - PRODUCTS

2.1 READER INTERFACE MODULE

A. Description: The peripheral interface device shall provide a solution for interfacing to TTL/Wiegand/RS-485 type readers and door hardware. The intelligent controller shall accept data from a reader with clock/data, Wiegand or RS-485 signaling, provide a tri-stated LED control and buzzer control. It shall also provide six Form-C relay outputs and eight supervised inputs for monitoring. The controller shall communicate via a 2-wire RS-485 interface.

1. Basis of Design Product: HID Mercury MR52; NO SUBSTITUTIONS.

B. Technical Specifications:

1. Primary Power:

a. 12-24VDC ±10%, 550mA maximum, plus reader current
b. 12VDC at 450mA nominal, plus reader current
c. 24VDC at 270mA nominal, plus reader current

2. Communication: 2-wire RS-485, 4,000 feet using Belden 9841
   a. Reader Interface: two reader ports, data card/keypad, clock/data, data-1/data-0, or 2-wire RS-485
   b. LED: one-wire bi-color LED support or two-wire
   c. Buzzer: one-wire LED mode

3. Keypad: 8-bit Mercury, 8-bit Dorado, or 4-bit HID
4. Reader Power: Pass through or 12VDC regulated power, 125mA each reader
5. Inputs: eight general purpose programmable type and two dedicated for tamper and power monitor
6. Outputs: Six relays – Form-C, 5 Amps at 28VDC
7. Temperature: 0 to 70 degrees Centigrade operational, -55 to 85 degrees Centigrade storage
8. Humidity: 10-95 percent RHNC
9. Standards: UL 294 recognized, CE compliant, RoHS

C. Technical Features:

1. Card Formats:
   a. Eight active card formats per intelligent controller
   b. 19 digit (64-bit) User ID and 15 digit PIN numbers maximum
   c. PIV-II, CAC, TWIC card compatible

2. Card Reader Functions
   a. Multiple card format support by reader
   b. Paired reader support
   c. Alternate reader support
   d. Turnstile support
   e. Biometric device support
   f. Keypad support with programmable user commands, card input
   g. Shunt relay support
   h. Strike follower relay support

3. Database Functions: Supports up to nineteen (19) digital card numbers
4. Intrusion Alarm Functions
   a. Supports entry delays and exit delays
   b. Provides control and alarm processing from the keypad

5. Offline mode operation
   a. Door Mode: Unlocked, locked, facility code only
   b. Relay Mode: Programmable for offline conditions

2.2 INTELLIGENT CONTROLLER

A. Description: The family of intelligent controllers and peripheral interface devices must provide an open architecture family of products that enables a choice of host software system vendor without replacement of hardware. The Linux based intelligent controller must provide decision making, event reporting, and database storage as a hardware platform. Two reader interfaces must provide control for two doors in addition to supporting an additional 62 doors, paired and or alternate reader configurations with peripheral interface devices.

1. The controller must communicate with the host via on-board 10BaseT/100BaseTX Ethernet port and support TLS encryption as a minimum security implementation.
2. The intelligent controller must be capable of elaborate processes and procedures without host intervention. Once configured, the intelligent controller must function independently of the host, and must be capable of controlling access, managing alarms, interfacing with an array of hardware devices, all while providing the decision-making oversight that each system configuration requires.
3. The intelligent controller must provide centralized biometric template management and support a wide range of reader technologies, including OSDP, Wiegand, magnetic stripe and biometric.
4. Two physical barriers must be controlled. Each reader port must accommodate a read head that utilizes OSDP (RS-485), OSDP SC, Wiegand, magnetic stripe, or F2F protocol/electrical signaling standards, one or two wire LED controls, and buzzer control.
5. Controller must support, as a minimum the following open standards, PSIA Area Control, SNMPv3/v2c, OSDP and OSDP SC.
6. The controller must utilize a cryptographic module, like OpenSSL FIPS Object Module RE, that is validated to FIPS 140-2 thus providing a certified implementation of TLS
7. Basis of Design Product: HID Mercury LP1502, NO SUBSTITUTIONS

B. Technical Specifications

1. The interface is for use in low voltage, Class 2 Circuits only.
2. The installation of this device must comply with all local fire and electrical codes.
3. Primary Power: 12 to 24 Vdc ± 10 %, 500 mA maximum (reader and USB ports not included)
4. Reader Ports 600 mA maximum (add 600 mA to primary power current)
5. Micro USB Port 5 Vdc, 500 mA maximum (add 270 mA to primary power current)
6. Memory and Clock Backup Battery: 3 Volt Lithium, type BR2330 or CR2330
7. microSD Card: Format: microSD or microSDHC; 2GB to 8GB
8. Host Communication: Ethernet: 10-BaseT/100Base-TX and Micro USB port (2.0) with optional adapter: pluggable model USB2-OTGE100
9. Serial I/O Device One each: 2-wire RS-485, 2,400 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit
10. Inputs: Eight unsupervised/supervised, standard EOL: 1k/1k ohm, 1%, ¼ watt Two unsupervised dedicated for cabinet tamper and UPS fault monitoring

11. Outputs: Four relays, Form-C with dry contacts Normally open contact (NO) contact: 5 A @ 30 Vdc resistive Normally closed contact (NC) contact: 3 A @ 30 Vdc resistive
12. Reader Interface
    a. Power: 12 Vdc ± 10 % regulated, 300 mA maximum each reader (jumper selectable) (input voltage (VIN) must be greater than 20 Vdc) or 12 to 24 Vdc ± 10 % (input voltage (VIN) passed through), 300 mA maximum each reader
    b. Data Inputs: TTL compatible, F/2F or 2-wire RS-485
    c. RS-485 Mode: 9,600 to 115,200 bps, asynchronous, half-duplex, 1 start bit, 8 data bits, and 1 stop bit. Maximum cable length: 2000 ft. (609.6 m)
    d. LED Output: TTL levels, high>3 V, low<0.5 V, 5 mA source/sink maximum
    e. Buzzer Output: Open collector, 12 Vdc open circuit maximum, 40 mA sink maximum

13. Cable requirements
    a. Power and Relays: 1 twisted pair, 18 to 16 AWG
    b. Ethernet: CAT-5, minimum
    c. RS-485
        1) (I/O Device Port): 1 twisted pair, shielded, 120 ohm impedance, 24 AWG, 4,000 ft. (1,219 m) max.
        2) (Reader Port): 1 twisted pair, shielded, 120 ohm impedance, 24 AWG, 2,000 ft. (610 m) max.
    d. Alarm Input: 1 twisted pair, 30 ohms maximum

14. Environmental
    a. Temperature: -55 to +85 °C, storage; 0 to +70 °C, operating
    b. Humidity: 5 to 95 % RHNC

15. Mechanical
    a. Dimension: 8 in. (203.2 mm) W x 6 in. (152.4 mm) L x 1 in. (25 mm) H
    b. Weight: 9 oz. (255 g) nominal, board only

16. Product Compliance
    a. UL294 Recognized
    b. FCC Part 15 Class A
    c. CE Compliant
    d. ROHS
    e. NIST Certified Encryption

C. Technical Features

1. Connectivity: 10/100 Ethernet. Optional alternate 10/100 Ethernet (using USB/Ethernet converter)
2. Security:
    a. Host/Controller connection protected by TLS 1.2/1.1 or AES-256/128
    b. Controller/IO Expansion connection protected by AES
    c. Generate and load custom peer certificates for TLS
    d. Port based network access control using 802.1X
    e. Crypto memory chip

f. FIPS 140-2 user of OpenSSL
g. HTTPS protection for installer web pages
h. Secure cookies
i. SNMPv3/v2c
j. DIP switch toggle sets 5 minute time to disable webpage access
k. Disable default login credentials
l. Authorized IP address filtering
m. IP Client Proxy
n. Bulk erase controller and periphery devices during replacement
o. Strong password enforcement

3. Door Control:
   a. Two-reader ports: Clock and Data, Wiegand, or RS-485
   b. Eight programmable inputs, four relays, diagnostic LEDs

4. Access Control:
   a. 240,000 Cardholder capacity
   b. 50,000 Transaction buffer
   c. If/Then Macro capability
   d. Adjustable cardholder capacity
   e. Supports up to 520 inputs and 516 outputs

5. Card Formats:
   a. 16 card formats per active reader, 8 per offline reader
   b. Entire card number reported on invalid read
   c. 19 digit (64-bit) User ID and 15 digit PIN numbers maximum
   d. PIV, CAC, TWIC card compatible
   e. 255 Access Levels per cardolder
   f. Activation/Deactivation Date or Date & Times

6. Card Reader Functions
   a. Multiple card format support by reader
   b. Paired reader support
   c. Alternate reader support
   d. Elevator support
   e. Turnstile support
   f. Biometric device support
   g. Open Supervised Device Protocol (OSDP) and OSDP SC compliant
   h. Occupancy count
   i. Support of multi-occupancy rules
   j. Anti-passback support
   k. Area-based, reader-based, or time based
   l. Nested area, hard, soft, or timed forgiveness
   m. Supports host-based approval rules
   n. Keypad support with programmable user commands, card input
   o. Shunt relay support
   p. Strike follower relay support
   q. Threat level and Operating Modes
   r. Host controlled OSDP reader passthrough
   s. Elevator floor override

7. Database Functions
   a. Encrypted database
   b. Configurable card database
   c. Supports up to nineteen (19) digit card numbers
   d. Supports pin codes up to fifteen (15) digits
   e. Card issue code of up to 32 bits, ADA and VIP flags; PIV (75 bits); Smart Card (200 bits)
   f. Ability to track people and objects

8. Intrusion Alarm Functions
   a. Supports entry delays and exit delays
   b. Area monitoring
   c. Standard alarm masking
   d. Provides control and alarm processing from the keypad

9. Supported Integrations
   a. Regional I/O shares I/O status
   b. Wireless locks
   c. Map Power Supply Alarms and Events using PSIA
   d. Reader firmware and configuration download
   e. Supports 1 total RS-485 I/O protocols

10. System Functions
    a. Relay count activations
    b. Interoperability with older host software using Legacy Mode feature
    c. Synchronize time using NTP

2.3 INSTALLATION ACCESSORIES

A. Provide all racks, cabinets, and all other components as required to provide a complete installation of the security components and system.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with manufacturer's published instructions, and with approved shop drawings.

B. Interfaces with Other Work: Coordinate installation of new products for complete integration into Owner’s existing security control system.

C. Installation: Install on racks or in cabinets as detailed on approved shop drawings

3.2 FIELD QUALITY CONTROL

A. Field tests and inspections must be witnessed by Architect, Owner, and if required, authorities having jurisdiction.

B. Tests and Inspections:

1. Perform manufacturer's recommended tests and inspections.

C. Nonconforming Work:

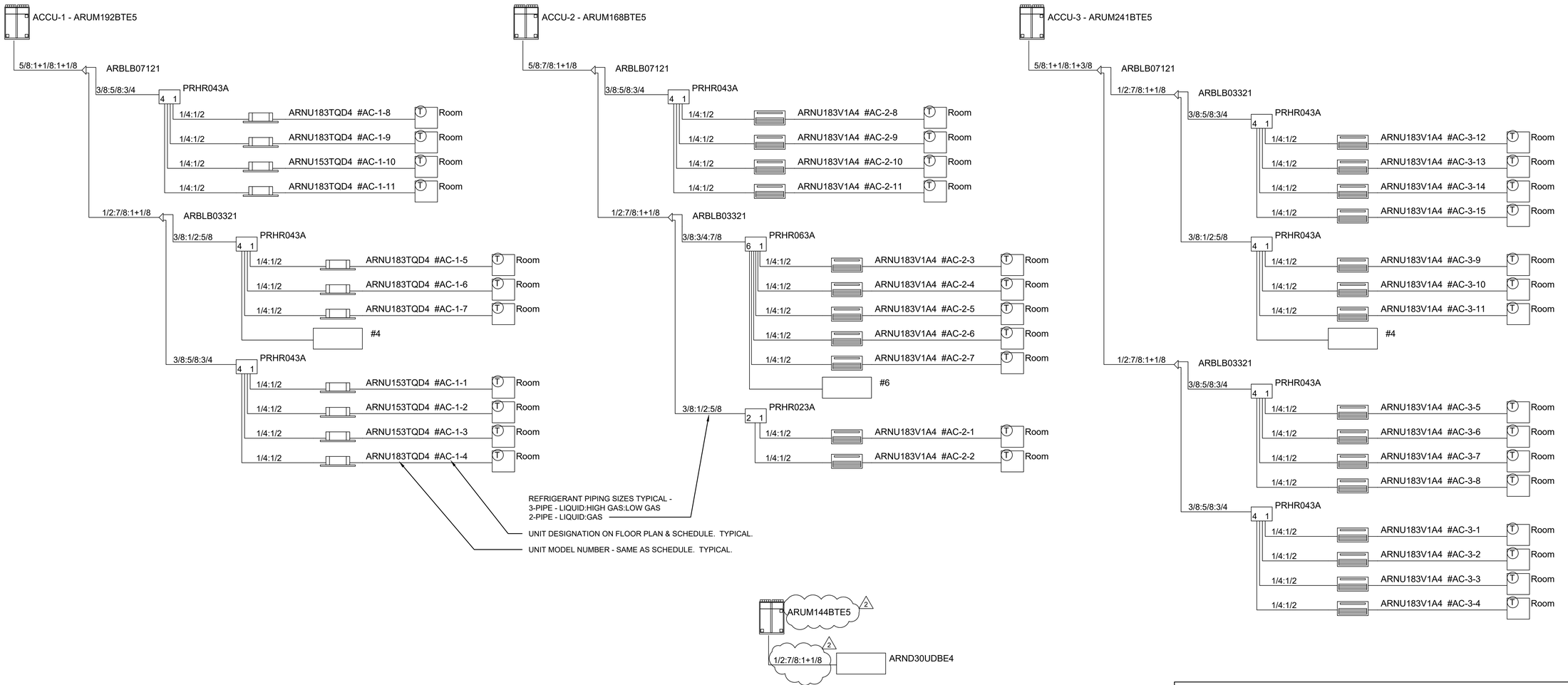
1. Device will be considered defective if it does not pass tests and inspections.
2. Remove and replace defective units and retest.

D. Collect, assemble, and submit test and inspection reports.

3.3 PROTECTION

A. After installation, protect access control remote devices from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 281519



TYPICAL FOR (6) DOAS UNITS

NOTES:
1. CONTRACTOR SHALL FIELD MEASURE AND DEVELOP FULL VRF SYSTEM PIPING DIAGRAMS OF EACH OF THE SYSTEMS ABOVE INCLUDING LENGTHS WITH VENDOR FOR ENGINEER REVIEW.

ADD ALTERNATE NOTES

ADD ALTERNATE #1
THE CONTRACTOR SHALL PROVIDE AN ADD ALTERNATE PRICE FOR THE FULL INSTALLATION OF THE FOLLOWING SYSTEMS INCLUDING ALL RELATED INDOOR HEAT PUMP UNITS, REFRIGERANT AND CONDENSATE PIPING, DUCTWORK AND ACCESSORIES, REGISTERS, POWER, FIRE ALARM AND CONTROLS & ANY & ALL DEMOLITION & PATCHING. COORDINATE WITH ARCHITECTURAL AND ELECTRICAL PLANS.

- DOAS UNIT #3, #4, #5 AND ASSOCIATED ACCUs #6, #7, #8
- VRF SYSTEMS ACCUs #2 & #3 AND ALL ASSOCIATED INDOOR HEAT PUMP UNITS

ADD ALTERNATE #2
THE CONTRACTOR SHALL PROVIDE AN ADD ALTERNATE PRICE FOR THE FULL INSTALLATION OF THE FOLLOWING SYSTEMS INCLUDING ALL RELATED INDOOR HEAT PUMP UNITS, REFRIGERANT AND CONDENSATE PIPING, DUCTWORK AND ACCESSORIES, REGISTERS, POWER, FIRE ALARM AND CONTROLS & ANY & ALL DEMOLITION & PATCHING. COORDINATE WITH ARCHITECTURAL AND ELECTRICAL PLANS.

- DOAS UNIT #1 & #2 AND ASSOCIATED ACCUs #4 & #5
- VRF SYSTEM ACCU #1 AND ALL ASSOCIATED INDOOR HEAT PUMP UNITS

TUCKAHOE MIDDLE/HIGH SCHOOL ALTERATIONS

TUCKAHOE UNION FREE SCHOOL DISTRICT
65 SIWANOY BLVD
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NY SED PROJECT CONTROL NO.
66-03-02-03-0-002-024

CONSTRUCTION DOCUMENTS

KEY PLAN
MAIN ENTRY

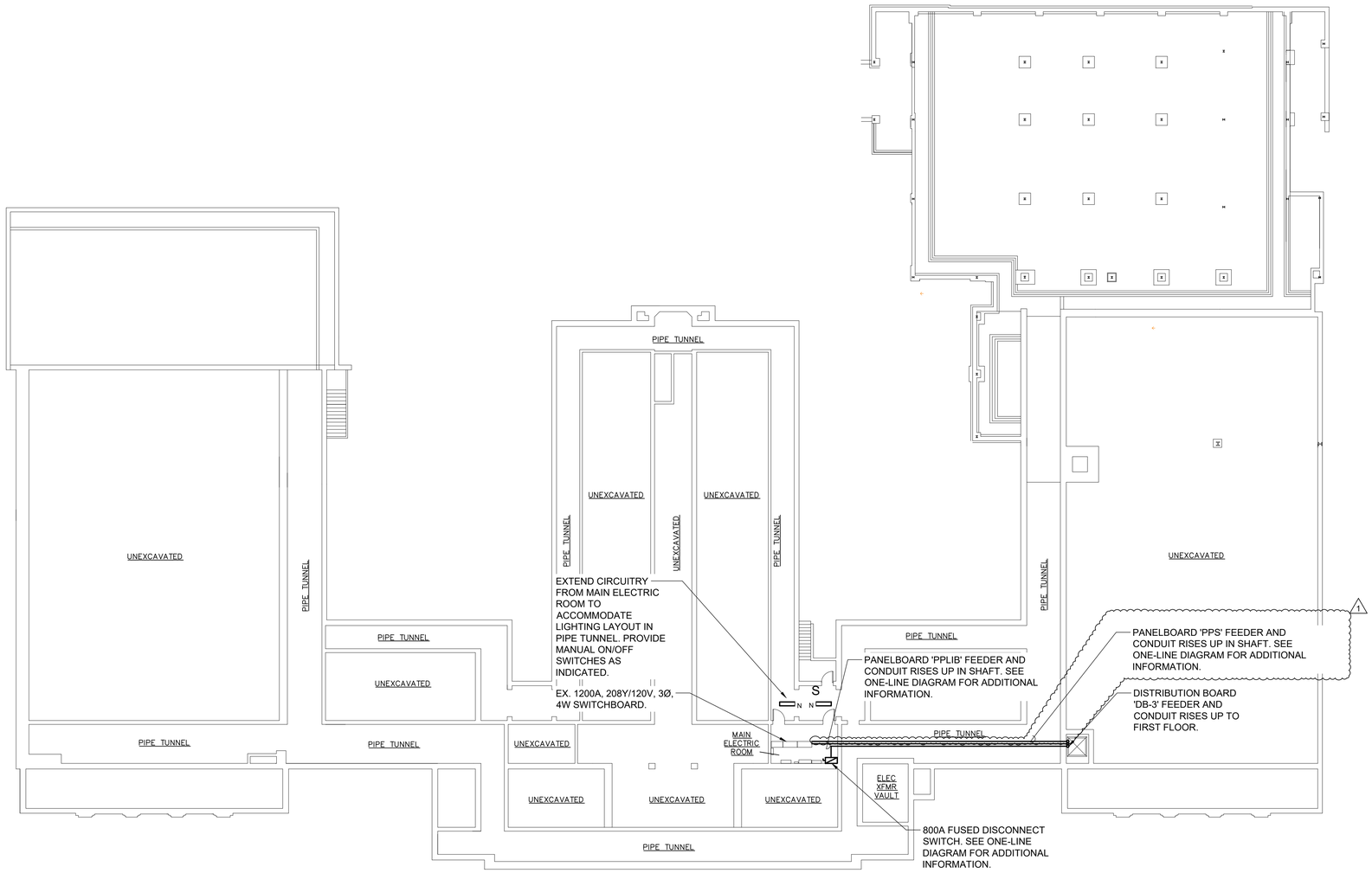
Professional Seal
STATE OF NEW YORK
BARBARA JILL WALSH
075260
LICENSED PROFESSIONAL ENGINEER

No.	Date	Issue
2	04/22/2022	BID ADDENDUM #2
1	03/31/2022	ISSUED FOR BID

Sheet Title
VRF RISER DIAGRAMS

Job No.	Date
NKGD0239.00	09/10/2021
Scale	Drawn / Checked
AS NOTED	NW / RS

Sheet Number
M501



1 ELECTRICAL BASEMENT POWER PLAN
SCALE: 1/16" = 1'-0"

NORTH

TUCKAHOE MIDDLE/HIGH SCHOOL ALTERATIONS

TUCKAHOE UNION FREE SCHOOL DISTRICT

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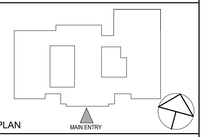
66-03-02-03-0-002-024

CONSTRUCTION DOCUMENTS



KEY PLAN

Professional Seal

No.	Date	Issue
2	04/22/2022	BID ADDENDUM #2
1	03/31/2022	ISSUED FOR BID

Sheet Title

ELECTRICAL BASEMENT POWER PLAN

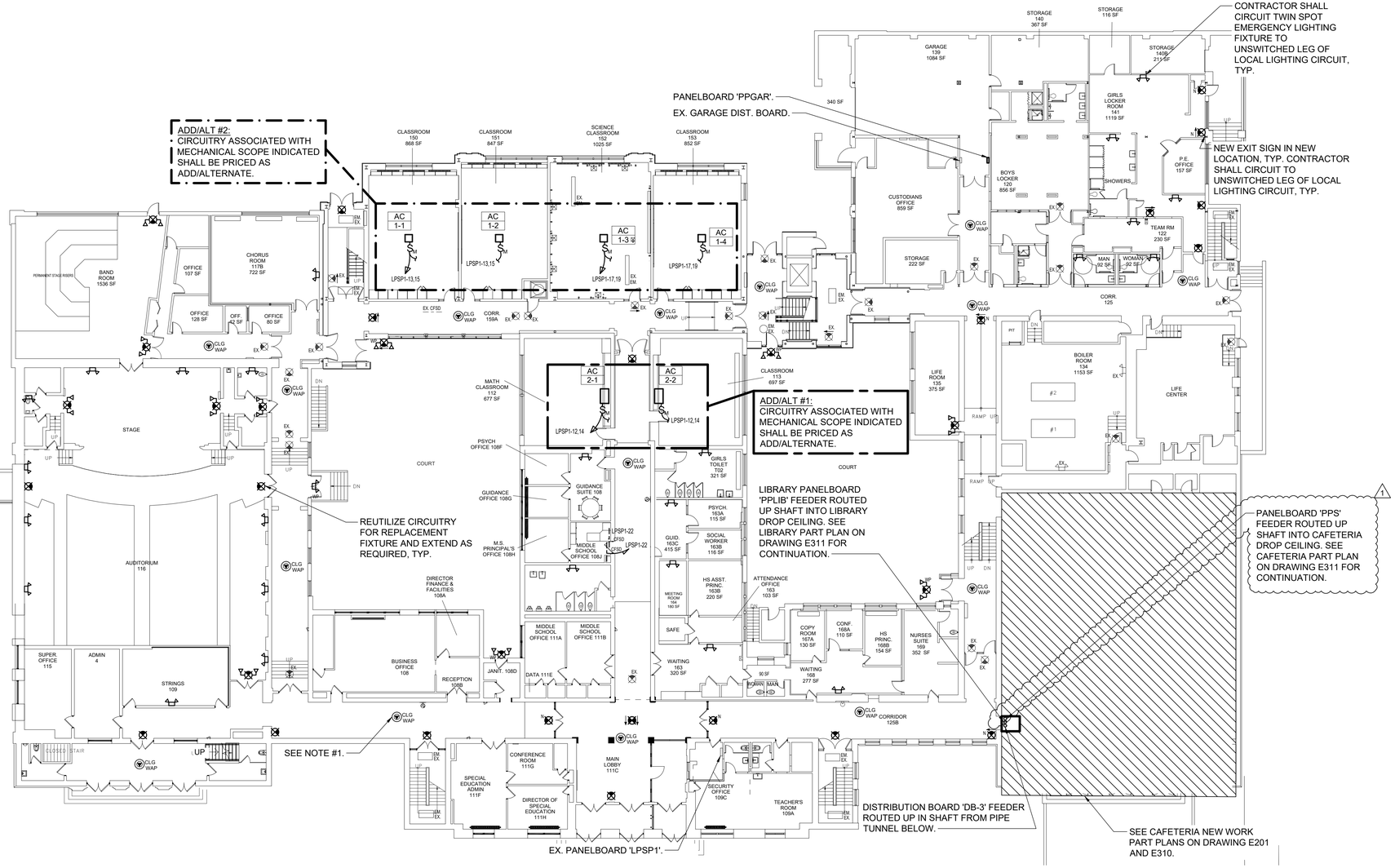
Job No.	Date
NKGD0239.00	09/10/2021
Scale	Drawn / Checked
AS NOTED	VB / ML

Sheet Number

E300

NOTES:

1.) ELECTRICAL CONTRACTOR SHALL WIRE (1) CAT6 CABLE TO EACH DATA POINT SHOWN FROM AN EXISTING DATA RACK IN DATA ROOM 214, SEE DRAWING E302 FOR LOCATION. CAT6 CABLE SHALL BE PLENUM RATED WITHIN PLENUM CEILINGS. ELECTRICAL CONTRACTOR SHALL PROVIDE (2) 48 PORT CAT6 PATCH PANELS FOR INSTALLATION IN EX. DATA RACKS. TERMINATIONS AT DATA POINT AND PATCH PANEL BY ELECTRICAL CONTRACTOR. RJ45 JACKS AND COVER PLATES TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR. TEST AND LABEL EACH END OF CAT6 CABLE.



1 ELECTRICAL FIRST FLOOR NEW WORK PLAN
SCALE: 1/16" = 1'-0"

TUCKAHOE MIDDLE/HIGH SCHOOL ALTERATIONS

TUCKAHOE UNION FREE SCHOOL DISTRICT

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66-03-02-03-0-002-024

CONSTRUCTION DOCUMENTS

KEY PLAN

Professional Seal

STATE OF NEW YORK
BARBARA JILL WALSH
LICENSED PROFESSIONAL ENGINEER
075260

No.	Date	Issue
2	04/22/2022	BID ADDENDUM #2
1	03/31/2022	ISSUED FOR BID

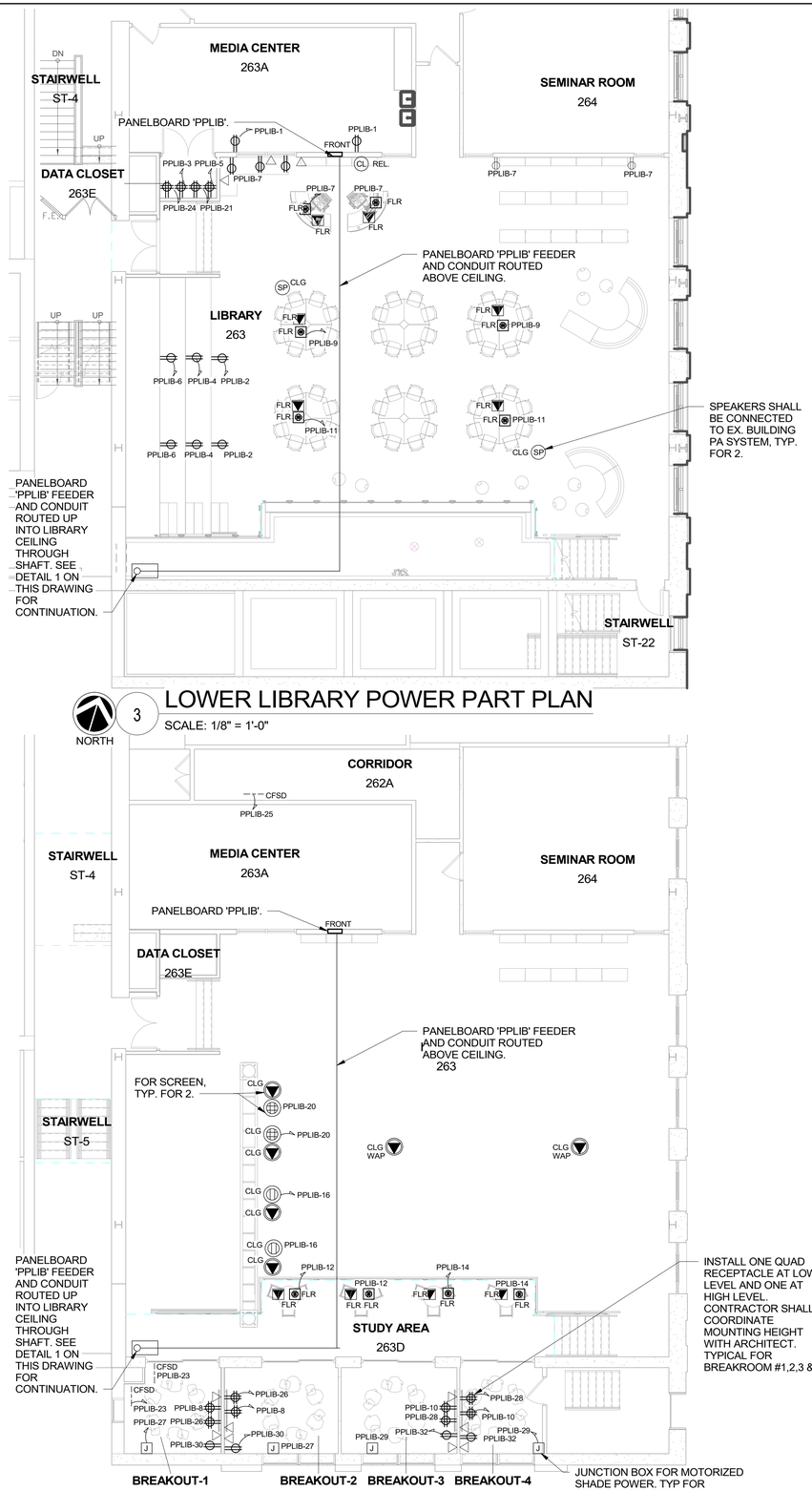
Sheet Title

ELECTRICAL FIRST FLOOR NEW WORK PLAN

Job No.	Date
NKGD0239.00	09/10/2021
Scale	Drawn / Checked
AS NOTED	VB / ML

Sheet Number

E301



3 LOWER LIBRARY POWER PART PLAN
SCALE: 1/8" = 1'-0"
NORTH

2 UPPER LIBRARY OFFICE POWER PART PLAN
SCALE: 1/8" = 1'-0"
NORTH

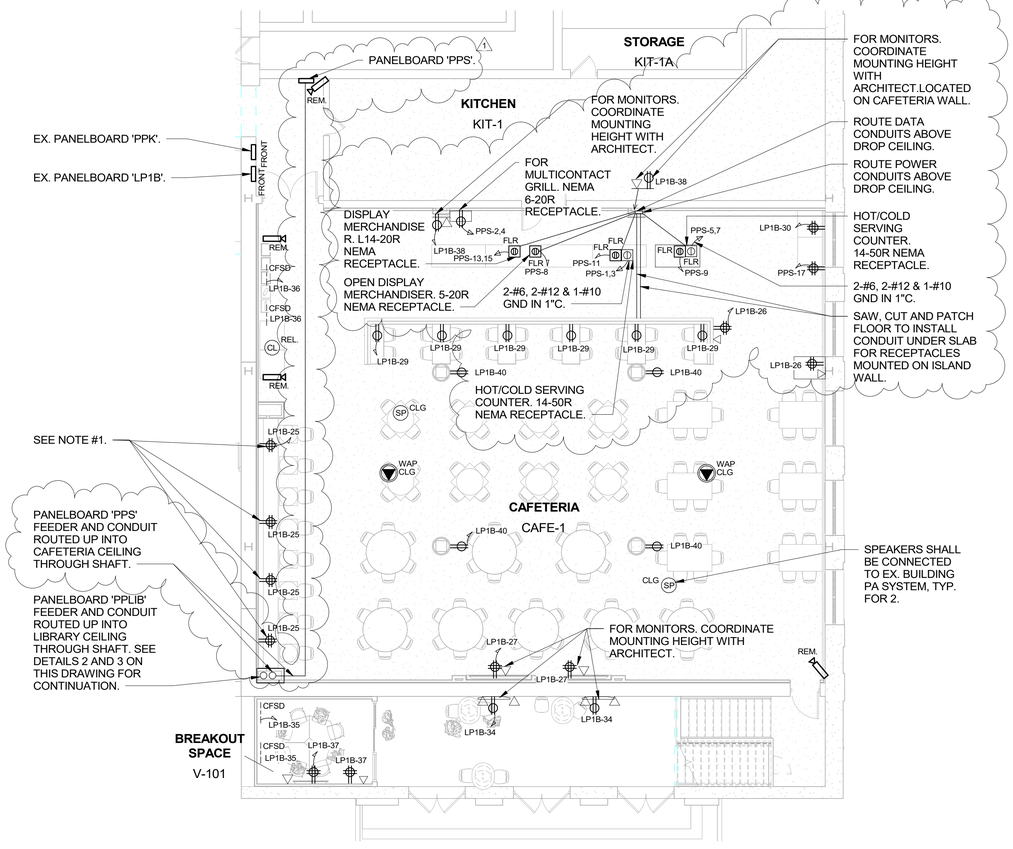
NOTES:

1. RECEPTACLES AT PERIMETER BENCH SHALL BE INSTALLED UNDER BENCH. COORDINATE HEIGHT WITH ARCHITECT. CONTRACTOR SHALL PROVIDE MOCKETT PCS82D (2 POWER, 1 USB-A, 1 USB-C RECEPTACLES) MOUNTED IN BOOTH DESKTOP. COORDINATE INSTALLATION WITH ARCHITECT.

2.) ELECTRICAL CONTRACTOR SHALL WIRE (1) CAT6 CABLE TO EACH DATA POINT SHOWN FROM AN EXISTING DATA RACK IN DATA ROOM 214. SEE DRAWING E302 FOR LOCATION. CAT6 CABLE SHALL BE PLENUM RATED WITHIN PLENUM CEILINGS. ELECTRICAL CONTRACTOR SHALL PROVIDE (2) 48 PORT CAT6 PATCH PANELS FOR INSTALLATION IN EX. DATA RACKS. TERMINATIONS AT DATA POINT AND PATCH PANEL BY ELECTRICAL CONTRACTOR. RJ45 JACKS AND COVER PLATES TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR. TEST AND LABEL EACH END OF CAT6 CABLE.

3.) COORDINATE SERVERY EQUIPMENT LOCATIONS WITH ARCHITECT.

4.) COORDINATE RECEPTACLE NEMA CONFIGURATION WITH SERVERY EQUIPMENT PURCHASED. 1



1 CAFETERIA POWER PART PLAN
SCALE: 1/8" = 1'-0"
NORTH

TUCKAHOE MIDDLE/HIGH SCHOOL ALTERATIONS

TUCKAHOE UNION FREE SCHOOL DISTRICT
65 SIWANOY BLVD
EASTCHESTER, N.Y. 10709

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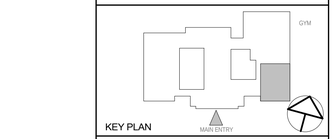


KEY PLAN

Professional Seal

No.	Date	Issue
2	04/19/2022	BID ADDENDUM #1
1	03/31/2022	ISSUED FOR BID

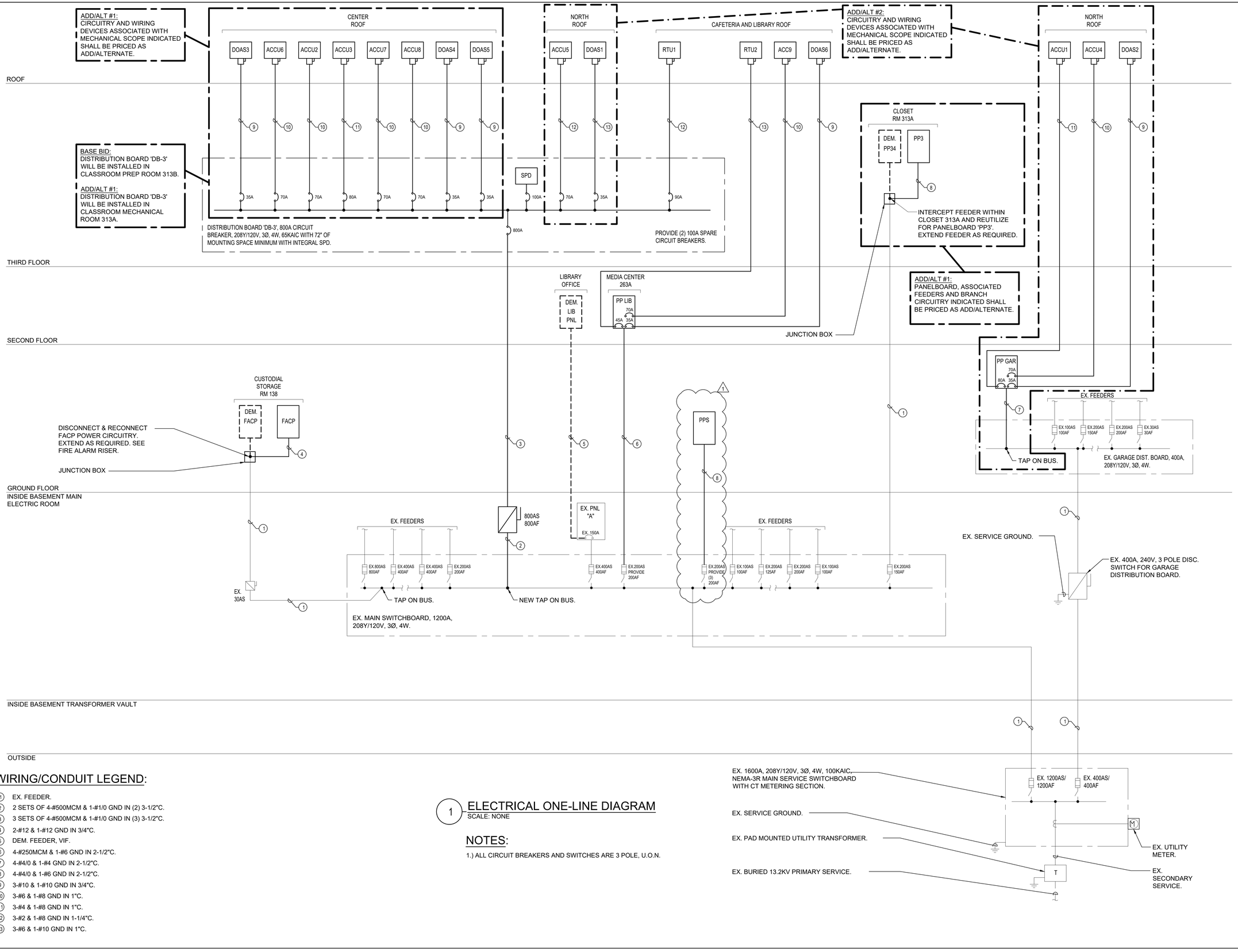
Sheet Title

ELECTRICAL CAFETERIA & LIBRARY POWER PART PLAN

Job No.	Date
NKGD0239.00	09/10/2021
Scale: AS NOTED	Drawn / Checked: Author Checker

Sheet Number

E310



WIRING/CONDUIT LEGEND:

1. EX. FEEDER.
2. 2 SETS OF 4-#500MCM & 1-#1/0 GND IN (2) 3-1/2"C.
3. 3 SETS OF 4-#500MCM & 1-#1/0 GND IN (3) 3-1/2"C.
4. 2-#12 & 1-#12 GND IN 3/4"C.
5. DEM. FEEDER, VIF.
6. 4-#250MCM & 1-#6 GND IN 2-1/2"C.
7. 4-#4/0 & 1-#4 GND IN 2-1/2"C.
8. 4-#4/0 & 1-#6 GND IN 2-1/2"C.
9. 3-#10 & 1-#10 GND IN 3/4"C.
10. 3-#6 & 1-#8 GND IN 1"C.
11. 3-#4 & 1-#8 GND IN 1"C.
12. 3-#2 & 1-#8 GND IN 1-1/4"C.
13. 3-#6 & 1-#10 GND IN 1"C.

1 ELECTRICAL ONE-LINE DIAGRAM

SCALE: NONE

NOTES:

1.) ALL CIRCUIT BREAKERS AND SWITCHES ARE 3 POLE, U.O.N.

TUCKAHOE MIDDLE/HIGH SCHOOL ALTERATIONS

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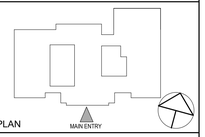
CONSTRUCTION DOCUMENTS

KEY PLAN



Professional Seal

No.	Date	Issue
2	04/22/2022	BID ADDENDUM #2
1	03/31/2022	ISSUED FOR BID

Sheet Title

ELECTRICAL ONE-LINE DIAGRAM

Job No.	Date
NKGD0239.00	09/10/2021
Scale	Drawn / Checked
AS NOTED	VB / ML

Sheet Number

E501

PP GAR PANEL SCHEDULE

MAIN RATING: 225A MAIN C.B.: 225A KAIC RATING: 22KAIC

VOLTAGE: 208Y/120V PHASE: 3 WIRE: 4 MOUNTING: SURFACE

CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.
1							2
3	ACCU1	80	3	3	20	DOAS2	4
5							6
7				1	20	REC - ROOF	8
9	ACCU4	70	3	-	-	-	10
11				-	-	-	12
13	-	-	-	-	-	-	14
15	-	-	-	-	-	-	16
17	-	-	-	-	-	-	18
19	-	-	-	-	-	-	20
21	-	-	-	-	-	-	22
23	SPARE	20	1	1	20	SPARE	24
25	SPARE	20	1	1	20	SPARE	26
27	SPARE	20	1	1	20	SPARE	28
29	SPARE	20	1	1	20	SPARE	30

LK - PROVIDE LOCKING TABS ON C.B.; GF - GFI TYPE C.B.; GP - GFP TYPE C.B.; AF - ARC FAULT TYPE C.B.; ST - SHUNT TRIP C.B.

NOTES:

ADD/ALT #2:
PANELBOARD, ASSOCIATED FEEDERS AND BRANCH CIRCUITRY INDICATED SHALL BE PRICED AS ADD/ALTERNATE.

EX. 'LP1B' PANEL SCHEDULE

MAIN RATING: 100A MAIN C.B.: 100A

VOLTAGE: 208Y/120V PHASE: 3 WIRE: 4 MOUNTING: RECESSED

CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.
1	EX. LOAD	20	1	1	20	EX. LOAD	2
3	EX. LOAD	20	1	1	20	EX. LOAD	4
5	EX. LOAD	20	1	1	20	EX. LOAD	6
7	EX. LOAD	20	1	1	20	EX. LOAD	8
9	EX. LOAD	20	1	1	20	EX. LOAD	10
11	EX. LOAD	20	1	1	20	EX. LOAD	12
13	EX. LOAD	20	1	1	20	EX. LOAD	14
15	EX. LOAD	20	1	1	20	EX. LOAD	16
17	EX. LOAD	20	1	1	20	EX. LOAD	18
19	EX. LOAD	20	1	1	20	EX. LOAD	20
21	EX. LOAD	20	1	1	20	EX. LOAD	22
23	EX. LOAD	20	1	1	20	EX. LOAD	24
25	REC - CAFETERIA	20*	1	1	20*	REC - CAFETERIA CASH REGISTER	26
27	REC - CAFETERIA MONITORS	20*	1	1	20*	REC - CAFETERIA MONITORS	28
29	REC - CAFETERIA	20*	1	1	20*	REC - CAFETERIA	30
31	LTG - CAFETERIA	20*	1	1	20*	LTG - CAFETERIA	32
33	LTG - CAFETERIA	20*	1	1	20*	REC - TV MONITOR	34
35	CFSD	20#	1	1	20#	CFSD	36
37	BREAKOUT V-101	20#	1	1	20#	REC - CAF TV	38
39	SPARE	20	1	1	20#	REC - CAF	40
41	SPARE	20	1	1	20	SPARE	42

LK - PROVIDE LOCKING TABS ON C.B.; GF - GFI TYPE C.B.

NOTES:
1. * - CONTRACTOR SHALL PROVIDE 1P-20A CB.
2. # - CONTRACTOR SHALL REUTILIZE 1P-20A CB FOR LOAD INDICATED ON DRAWINGS.

EX. LPSP1 PANEL SCHEDULE

MAIN RATING: 125A MAIN C.B.: 100A

VOLTAGE: 208Y/120V PHASE: 3 WIRE: 4 MOUNTING: RECESSED

CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.
1	EX. REC - SECURITY 109C	20	1				
3	EX. LTG - SECURITY 109C	20	1	2	15	EX. ACC-1	4
5	EX. DOOR RELEASE VESTIBULE V-1	20	1	1	20	EX. REC - ACC-1	6
7	EX. MOTORIZED DAMPER	15	1	1	20	EX. REC - BATHROOM 109D	8
9	EX. JBOX - TEACHER'S ROOM	20	1	1	20	EX. REC - TEACHER'S ROOM	10
11	EX. REC - TEACHER'S ROOM	20	1	2	15*	AC 2-1 & AC 2-2 - 1ST FLR	12
13	AC 1-1 & AC 1-2 - 1ST FLR	15*	2				14
15				1	20#	HVAC CONTROLS	16
17	AC 1-3 & AC 1-4 - 1ST FLR	15*	2	1	20#	HVAC CONTROLS	18
19				1	20#	HVAC CONTROLS	20
21	-	-	-	1	20#	CFSDS	22
23	EX. SPARE	20	1	1	20	EX. SPARE	24
25	EX. SPARE	20	1	1	20	EX. SPARE	26
27	EX. SPARE	20	1	1	20	EX. SPARE	28
29	EX. SPARE	20	1	1	20	EX. SPARE	30

LK - PROVIDE LOCKING TABS ON C.B.; GF - GFI TYPE C.B.; AF - ARC FAULT TYPE C.B.; ST - SHUNT TRIP C.B.

NOTES:
1. * - CONTRACTOR SHALL PROVIDE 2P-15A CB.
2. # - CONTRACTOR SHALL PROVIDE 1P-20A CB.
3. CONTRACTOR SHALL EXTEND BRANCH CIRCUITRY TO NEW PANELBOARD LOCATION, UON.

PPLIB PANEL SCHEDULE

MAIN RATING: 225A MAIN C.B.: 200A KAIC RATING: 22KAIC

VOLTAGE: 208Y/120V PHASE: 3 WIRE: 4 MOUNTING: RECESSED

CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.
1	REC - RM 263A	20	1	1	20	REC - RM 263	2
3	REC - DATA CLOSET 263C	20	1	1	20	REC - RM 263	4
5	REC - DATA CLOSET 263C	20	1	1	20	REC - RM 263	6
7	REC - RM 263	20	1	1	20	REC - RM SV-2/SV-3	8
9	REC - RM 263	20	1	1	20	REC - RM SV-4/SV-5	10
11	REC - RM 263	20	1	1	20	REC - STUDY AREA 263D	12
13	LTG - SV-2/3/4/5	20	1	1	20	REC - STUDY AREA 263D	14
15	LTG - RM 263/263D	20	1	1	20	REC - PROJECTOR	16
17	LTG - RM 263	20	1	1	20	LTG - RM 263A	18
19	LTG - RM 263	20	1	1	20	REC - PROJECTOR	20
21	REC - DATA ROOM	20	1	1	20	REC - ROOF	22
23	CFSD	20	1	1	20	REC - DATA CLOSER 263E	24
25	CFSD	20	1	1	20	REC - BREAKROOM 1 & 2	26
27	BREAKROOM MOTORIZED SHADES	20	1	1	20	REC - BREAKROOM 3 & 4	28
29	BREAKROOM MOTORIZED SHADES	20	1	1	20	REC - BREAKROOM 1 & 2	30
31	-	-	-	1	20	REC - BREAKROOM 3 & 4	32
33	-	-	-	-	-	-	34
35	SPARE	20	1	1	20	SPARE	36
37	SPARE	20	1	1	20	SPARE	38
39	SPARE	20	1	1	20	SPARE	40
41	SPARE	20	1	1	20	SPARE	42

LK - PROVIDE LOCKING TABS ON C.B.; GF - GFI TYPE C.B.; GP - GFP TYPE C.B.; AF - ARC FAULT TYPE C.B.; ST - SHUNT TRIP C.B.

NOTES:

PP3 PANEL SCHEDULE

MAIN RATING: 225A MAIN C.B.: 150A KAIC RATING: 22KAIC

VOLTAGE: 208Y/120V PHASE: 3 WIRE: 4 MOUNTING: SURFACE

CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.
1	2ND FLR - AC 3-1/AC 3-2/AC 3-3/	15	2	2	15	3RD FLR - AC 1-8/AC 1-9/AC 1-10/	2
3	AC 3-4					AC 1-11	4
5	2ND FLR - AC 3-5/AC 3-6/AC 3-7/	15	2	2	15	3RD FLR - AC 2-8/AC 2-9/AC 2-10/	6
7	AC 3-8					AC 2-11	8
9	2ND FLR - AC 1-5/AC 1-6/ AC 1-7	15	2	2	15	3RD FLR - AC 3-9/AC 3-10/ AC 3-11	10
11	AC 2-3						12
13	2ND FLR - AC 2-4/AC 2-5/AC 2-6	15	2	2	15	3RD FLR - AC 3-12/AC 3-13/AC 3-14	14
15	AC 2-7					AC 3-15	16
17	HVAC CONTROLS	20	1	1	20	REC - ROOF	18
19	HVAC CONTROLS	20	1	1	20	2ND FLR - CFSD	20
21	HVAC CONTROLS	20	1	1	20	2ND FLR - CFSD	22
23	HVAC CONTROLS	20	1	1	20	3RD FLR - CFSD	24
25	HVAC CONTROLS	20	1	1	20	3RD FLR - CFSD	26
27				2	25#	EX. LOAD	28
29	EX. LOAD	30@	3				30
31				1	20*	EX. LOAD	32
33	EX. LOAD	25#	2	2	20#	EX. LOAD	34
35							36
37	EX. LOAD	20*	1	2	15#	EX. LOAD	38
39	EX. LOAD	20*	1				40
41	EX. LOAD	20*	1	1	15*	EX. LOAD	42
43	EX. LOAD	15*	1	1	15*	EX. LOAD	44
45	EX. LOAD	15*	1	1	15*	EX. LOAD	46
47	EX. LOAD	15*	1	1	15*	EX. LOAD	48
49	EX. LOAD	15*	1	-	-	-	50
51	-	-	-	-	-	-	52
53	SPARE	20	1	1	20	SPARE	54
55	SPARE	20	1	1	20	SPARE	56
57	SPARE	20	1	1	20	SPARE	58
59	SPARE	20	1	1	20	SPARE	60

LK - PROVIDE LOCKING TABS ON C.B.; GF - GFI TYPE C.B.

NOTES:
1. * - CONTRACTOR SHALL PROVIDE 30' OF 2-#12 & 1-#12 GND IN 3/4"C TO EXTEND EX. BRANCH CIRCUITRY AS REQUIRED FOR RELOCATED REPLACEMENT PANELBOARD.
2. # - CONTRACTOR SHALL PROVIDE 30' OF 2-#10 & 1-#10 GND IN 3/4"C TO EXTEND EX. BRANCH CIRCUITRY AS REQUIRED FOR RELOCATED REPLACEMENT PANELBOARD.
3. @ - CONTRACTOR SHALL PROVIDE 30' OF 3-#10 & 1-#10 GND IN 3/4"C TO EXTEND EX. BRANCH CIRCUITRY AS REQUIRED FOR RELOCATED REPLACEMENT PANELBOARD.

ADD/ALT #1:
PANELBOARD, ASSOCIATED FEEDERS AND BRANCH CIRCUITRY INDICATED SHALL BE PRICED AS ADD/ALTERNATE.

1

PPS PANEL SCHEDULE

MAIN RATING: 200A MAIN C.B.: 200A KAIC RATING: 22KAIC

VOLTAGE: 208Y/120V PHASE: 3 WIRE: 4 MOUNTING: SURFACE

CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.
1	SERVING COUNTER HOT/COLD	50	2	2	20	MULTI CONTACT GRILL	2
3							4
5	SERVING COUNTER HOT/COLD	50	2	1	20	REFRIGERATOR	6
7				1	20	OPEN DISPLAY MERCHANDISER	8
9	SERVING COUNTER HOT/COLD	15	1	-	-	-	10
11	SERVING COUNTER HOT/COLD	15	1	-	-	-	12
13	DISPLAY MERCHANDISER	20	2	-	-	-	14
15				-	-	-	16
17	REFRIGERATOR	20	1	-	-	-	18
19	-	-	-	-	-	-	20
21	-	-	-	-	-	-	22
23	-	-	-	-	-	-	24
25	SPARE	20	1	1	20	SPARE	26
27	SPARE	20	1	1	20	SPARE	28
29	SPARE	20	1	1	20	SPARE	30

LK - PROVIDE LOCKING TABS ON C.B.; GF - GFI TYPE C.B.; GP - GFP TYPE C.B.; AF - ARC FAULT TYPE C.B.; ST - SHUNT TRIP C.B.

NOTES:

TUCKAHOE MIDDLE/HIGH SCHOOL ALTERATIONS

TUCKAHOE UNION FREE SCHOOL DISTRICT

65 SIWANOY BLVD
EASTCHESTER, N. Y. 10709

KG+D . ARCHITECTS PC
285 MAIN STREET MOUNT KISCO . NEW YORK . 10549
P:914.666.5900 KGDARCHITECTS.COM

OLA Consulting Engineers
50 Broadway,
Hawthorne, NY 10532
914.747.2800

8 West 38th Street,
Suite 501
New York, NY 10018
646.849.4110

olace.com

NY SED PROJECT CONTROL NO.

66-03-02-03-0-002-024

CONSTRUCTION DOCUMENTS

KEY PLAN

MAIN ENTRY

Professional Seal

STATE OF NEW YORK
BARBARA JILL WALSH
075260
LICENSED PROFESSIONAL ENGINEER

No.	Date	Issue
2	04/22/2022	BID ADDENDUM #2
1	03/31/2022	ISSUED FOR BID

Sheet Title

ELECTRICAL SCHEDULES

Job No.	Date
NKGD0239.00	09/10/2021
Scale: AS NOTED	Drawn / Checked: VB / ML

Sheet Number

E602