CSARCH

Bid Addendum No. 2

September 8, 2023
Highland Central School District 2022 Capital Improvement Project – Phase 1
CSArch Project No. 197-2201
SED Control No. Varies

Architect's Seal

This Bid Addendum No. 2 forms part of the Contract Documents and modifies the original bidding documents dated August 18, 2023. Bid Addendum No. 2 consists of (4) cover sheet pages, (9) specification sections, and (32) 30"x42" drawing sheets.

GENERAL INFORMATION

1. Bid Addendum No. 1 was issued to bidders on August 21, 2023.
2. Bid Addendum No. 2 was issued to bidders on September 8, 2023.

REVISIONS TO THE PROJECT MANUAL

1. **DELETE** original specification section 000110 – Table of Contents.
2. **DELETE** original specification section 004116.4 - Bid Form – Contract No. 04 – Electrical Construction (EC)
3. **DELETE** original specification section 011200 – Multiple Contract Summary.
4. **DELETE** original specification section 012100 – Allowances.
5. **DELETE** original specification section 012300 – Alternates.
6. **DELETE** original specification section 087100 – Door Hardware.
7. **DELETE** original specification section 275117 – Gymnasium Sound Systems.
8. **DELETE** original specification section 275119 – Assistive Listening Systems.
9. **ADD** attached revised specification section 000110 – Table of Contents.
10. **ADD** attached revised specification section 000110 – 004116.4 - Bid Form – Contract No. 04 – Electrical Construction (EC)
11. **ADD** attached revised specification section 011200 – Multiple Contract Summary.
12. **ADD** attached revised specification section 012100 – Allowances.
13. **ADD** attached revised specification section 012300 – Alternates.
14. **ADD** attached revised specification section 087100 – Door Hardware.
15. **ADD** attached new specification section 090561.13 – Moisture Vapor Emission Control
16. **ADD** attached revised specification section 275117 – Gymnasium Sound Systems.
17. **ADD** attached revised specification section 275119 – Assistive Listening Systems.

REVISIONS TO THE CONSTRUCTION DRAWINGS

Highland Middle School (HMS) – Volume 1 of 4

1. **DELETE** original drawing sheet HMS E101.
2. **DELETE** original drawing sheet HMS E201.
3. **ADD** attached revised drawing sheet HMS E101.
4. **ADD** attached revised drawing sheet HMS E201.

Highland High School (HHS) – Volume 2 of 4

5. **DELETE** original drawing sheet HHS HAZ101.
6. **DELETE** original drawing sheet HHS AD111.
7. **DELETE** original drawing sheet HHS AD112.
8. **DELETE** original drawing sheet HHS AD113.
9. **DELETE** original drawing sheet HHS AD115.
10. **DELETE** original drawing sheet HHS AD400.
11. **DELETE** original drawing sheet HHS A111.
12. **DELETE** original drawing sheet HHS A112.
13. **DELETE** original drawing sheet HHS A113.
14. **DELETE** original drawing sheet HHS A115.
15. **DELETE** original drawing sheet HHS A351.
16. **DELETE** original drawing sheet HHS A400.
17. **ADD** attached revised drawing sheet HHS HAZ101.
18. **ADD** attached revised drawing sheet HHS AD111.
19. **ADD** attached revised drawing sheet HHS AD112.
20. **ADD** attached revised drawing sheet HHS AD113.
21. **ADD** attached revised drawing sheet HHS AD115.
22. **ADD** attached revised drawing sheet HHS AD400.
23. **ADD** attached revised drawing sheet HHS A111.
24. **ADD** attached revised drawing sheet HHS A112.

25. **ADD** attached revised drawing sheet HHS A113.
26. **ADD** attached revised drawing sheet HHS A115.
27. **ADD** attached revised drawing sheet HHS A351.
28. **ADD** attached revised drawing sheet HHS A400.

Highland Elementary School (HES) – Volume 3 of 4

1. **DELETE** original drawing sheet HES C130.
2. **DELETE** original drawing sheet HES AD112.
3. **DELETE** original drawing sheet HES A112.
4. **DELETE** original drawing sheet HES A115.
5. **DELETE** original drawing sheet HES A125.
6. **DELETE** original drawing sheet HES A901.
7. **DELETE** original drawing sheet HES E102.
8. **DELETE** original drawing sheet HES E103.
9. **DELETE** original drawing sheet HES E104.
10. **DELETE** original drawing sheet HES E105.
11. **DELETE** original drawing sheet HES ED201.
12. **DELETE** original drawing sheet HES ED313.
13. **DELETE** original drawing sheet HES ED323.
14. **DELETE** original drawing sheet HES E201.
15. **DELETE** original drawing sheet HES E311.
16. **DELETE** original drawing sheet HES E312.
17. **DELETE** original drawing sheet HES E313.
18. **DELETE** original drawing sheet HES E323.
19. **ADD** attached revised drawing sheet HES C130.
20. **ADD** attached revised drawing sheet HES AD112.
21. **ADD** attached revised drawing sheet HES A112.
22. **ADD** attached revised drawing sheet HES A115.

23. **ADD** attached revised drawing sheet HES A125.
24. **ADD** attached revised drawing sheet HES A901.
25. **ADD** attached revised drawing sheet HES E102.
26. **ADD** attached revised drawing sheet HES E103.
27. **ADD** attached revised drawing sheet HES E104.
28. **ADD** attached revised drawing sheet HES E105.
29. **ADD** attached revised drawing sheet HES ED201.
30. **ADD** attached revised drawing sheet HES ED313.
31. **ADD** attached revised drawing sheet HES ED323.
32. **ADD** attached revised drawing sheet HES E201.
33. **ADD** attached revised drawing sheet HES E311.
34. **ADD** attached revised drawing sheet HES E312.
35. **ADD** attached revised drawing sheet HES E313.
36. **ADD** attached revised drawing sheet HES E323.

END OF BID ADDENDUM NO. 2

DOCUMENT 000110 - TABLE OF CONTENTS

VOLUME 1 OF 2 – Divisions 00 - 02

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

Introductory Information

Procurement Requirements

Procurement Forms and Supplements

Contracting Requirements & Supplements

VOLUME 2 OF 2 – Divisions 03–34

DIVISION 03 – CONCRETE

DIVISION 04 – MASONRY

DIVISION 05 – METALS

NOT USED

DIVISION 06 – WOOD AND PLASTICS

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

DIVISION 08 – DOORS AND WINDOWS

DIVISION 09 – FINISHES

DIVISION 10 – SPECIALTIES

DIVISIONS 11 through 13

NOT USED

DIVISION 14 – CONVEYING EQUIPMENT

DIVISION 21 – FIRE SUPPRESSION

NOT USED

DIVISION 22 – PLUMBING

DIVISION 23 – HEATING, VENTILATING AND AIR CONDITIONING

NOT USED

DIVISION 26 – ELECTRICAL

DIVISION 27

DIVISION 28

NOT USED

DIVISION 31 – EARTHWORK

DIVISION 32 – SITE IMPROVEMENTS

DIVISION 33 – UTILITIES

NOT USED

DIVISION 34 – TRANSPORTATION

NOT USED

END OF DOCUMENT 000110

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SECTION 004116.4 – BID FORM – CONTRACT NO. 04 – ELECTRICAL CONSTRUCTION (EC)

BIDDER INFORMATION

CONTACT: _____

COMPANY: _____

ADDRESS: _____

_____

TELEPHONE: (_____) _____

E-MAIL: _____

BID TO (Owner): Highland Central School District
320 Pancake Hollow Road
Highland, New York 12528
Attention: Lindsay Eidel, School Business Administrator

PRIME CONTRACT: Contract No. 04 – Electrical Construction (EC)

PROJECT TITLE: Highland Central School District
2022 Capital Improvement Project – Phase 1

Middle School	SED#62-08-03-04-0-001-010
High School	SED#62-08-03-04-0-009-014
Elementary School	SED#62-08-03-04-0-010-014
Bus Garage	SED#62-08-03-04-5-002-011

ARCHITECT'S PROJECT NO: 197-2201.01

1. **Representations:** By submitting this Bid, the Bidder represents that they have examined and fully understand the requirements and intent of the Bidding and Contract Documents, including but not limited to Drawings, Project Manuals, and Bid Addenda; and proposes to provide all labor, material, and means necessary to complete the Work on, or before, the milestone date(s) specified in the Bid Documents.

2. **Base Bid:**

_____ $_____
(Words) (*Figures)*

Sums shall be expressed in both words and figures. In case of discrepancy, written words shall govern.

3. **Addenda:** The Bidder acknowledges receipt of the following Addenda:

No._____ Dated _____ No._____ Dated _____

No._____ Dated _____ No._____ Dated _____

4. **Alternates:**

ADD Alternate No. EC-04-001-ES – In lieu of the Base Bid scope of installing new 24" x 48" light fixtures in existing 24" x 48" ceilings, where noted in the drawings at First Floor Area 'E' and Second Floor Area 'E' of Highland Elementary School, provide new 24" x 24" light fixtures in new 24" x 24" ceilings. Refer to drawings for additional information.

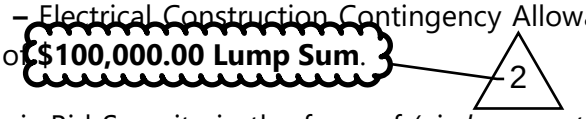
_____ $_____
(Words) (*Figures)*

Sums shall be expressed in both words and figures. In case of discrepancy, written words shall govern.

5. **Unit Prices:** None

6. **Allowances:** Base Bid shall include the following Allowance(s):

Allowance No. EC-04-001 – Electrical Construction Contingency Allowance for work at all buildings in the amount of **$100,000.00 Lump Sum**.



7. **Bid Security:** Attached hereto is Bid Security in the form of (*circle correct form*) Bid Bond, Certified Check, Cash in the amount of five percent (5%) of the written Base Bid amount.

8. **Time of Commencement and Completion:** The Bidder agrees to commence Work on the stipulated starting date(s) and will substantially complete the Work in accordance with the information provided in specification 011200 – Multiple Contract Summary.

9. **Rejection of Bids:** The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

10. **Execution of Contract:** If notice of the acceptance of this Bid is mailed, telegraphed, or otherwise delivered to the undersigned within forty-five (45) days after the date of the Bid Opening, or any time thereafter, the undersigned will, within ten (10) working days after the receipt of the form of Agreement, execute and deliver the Contract.

11. **Site Visit:** By initialing at the end of this paragraph the Bidder acknowledges visiting the project Site as requested by the Bidding Documents.

_____ _____
(Name-Printed) *(Initials)*

12. **Authorized Signature:**

_____
(Signature)

_____
(Name – Printed)

_____
(Title – Printed) *(Date)*

13. **Attachments:** As itemized in the "Instructions to Bidders" for a complete Bid Form include the following:
    a. Bid Form.
    b. Resolution.
    c. Non-Collusive Bid Certification.
    d. Bid Security.
    e. Iran Divestment Act Affidavit.

14. **Supplementary Bid Information**: If apparent lowest Bidder upon Bid Opening, submit in accordance with the "Instructions to Bidders" within three (3) business days the following:
    a. Contractor Statement of Qualifications – AIA Document A305, 2020 edition.
    b. Proposed Subcontractors.
    c. Identification of Work to be self-performed.
    d. Proposed Substitutions.
    e. Proposed Project Manager & Superintendent resumes.
    f. DRAFT Schedule of Values.

END OF DOCUMENT 004116.4

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SECTION 011200 MULTIPLE CONTRACT SUMMARY

PART 1 GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including the General and Supplemental Conditions and Division 01 Specification Section, apply to this Section.

1.2 SUMMARY

Section include/reference:

1. Project information.
2. Work covered by Contract Documents.
3. Construction schedule.
4. Requirements and assignments for each Contract.
5. Owner-furnished products.
6. Access to site.
7. Coordination with occupants.
8. Work restrictions.

This Section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls.

Each Contractor is responsible to review all Drawings and Specifications for every contract to gain a complete understanding and knowledge of the entire Project, to determine how the work of each contract is to interface with every other contract.

1.3 DEFINITIONS

Project Identification: Project consists of all labor, materials, equipment, appliances, services, and incidentals necessary for layout, installing, and performing Additions and Alterations at the Highland Central School District (HCSD) as shown on the Contract Drawings and described in the Specifications. The Work on this Contract will be performed at multiple schools within the School District.

1. Phase 1 - The work consists of but not limited to the following:

    a. Highland Elementary School located at Lockhart Ln Highland NY 12528
    b. Highland Middle School located at 71 Main St, Highland NY 12528
    c. Highland High School located at 320 Pancake Hollow Rd, Highland NY 12528
    d. HCSD Bus Garage located at 320 Pancake Hollow Rd, Highland NY 12528

e. Architect Identification: The Contract Documents were prepared for the Project by Architect of Record, CSArch.
f. Construction Manager: The Palombo Group has been engaged as Construction Manager for this Project to serve as an advisor to Owner and to provide assistance in administering the Contract for Construction between Owner and Contractor, according to a separate contract between Owner and Construction Manager.
g. Building Code in Effect for Project: 2020 Building Code of New York State as adopted and the Energy Conservation Construction Code of New York State.
h. Comply with the following: New York State Energy Conservation Code and the building standards of the New York State Education Department.

1.4 THE CONTRACT

The Project will be constructed under a multiple prime contracting arrangement with the Owner awarding and holding the separate Contracts. Each contractor shall furnish all labor, material, tools, equipment, supervision, layout, delivery, trucking, shop drawings, submittals, closeout etc. necessary to complete the work described in the Division of Work of their respective Contracts and based upon a complete set of Contract Documents.

Each Contractor has been given the opportunity prior to bid to inspect the entire Project site for interferences to their Contract work and agrees to accept the site as it exists on the date of the bid opening.

1. It is the Owner's intention to continue to occupy the existing buildings and site for normal School operations during the Construction process. The Contractors all agree to:

a. Cooperate with the Owner's personnel in maintaining and facilitating access to the School buildings and its facilities by the School staff, Students, Owner's agents, service consultants and the public, throughout the construction process.
b. Keep driveways and entrances serving the occupied School buildings clear and available to the Owner, the Owner's employees, the public, and to emergency vehicles at all times. Do not obstruct access to, or use these areas for parking, staging of equipment or materials. All access through these existing areas must be coordinated in advance and in accordance with the Owner's usage and occupancy schedule.
c. Schedule construction operations so as to minimize any conflicts or interruptions to the daily school functions. Coordinate any necessary interruptions with the designated project representative.
d. All existing Owner occupied areas of buildings (not turned over to the Project Contractors) need to remain operational at all times. The contractors are responsible to maintain all systems, such as but not limited to: fire alarm, clocks, electric, public address system, gas service, heat etc.

    a. District intends to occupy the HS during the summer for administration use as well as facility summer prep activities. Access shall be restricted per a coordinate plan from the Contractor.
    b. District intends to relocate from the ES during the summer. Access shall provided on an as needed basis. Administrators shall return to the building August 19th.

Each Prime Contractor shall:

1. Provide field-engineering services, in addition to those provided by the General Work Prime Contract, to install site utilities included in the applicable Prime Contract.
2. Coordinate construction schedule information in order to formulate one master schedule for the entire Project. General Contract to organize, publish and update said schedule as direct by the CM, but no less than bi-monthly (twice per month).
3. Coordinate weekly construction schedules and activities. Every week

Prime is to submit to the CM and other Primes a detailed plan of activities in the field to include, but not be limited work planned, crew size, hours of work, deliveries, coordinated activities with others, Owner requested coordination needs. Prime Contractor to take responsibility for submitting this on account for all of their vendors and subcontractors.

4. Provide reflective vests and other necessary PPE to be worn by all on-site personnel at all times. Parties that do not abide by this requirement will be escorted off the premises.
5. Provide erosion and Sediment Control and dewatering as it relates to any excavation associated with its own Prime Contract.
6. Provide potable drinking water for its own employees.
7. Provide access to all concealed systems as required for system maintenance and repair for items installed in their Prime Contract. This specifically talks to access panels needed for future maintenance by the district.
8. Provide and maintain material lifting equipment required for the completion of their Contract requirements, and complying with NYS Labor Laws, OSHA Regulations, and other Federal, State, and local laws.
9. Provide and maintain additional temporary stairs, ladders, ramps, scaffolding, and platforms required specifically for completion of work of their own Contract, and as further detailed in this section. All work needs to comply with the NYS Labor Laws, OSHA regulation, and other Federal, State, and local laws.
10. Provide Fire Prevention materials and equipment for fire protection related to the work of their own Prime Contract. Provide fire extinguishers, fire blankets, and fire watch during all cutting and welding operations.
11. Provide any supplemental lighting required to install the work of its own Contract, beyond the minimum OSHA levels provided under the Electrical Work Prime Contract.
12. Provide any supplemental heat required to install the work of its own Contract, beyond the levels owed by the Mechanical Work Contractor.
13. Provide traffic control for deliveries, and equipment needed to perform the work of their own Prime Contract.
14. Provide protection of its own finished Work, after installation, until accepted by the Owner.
15. Provide fire caulking for any penetration related to the work for its

own Prime Contract.

16. Provide any office and storage trailers required to complete the work of their own Prime Contract.
17. Provide final cleaning of all surfaces and areas within the work areas to the satisfaction of the CM.
18. Project closeout requirements including As-Builts, Owner's Manual, Training ect.
19. Each Contractor shall review the facility asbestos report to become familiar with any materials that may contain asbestos. If the contractor encounters materials that have not been tested for asbestos, he shall cease work and contact the Construction Manager. The Contractor will be held responsible for clean-up costs if they continue to remove materials that have not been tested for asbestos.
20. Provide for a thorough final cleaning of the site, building, and equipment provided under their Prime Contract immediately before the final inspection. Each Prime Contractor is responsible for cleaning and dust and debris generated from the work of their own Contract.

    a. Maintain areas in a cleaned condition until the Owner occupies the space.
    b. Personnel: Experienced workman or professional cleaners approved by the Construction Manager.

1.5 SUMMARY OF WORK

The work will be constructed under multiple prime contracts. One set of contract documents is issued covering the multiple contracts. Each Prime Contract is defined as:

1. CONTRACT 1 HAZ - ABATEMENT OF HAZARDOUS MATERIALS
2. CONTRACT 2 GC – GENERAL CONSTRUCTION WORK
3. CONTRACT 3 MPC – MECHANICAL & PLUMBING CONSTRUCTION WORK
4. CONTRACT 4 EC - ELECTRICAL CONSTRUCTION WORK

1.6 WORK UNDER SEPARATE CONTRACTS

The project will be constructed under a multiple-prime contracting arrangement. One set of documents is issued covering all prime contracts scope of work. Each prime contractor is to review ALL drawings and specifications for complete understanding and knowledge of the work to be performed.

The following Contract Documents are specifically included and defined as integral to each Prime Contract.

1. Bidding Requirements
2. Performance and Payment Bonds
3. Conditions of the Contract, including

a. General Conditions & Supplementary Conditions
b. Insurance Requirements
c. NYS Prevailing Wage Rates

Extent of Contract: Unless the Contract Documents contain a more specific description of the Work, names and terminology on Drawings and in Specification Sections determine which contract includes a specific element of Project.

a. Unless otherwise indicated, the Work described in this Section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the Contract Documents.
b. Local custom and trade-union jurisdictional settlements do not control the scope of the Work of each contract. When a potential jurisdictional dispute or similar interruption of work is first identified or threatened, affected contractors shall negotiate a reasonable settlement to avoid or minimize interruption and delays.
c. It is implied, unless otherwise noted, that any new work that has existing work in its place, the removal of the existing work is included in the scope of new work installer.
d. All contractors are responsible for the removal and reinstallation of ceiling where work must be installed above a ceiling not scheduled for removal.
e. Each Prime Contractor shall provide excavation, SOE, backfilling material, restoration ect for all scope of work within their Contract.
f. Concrete Work of each contract shall be provided by each contract for its own Work, unless specifically assigned to another Contract.
g. The General Construction Work Contract shall provide all cutting and patching, wall and floor trenching, ect associated with all Contracts. All patching/restoration is to be performed by mechanics qualified and experienced with the materials and finishes being patched. New openings requiring structural reinforcing will be the responsibility of the General construction contract. Core drilling, fire proofing ect. shall be by Prime Contractor. Layout to be performed by the Prime requiring the opening.

h. Firestopping for the Work of each contract shall be provided by each contract for its own Work. Firestopping shall comply with Division 07 Section "Through Penetration Firestop Systems".
i. Access doors not shown on Architectural drawings and required for access to junction boxes, valves and similar equipment for the Work of each contract shall be furnished by each contract for its own Work to the General Construction Contractor for installation.
j. Lead Based Paint precautions for the Work of each contract shall be provided by each contract for its own Work. Each Prime Contractor shall provide procedures for OSHA Lead precautions.
k. Each Prime Contractor shall designate a full time superintendent to supervise the work of the Prime Contractor, who shall always be present on the job site when work is being performed by their Contract; this person shall be familiar with Project and authorized to conclude matters relating to progress. This person shall also represent their company at weekly contractor meetings.
l. Termination and removal of its temporary facilities shall be provided by each contract for its own Work.
m. The Electrical Contractor Shall provide temporary power and lighting at the areas of work for all trades within the building, as required for the duration on construction.

Temporary Facilities and Controls: In addition to specific responsibilities for temporary facilities and controls indicated in this Section and in Division 1 Section 01 5000 "Temporary Facilities and Controls," each Contract is responsible for the following:

a. Installation, operation, maintenance, and removal of each temporary facility usually considered as its own normal construction activity, and costs and use charges associated with each facility.
b. Generators, plug-in electric power cords and extension cords, supplementary plug- in task lighting, and special lighting necessary exclusively for its own activities.
c. Its own field office, complete with necessary furniture, and telephone service.
d. Its own storage and fabrication sheds.
e. Temporary heat for construction at isolated work areas.
f. Its own dust protection to control dust where dust partition is not scheduled or shown on the drawings but are necessary to protect the building from dust contamination. This to included temp walls, zip walls, portion walls, as

needed or as directed by the CM to contain dust.

g. Temporary enclosures for its own construction activities.
h. Hoisting requirements for its own construction activities.
i. Staging and scaffolding for its own construction activities.
j. Collection and disposal of its own hazardous, dangerous, unsanitary, or other harmful waste material.
k. Daily clean-up and disposal is required by each Contractor for the periods which that Contractor is performing work on site. Dumpsters will be provided by the General Construction contract for use by the prime contractors, recycling of materials will be instituted daily. Each trade will assign at least one person to the weekly general clean-up. Any Contractor not providing personnel will be "back-charged" for labor provided by the Construction Manager. Progress cleaning of its own areas on a daily basis.
l. Secure lockup of its own tools, materials, and equipment.
m. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.
n. Temporary heat to protect to install and protect the work is place where scheduled temporary heat is not in place or not called for in the contract documents.
o. Safety procedures as dictated by the district, OSHA, and the NYS Department of Labor

Temporary Heating, Cooling, and Ventilation: The Mechanical Contractor is responsible for temporary heating, cooling, and ventilation before permanent enclosure of building is complete and/or when a system is removed or otherwise disabled. The General Construction Contract is responsible for temporary heating, cooling, and ventilation after permanent enclosure of building is complete and Owner will pay utility-use charges.

Temporary ventilation: Each Contractor to control fumes from their own construction operations including interior panting and "off gassing" of new finish materials.

Use Charges: Comply with the following:

a. Water Service: Water service is available at no charge
b. Electric Power Service: Electric Power service is available at no charge. Except when power shut down to the building occurs, the EC to provide temp power to facilitate the ongoing work of other trades.

Storage: Each Contractor shall coordinate with the Construction Manager for

locations of on-site storage for material, employee parking, material loading/loading ect. It is the intent of the Project to store approved delivered material on site. Any storage required for material, tools, and equipment outside the summer schedule is the responsibility of the Contractor. Example locations are proposed in a Project Staging Plan. Material available and not on site will not be a basis for delay.

1.7 OWNER SUPPLIED OR STATE CONTRACT SCOPE

1. The Procurement and Installation of the High School Lockers;

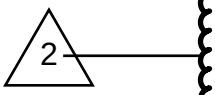
    a. Hazardous Abatement Contractor to remove all material adjacent to old lockers including disposal of lockers within the limits as shown in the documents. This to included blocking, supports, base ect, as required for the new installation.
    b. General Contractor shall prepare and install new base as required for acceptance of the new lockers. Contractor shall also include dunnage, support, bracing ect for the lockers to be supported/anchored to.
    c. Owner to provide and install lockers off of State Contract Agreement
    d. General Contractor shall furnish and install all adjacent walls, supports, ceilings and other work/finishes adjacent to the lockers for the final finish.
    e. General Contractor shall remove, reinstall, replace, modify ect as necessary, the ceiling tile/grid into the new walls.

2. The Procurement and Installation of the Bus Garage Lifts;

    a. General Contractor shall provide all excavation, demo and restoration, support of excavation and dewatering, concrete structural elements for the purpose of supporting the Lift Installer's system.
    b. Owner to provide and bus lift system off of State Contract Agreement
    c. Electrical contractor to include all necessary connections, disconnections, for the purpose of installing the new bus lift equipment. This to include, conduit, wire, breakers, terminations, ect to support the Lift Installer. Contractor shall review specifications for lift system and provided any/all electrical needs to support the Lift Installer for a full complete working system.
    d. Mechanical-Plumbing contractor to include all necessary connections, disconnections, for the purpose of installing the new bus lift equipment. This to include, pipe, drains, pumps, ect to support the Lift Installer. Contractor shall review specifications for lift system and provided any/all

electrical needs to support the Lift Installer for a full complete working system.

3. The District shall furnish and install final classroom waxing. General Contractor shall provide ample time for 3 coats plus cure time. General Contractor shall be responsible for coordination when waxing can occur in enough time to return the classrooms back to the District.
4. The District shall provide labor and protection to relocate and return classroom furniture during the summer weeks. Anything needed to be relocate during the school year will be by the General Contractor.
5. The ~~District~~ **Electrical Contractor** shall be responsible for **removing and** re-installing cameras in the ceiling. The ~~General Contractor and~~ Electrical Contractor shall ~~support~~ **consult with** the District's third party as needed by the vendor for the **removal and** re-installation. **District's third party vendor information is as follows:**



a. Day Automation
594 NY-299
Highland, NY 12528

1.8 GENERAL CONSTRUCTION CONTRACT

Work in the General Construction Contract includes Architectural, Structural, Masonry, Roofing, Finishes, Blocking for Equipment, Sitework, plus other construction operations traditionally recognized as General Work Construction. This includes, but is not limited to, work shown on the following:

a. Drawings:

a. All "title sheets, general notes, code compliance and Phasing Drawings" (General)
b. All "C" series Drawings (Civil)
c. All "S" series Drawings (Structural)
d. All "A" and "AD" series Drawings (Architectural)
e. All "G" "GEN", Drawings, as it pertains to Work of this Contract
f. Applicable information as shown on the "HAZ" "P" "PD" "E" "ED" drawings, unless noted otherwise. It also includes Administrative and coordination responsibilities.
g. All reference to other drawings from all other drawing listed above

b. Coordination:

a. Coordination with their work with all of the other contractors.
b. Coordinate with State Contract scope of work, see section for details

c. Demolition:

a. Removal of any existing curbing, stairs, bituminous paving, asphalt and sidewalks as shown or described as it relates to the scope shown or required to install new work
b. Removal of all underground utilities and/or equipment as shown or described as it relates to the scope shown
c. Removal and disposal of miscellaneous material and/or equipment, including equipment not, shown if impacting work to be demolished.
d. Salvage, Storage, Protection and Repair work as needed as shown or described within the documents or discovered in the field as required to install new work
e. Removal of masonry walls, doors, and interior partitions as required for new work. General work contractor is responsible for shoring, demolition and protection of areas associated with new work.
f. Provide protection to all materials to remain intact.
g. Removal of finishes noted on plans or as needed to install new work including but not limited to flooring, ceilings, and misc. items attached to existing walls. Patch to match existing conditions.
h. Removal and disposal of miscellaneous material/items/equipment including all existing wall mounted specialty items, accessories and/or equipment not shown if impacting work to be demolished. Coordinate shutdown of water and/or electric with trades associated with the area of demolition. See demolition plans for additional demolition notes.
i. All cutting and patching necessary for work of this contract, including layout, sleeves, coring, debris removal, saw cuts of existing slabs/walls, patch/pinning or dowels, subfloor trenching, lintels, drywall work, plaster work, grouting, painting, ceiling

removal and replacement, etc. This trade contractor will be responsible for other trades openings (cutting and infill). Coordinate with other trades for access and finish of their scope of work.

j. Provide and install shoring bracing and underpinning related to the General Construction work; excavation and structural backfill for footing, foundations, trenches and ground openings

d. Temporary Facilities

a. Temporary facilities and controls that are not otherwise specifically assigned to the Mechanical Contract or Electrical Contract.
b. Sediment and erosion control.
c. Storm water control.
d. Unpiped temporary toilet fixtures, wash facilities, and drinking water facilities, including disposable supplies at each facility for the duration of the project
e. Temporary enclosure for building exterior, except as indicated.
f. Dewatering facilities and drains.
g. Excavation support and protection, unless required solely for the Work of another contract.
h. Special or unusual hoisting requirements for construction activities, including hoisting loads in excess of 2 tons, hoisting material or equipment into spaces below grade, and hoisting requirements outside building enclosure.
i. Project identification and temporary signs for construction
j. General waste disposal facilities including dumpsters for the project duration at each school for <u>all</u> trades. Specific Contracts to also carry general waste of their specific removed/demolished articles of work.
k. Pest control.
l. Temporary stairs.
m. Temporary fire-protection equipment.
n. Barricades, warning signs, and lights.
o. Site enclosure fence as directed
p. Covered walkways as shown
q. Security enclosure and lockup.
r. Environmental protection.
s. Dust mitigation/containment and control measures i.e. “zip walls”, plastic may need to be required in classrooms, hallways, office, to

protect unmoved equipment, furniture, finishes, as required and as directed.

t. Restoration of Owner's existing facilities used as temporary facilities.
u. Site restoration, topsoil seed and straw for damaged lawns due to temporary storage units
v. Provide dust protection and temporary site/security fencing, reference phasing and logistics plan
w. Provide temporary roads/ access and continuous exits in and out of the construction area as shown. Provide stone entry pad at staging yard. Repair back to natural state when complete. Provide work as shown on the phasing and logistics plan.
x. Provide temporary access and continuous exits in and out of all construction areas
y. Provide frost protection during excavation; protect concrete slab and masonry from cold temperatures during and after pour.
z. Protect exterior wall and interior spaces when performing tie in work for new addition and any type of window wall replacements.
aa. Provide all temporary partitions, egress doors, and temporary egress parameters indicated by the CM inside and outside the building. Restore all areas to original condition upon completion. Review Logistics and Phasing Plans.
bb. Provide Temporary Facilities indicated as Work of this Contract in Division 01 Section 015000, “Temporary Facilities and Controls”
cc. Provide all temporary fall protection, guardrails, handrails, slab and roof openings protection, temporary stairs and ramps as required. Include maintaining these items throughout the project as well as removal when no longer needed.
dd. Provide Temporary storage for salvaged materials as indicated on the drawings until reinstallation of such materials.

e. New Construction:

a. The General Construction Work Contract shall perform all necessary trenching and excavation, backfilling, and compaction and field restoration required for all other primes. Include

setting of precast material provided by other trades

b. Earthwork

I. GENERAL: All earthwork shall be confined to the construction area as shown on the plans, and shall be done in an approved manner with proper equipment. Earthwork shall be suspended during rain and inclement weather, or when unsatisfactory field conditions are encountered, unless otherwise directed by the AE and CM. At all times during construction, the CONTRACTOR shall maintain proper drainage in the construction area, and shall take all measures necessary for erosion and sediment control.

II. Existing Utilities: CONTRACTOR shall take every precaution to protect existing utility services from damage during construction operations. If damage occurs, the OWNER of the utility shall be notified immediately, and repairs shall be made promptly at the CONTRACTOR'S expense. All repair work shall be satisfactory to the AE and CM and the OWNER of the utility. When interruptions of existing utilities occur, temporary service shall be provided as approved by the AE and CM and OWNER of the utility.

c. Dressing Off: All cuts, fills and slopes shall be neatly dressed off to the required grade or subgrade, as indicated on the plans.

I. Cleanup: Cleanup of the site shall be made upon completion of grading work or any major part thereof. Unless otherwise noted, excess or surplus material shall be wasted and dressed off on the site, or adjacent thereto, to the AE and CM'S satisfaction. Excess or surplus material wasted in off- site spoil areas shall be spread and leveled as directed.

II. Topsoil Placement: Topsoil shall consist of a natural friable loam, occurring usually in a surface layer 6 to 18 inches thick, and free of roots, grass, weeds, stone and other foreign matter. Topsoil may be obtained from the graded area, if available, and stockpiled for future use. Otherwise,

the CONTRACTOR shall provide topsoil from other sources at his own expense. All topsoil shall be acceptable to the AE and CM. Topsoil shall be placed on the entire graded area as shown on the plans, or as directed by the AE and CM. Topsoil shall be distributed to a depth of 4 inches, measured loose, and dressed off neatly to finish grade, with all debris removed. Topsoil shall receive final dressing of seed and mulch or straw and watered until germination.

d. Provide temporary driveway, parking lot paving and drainage as required.
e. Areas modified for construction/staging/etc.. to be placed back to its natural state once construction is complete by this trade.
f. Provide all site signage as requested by the CM. Example; Gates, Hard hat area, No smoking, Construction personnel only, Exit signs, Etc..
g. Contractor shall obtain and pay for any permits, inspections, or certifications from governing authorities having jurisdiction over the work to be performed, or over the finished product to be installed by this Contractor. Project Building Permit is by Owner
h. The General Construction Contract is to provide rough opening in walls, floors, and roofs both inside and out, including lintels and any required structural framing for penetrations as part of this Contract. All lintels and/or framing are to be sized per the Architect.
i. Provide all associated lintels at new or old openings as shown. Coordinate with mechanical trades. Removal and replacement of ceilings as required to perform work by this trade.
j. Provide and install interior construction finishes, including partitions, doors-frames-hardware, thresholds, sills, signage, interior glazed openings, and fittings and all work required to install select work. Provide all steel required at new openings, coordinate with all Prime contracts. Power for electrified hardware to be provided by the Electrical Contractor.
k. Provide and install, interior finishes such as rough carpentry finish carpentry, ceilings, architectural woodwork, filler panels. Built-in casework shall be by other. Salvage and re-install work as applicable.

l. Provide repairs to masonry and concrete structures and openings. Patch to match exterior and interior finishes including work from other trades. Provide and install sitework restoration on disturbed areas, regardless of cause during construction of; asphalt, concrete, curb, topsoil, seed ect.
m. Provide and install thermal and moisture protection as required
n. Provide and install Purple (moisture resistant) gypsum wallboard in all wet areas and finishing for same.
o. Provide and install finishes and subfloor prep requirements including polished concrete, terrazzo, tile flooring, resilient vinyl tile, ceramic tile. carpeting, base cove, painting, high performance coatings, grout, caulk, setting material, suspended acoustical and gypsum walls/ceilings, chassis ways/walls, grid/track/studs, insulation. Provide self-leveling underlayment and/or other surface prep as required by manufacturer to allow for acceptable flooring installation. Patch existing floor penetrations for installation of new work. This to include any moisture mitigation requirement by the flooring manufacturer due to site conditions.
p. Include surface prep as required by the product manufacturer. Remove and re-install obstructions as needed for finish work installation.
q. Provide all building signage, fire-protection specialties, visual display boards, as indicated or directed by CM.
r. Provide temporary hard protection over finished products. Include maintenance and removal of protection. Contractor shall anticipate that all existing areas to receive new flooring shall require both light grinding and self leveling underlayment. Provide additional flash- patching where old walls were removed.
s. Provide and install exterior facade repairs such as pointing, repointing cracks repairs, facade replacement, new lintels, lintel replacements, expansion joints, caulk. Include infills, removals, waterproofing, anchors ect as detailed
t. Provide and install roofing scope as shown, including patching, coverings, flashings, roof specialties and glazed openings. The roofing shall be by the General Contractor, along with all necessary supports, waterproofing, manufacturer inspection ect.

u. Provide and install all gutters, downspouts, supports and site drainage for a complete system

v. Contractor shall demo, prep, repair, seal, chalk, paint all staircases within the back of the Middle School, as shown on the documents. This shall include replacing handrails and/or welding and finishing existing if in good condition, adding/replacing sleeves via core for handrail installation.

w. Contractor shall include all Sitework as shown, including removal and sugbgrade prep for finish work. Include scope for basketball court, all fencing, including fdn removal, gates. Basketball court scope includes painting and line striping.

f. Misc. Inclusions

a. Contractor shall include prime coats, final painting, stone, brick, ceiling tile, gypsum, plaster, chalk, grout, floor tile ect. Paint entire patched wall, corner to corner. Color/Finish to be coordinated with Owner prior to commencing. “Patch” to match existing at the following conditions

I. At all removed existing walls.
II. At all new door openings cut through existing walls.
III. At all new walls in existing construction.

g. Include (furnish, and install, unless noted otherwise):

a. As indicated on the plans.
b. Provide exterior and interior equipment and housekeeping pads, structural slabs ect including but not limited to including formwork, rebar, pins, sleeves, finishing, ect for completion of work
c. Provide and install Bathroom finishes and accessories.
d. Include in base bid to furnish and install the following access doors beyond those already shown on drawings:
e. Provide within the Base Bid, furnish and install additional to the contract documents, 2,000 square feet of finished sheetrock and support, paint ect. at the direction of the CM. This work shall be used for Owner requested items, bulk heads, chase-ways, infills and excessive patch areas.

f. Provide Professional cleaning prior to substantial completion including but not limited to, window washing, vacuuming of carpeting, and waxing of flooring. This shall be done with all trades complete. A Third Party vendor is required and must be submitted for approval. This work shall start August 1 to maintain summer schedule / turnover.
g. Provide and Install Misc. access for work, as directed by the AE or CM;

    I. Four 18" x 18" fire-rated access doors for gypsum wallboard
    II. Four 18" x 18" fire-rated access doors for masonry construction.
    III. Four 8" x 8" non-rated, primed steel, trimless, access doors for gypsum wallboard construction.

h. General Requirements, including but not limited to, additional items specifically indicated as the Work of this Contract.

The Work of the General Construction Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. The Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:

1. Division 00 – Procurement and Contracting Requirements All Sections
2. Division 01 – General Requirements, All Sections, including Temporary Facilities
3. Division 02 – Existing Conditions - As applicable to work of this contract
4. Division 03 – "Concrete" All Sections
5. Division 05 - "Metals" All Sections
6. Division 06 - "WOOD, PLASTICS, AND COMPOSITES" All Sections
7. Division 07 – "THERMAL AND MOISTURE PROTECTION" All Sections
8. Division 08 – "OPENINGS" All Sections
9. Division 09 – "FINISHES" All Sections
10. Division 10 – "SPECIALTIES" Support as required for the installation by other
11. Division 14 – "Conveying Equipment" Support as required for the lift

equipment installation by other

12. Division 31 – "Earth Work" - All Sections as applicable to work of this contract
13. Division 32 – "Exterior Improvements" - All Sections

1.9 ELECTRICAL CONTRACT

Work of the Electrical Contract includes a complete working system for system such as Electrical Distribution Service, Lighting, CATV systems, Communications, Fire Alarm, Intercom Systems, Security Systems, Emergency Lighting, and other systems traditionally recognized as Electrical work. This includes, but is not limited to, work shown on the following:

1. Drawings:

    a. All "title sheets, general notes, code compliance and Phasing Drawings" (General)
    b. All "E" and "ED" series drawings (Electrical)
    c. Applicable information shown on the "HAZ" "S" "C" "A" "AD" "P" "PD" drawings, unless noted otherwise. It also includes Administrative and coordination responsibilities.
    d. All "GEN" series Drawings, as it pertains to Work of this Contract
    e. All references to other drawings from drawings listed above.

2. Coordination:

    a. Coordination with the work with all of the other contractors.
    b. Coordinate with State Contract scope of work, see section for details

3. Demolition

    a. Provide demolition of all electrical equipment and conduit as shown and as required at the existing building. Included any work found abandoned in place or unused adjacent to work scope. Salvage, Store, Protection of equipment for reinstallation as indicated on the drawings.
    b. Coordinate with General Contractor for all cutting and patching necessary for work of this contract, however the Electrical Contract to include layout, sleeves, coring, debris removal, and etc. for scope associated with the Electrical system installation.
    c. Removal and disposal of miscellaneous equipment, including equipment not shown if impacting work to be demolished.

d. Provide protection to all materials to remain intact
e. Coordinate with the General, Plumbing and Mechanical Contractor for necessary shutdowns and disconnects. Remove and reinstall equipment, obstructions, ect as required for the installation of new work required by other Prime's scope.
f. Removal of items as shown and/or required
g. Removal and disconnections of electrical devices in walls, ceilings and floors scheduled to be removed. Conduit to be labeled and capped, with wires pulled out to source.

4. Temporary Facilities

a. Provide Temporary Facilities indicated as Work of this Contract in Division 01 Section 015000, "Temporary Facilities and Controls"
b. Provide and install temporary power to abatement contractor's equipment as required up to the Abatement Contractor provided sub/supply panel
c. During construction the need for a temporary full building generator will be required for either/or District infrastructure and Prime Contractor scope during the main and sub panel outages. Electrical Contractor shall carry within the Bid the cost for such, assume a 24hrs per day running rental, including transportation, installation, fuel, maintenance, servicing, extended hours charges ect. for the outage necessary to perform the service scope as described within the Contract. Include material for connections, including but not limited to temporary and permanent for this service. Other temporary power may need to be required due to phasing and logic's of other panel replacements. As contractor power/lighting will be required, the Electrical Contractor shall provide such, as required, to maintain other Primes continuation of work included within their Base Bid
d. Fire alarm devices shall be surveyed and protected prior to work. All devices shall be returned to their existing location or adjusted to a code compliant location as required due to the scope on the ceilings/walls due to them being removed/relocated/new.
e. The Electrical Contractor is aware that the District has emergency lights on the ceilings and walls. Upon the end of the panel installation, all emergency fixtures shall be tested. Any devices not functioning shall be restored/repaired/replaced in kind prior to the return of the building to the District for operational use or as directed.

5. Construction:

a. Selective demolition in a safe and approved manner (LOTO)
b. Provide and install panels, conduit, wire, enclosures, junction/splice boxes grounding, terminations, tagging/labeling of new work
c. Provide and install electrical equipment such as transformers, junction boxes, panels, breakers, enclosures, switch gear, pull boxes, supports, ect.
d. Provide and install power to all mechanical and plumbing equipment, reference applicable drawings. Disconnect and safe as required for reuse. Reconnect power to new equipment as required. Prior to disconnecting, in a reasonable timeline, record panel, breaker, wire size, amps, voltage, phase information for the A/E and MC for coordination of new equipment submittals.
e. Salvage all required equipment and re-install as applicable
f. Provide and install Interior and Exterior Lighting, including poles, supports, emergency and exit lighting, sensors, controls for a complete system as required by the manufacture per the design intent.
g. Provided in wall cores, openings, ect for system/equipment penetrations, firestopping
h. Provide and install all bonding and grounding
i. Provide and install all lightening protection system including anchors, rods, cable, supports, grounding ect. as shown
j. Provide ALL power wiring to ALL HVAC equipment. Install motor controllers/disconnects supplied by HVAC Contract.
k. Mechanical Contractor to provide pumps, motor starters, VFDs ect. Disconnects to be provided by Mechanical Contractor. Coordinate installation of power wires, conduits ect from source to various equipment. Controls to be by Mechanical Contractor.
l. Provide power to all ADA hardware and electric hardware shown in door hardware schedule. Provide control wiring and connection for electrified door hardware.
m. Provide all phone, CAT, and communication/networking work/systems as shown.
n. Provide public address systems, devices as shown, including full installation and training.
o. Provide all fees required for inspections and permits.
p. Furnish access doors for electrical access (to be installed by GC)
q. Provide and maintain a temporary electric service, including lighting and power, for the site office trailers off of the temporary service being provided General Requirements, including but not limited to, additional items specifically

indicated as the Work of this Contract.

The Work of the Electrical Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. The Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:

1. Division 00 – Procurement and Contracting Requirement, All Sections.
2. Division 01 – General Requirements All Sections, including Temporary Facilities indicated
3. Division 02 – Existing Conditions - As applicable to work of this contract
4. Division 07 – "THERMAL AND MOISTURE PROTECTION" As applicable to work of this contract
5. Division 14 – "Conveying Equipment" Support as required for the lift equipment installation by other
6. Division 22 – "Plumbing" As applicable to work of this contract
7. Division 23 – "Heating Ventilating and Air Conditioning" As applicable to work of this contract
8. Division 26 – "Electrical" - All Sections

1.10 PLUMBING & MECHANICAL CONTRACT

Work of the Plumbing and HVAC Contract includes Plumbing as a working finish system such as supply, venting drainage ductwork, housekeeping pads, plus other construction operations traditionally recognized as plumbing work. Includes HVAC as a complete working finish system such as Equipment, Piping, ductwork, control systems, housekeeping pads, plus other construction operations traditionally recognized as heating, ventilating and cooling work. This includes, but is not limited to, work shown on the following:

1. Drawings:
    a. All "title sheets, general notes, code compliance and Phasing Drawings" (General)
    b. All "P" and "PD" series drawings (Plumbing)
    c. Applicable information shown on the "A" "AD" "E" "ED" "C" "S" "HAZ" drawings, unless noted otherwise. It also includes Administrative and

coordination responsibilities.

d. All "GEN" series Drawings, as it pertains to Work of this Contract
e. All references to other drawings from drawings listed above.

2. Coordination:

a. Coordination with the work with all of the other contractors.
b. Coordinate with State Contract scope of work, see section for details

3. Demolition

a. Provide demolition of all plumbing equipment/fixtures and piping as shown and as required at the existing building. Included any work found abandoned in place or unused adjacent to work scope. Salvage, Store, Protection of equipment for reinstallation as indicated on the drawings.
b. Coordinate with General Contractor for all cutting and patching necessary for work of this contract, however the Plumbing Contract to include layout, sleeves, coring, debris removal, and etc. for scope associated with the Plumbing system installation.
c. Removal and disposal of miscellaneous equipment, including equipment not shown if impacting work to be demolished. Restore and replace as required
d. Provide protection to all materials to remain intact
e. Provide demolition of all HVAC equipment/devices and piping as shown and as required at the existing building. Included any work found abandoned in place or unused adjacent to work scope. Salvage, Store, Protection of equipment for reinstallation as indicated on the drawings.

4. Temporary Facilities

a. Provide Temporary Facilities indicated as Work of this Contract in Division 01 “Temporary Facilities and Controls”

5. Construction:

a. Selective demolition.
b. Salvage and re-install work as applicable.

c. Provide and install potable water supply and distribution including valves, hoses, support, insulation, fittings and applicable accessories
d. Provide and install insulation on all new work. Tie into existing lines and insulate up to existing work for a unified insulation performance
e. Provide and install bathroom fixtures sinks, supports, anchors, shutoffs, and applicable accessories
f. Provide and install Drainage pipe, cleanouts, vents covers ect as required
g. Provide and install Water Fountains for a complete system
h. Provide and install Water Service testing, connections, and commissioning
i. Provided inwall cores, openings, ect for system/equipment penetrations, firestopping
j. Provide all testing, inspection, permits
k. Provide and install all cleaning, startup, chemicals, testing, inspection, permits, balancing, commissioning
l. Contractor to provide and install new additional valves above and beyond what is shown on the drawings – (5) five 1", (2) 1 ½", (2) 2", (1) 3" for pricing purposes. Exact sizes and location to be determined in the field, at the direction of the construction manager.
m. Remove and dispose of all unused equipment, fuel lines, piping, ect. adjacent to the new work and/or as shown on the Drawings
n. Roof mounted equipment installation shall be coordinated for location and building tie-in. Curb material will be removed and furnished by the Mechanical Contractor. The roofing and curb cut in shall be by the General Contractor, along with all necessary, waterproofing, ect. Any structural support modifications and building envelope penetrations will be by General Contractor
o. Provide and install Ductwork, supports, grilles, louvers, valves, dampers, access hatches, insulation, and applicable accessories
p. Adjust (add or remove) necessary duct extensions to make up the difference in height/locations or other necessary adjustments for grills/louvers ect in the ceilings.
q. Provide and install Exhaust fans, hoods, motors, fan, equipment, penetrations, and applicable accessories for a complete system. Curbs to be provided by the Mechanical Contractor for the General Contractor to install and flash.
r. Provide and install Pumps, controls, motor starters, VFDs. Disconnects to be installed by Electrical Contractor. Coordinate installation of main power from disconnect/breaker/panel to be performed by Electrical Contractor.

s. Provide and install new HVAC equipment controls on all new equipment included or salvaged/re-installed, including connection, conduit, cores, wires, ect (Building Management System - BMS). Coordinate with the Owner on existing equipment tie-in.
t. Provide and install all equipment as per the schedule on the mechanical drawing schedules
u. Provide and install mechanical piping, hangers, joints and applicable accessories including insulation, labels, tags, expansions joints,
v. Clean existing ductwork prior to system startup, replace filters as needed
w. Mechanical Contractor to included construction filters and change them out with permanent ones prior to startup/turnover on all equipment.
x. Provided in wall cores, openings, ect for system/equipment penetrations. Penetrations for exterior louvers to be laid out be the Mechanical Contractor to be cut out by the General Contractor. General Contractor to provide all required lintels and wall finish repair. Mechanical Contractor to furnish and install the louvers.
y. Provide and install all labeling, startup, cleaning, disinfection, chemicals, testing, inspection, permits, balancing, commissioning ect.
z. Provide Training on new systems and equipment
aa. Provide and install all required low voltage for HVAC equipment
bb. Provide and Install all controls components into air and hydronic systems such as, but not limited to;

I. Install motor actuated dampers.
II. Install airflow measuring stations.
III. Install airside temperature and pressure sensors.
IV. Install hydronic control valves.
V. Install hydronic temperature and pressure sensor wells, monitor sensors
VI. Provide TAB and participate in commissioning work as required for controls of the work of this contract.

cc. Furnish access doors for HVAC access (to be installed by GC)
dd. Provide the necessary layout for all equipment and penetrations with other Contracts
ee. Provide Owner training / commissioning of equipment.

The Work of the HVAC and Plumbing Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form

the contract plans. The Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:

1) Division 00 - Procurement and Contracting Requirement, All Sections
2) Division 01 – General Requirements, All Sections, including Temporary Facilities indicated
3) Division 02 – Existing Conditions, As applicable
4) Division 07 – "THERMAL AND MOISTURE PROTECTION" As applicable to work of this contract
5) Division 14 – "Conveying Equipment" Support as required for the lift equipment installation by other
6) Division 22 – "Plumbing" All Sections

1.11 ABATEMENT OF HAZARDOUS MATERIALS CONTRACT

Work of this Contract includes Hazardous Materials abatement/removal plus other construction operations traditionally recognized as Hazardous Materials Construction. This includes, but is not limited to, following:

1. Drawings:

    a. All "title sheets, general notes, code compliance and Phasing Drawings" (General)
    b. All "HAZ" series Drawings (Hazardous Material)
    c. All "GEN", series Drawings, as it pertains to Work of this Contract
    d. Applicable information as shown on the "A" "AD" "P" "PD" "E" "ED" "C" "S" drawings, unless noted otherwise. It also includes Administrative and coordination responsibilities.
    e. All references to other drawings from drawings listed above.

2. Coordination:

    a. Coordination with the work of all of the other contractors. Review with adjacent Contractors and ensure that the work and facilities are always protected
    b. Coordinate with State Contract scope of work, see section for details

3. Demolition:

a. Asbestos containing material removal as shown in the contract documents and disposal per Code Rule 56.
b. Construction of hard barriers separating abatement areas from all other areas.
c. Removal of casework, sink, flooring for access to hazardous material removal

4. Temporary Facilities

a. Provide Temporary Facilities indicated as Work of this Contract in Division 01 Section 015000, "Temporary Facilities and Controls"

5. Construction: Provide the removal of asbestos containing material as shown.

a. Pipe fitting insulation removal as shown
b. Remove chase and other walls for access to pipe fitting and insulation
c. Floor tile, cove base and mastic down to substrate, all layers required
d. Floor mounted equipment, flooring and mastic down to substrate
e. Floor mounted casework, flooring and mastic down to substrate
f. Sink scope, removal
g. Caulk and backer rod in expansion joints
h. Asbestos containing material removal as shown in the contract documents and disposal per Code Rule 56 for all affected material on or adjacent to the window scope of work to be by General Contractor
i. Asbestos containing material removal as shown in the contract documents and disposal per Code Rule 56 for all affected material on or adjacent to the new or disturbed scope of work
j. HVAC Putty on shown joints
k. Misc. electrical components
l. If not otherwise being replaced, re-install/repair anything removed for protection and or access to the work.
m. General Requirements, including but not limited to, additional items specifically indicated as the Work of this Contract.

The Work of the Hazardous Material Abatement Work Contract includes, but is not limited to, the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. The Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, the following listed sections:

1. Division 00 - Procurement and Contracting Requirement, All Sections
2. Division 01 – General Requirements, All Sections
3. Division 02 – Existing Conditions, All Sections
4. Section 07 - Penetration Firestopping, as required for the Work of this Contract
5. Section 07 - Joint Sealants, as required for the Work of this Contract

1.12 ADDITIONAL SCOPING

Definition of Extent of Prime Contract Work; Additional Prime Contract Work not previously described.

a. All Prime Contractors are responsible for reviewing plans and specs as it pertains to their scope of work mentioned in the contract documents. Scopes of work referenced may be found in multiple locations throughout the plans and specifications and addendums. Contractor will confirm their own bid set of documents.
b. Local custom and trade union jurisdictional settlements do not control the scope of work included in each prime contract. When a potential jurisdictional dispute or similar interruption of work is first identified or threatened, the affected prime contracts shall promptly negotiate a reasonable settlement to avoid or minimize the pending interruption and delays.
c. All OSHA safety and hazardous materials regulations will be enforced on this project. All Contractors must submit a safety program, a hazardous materials program, (all required data must be maintained at the job site) and attend safety meetings. Toolbox talks will be required from each prime contractor.
d. All Contractors are responsible for any debris caused by their work. A daily clean- up and disposal is required by each Contractor for the periods which that Contractor is performing work on site, on a day selected by the Construction Manager. Each trade will assign at least one person to the weekly clean-up; the name of this person is to be submitted to the Construction Manager. Any Contractor not providing personnel will be “back-charged” for labor provided by the Construction Manager.
e. All Contractors are responsible for coordinating cutting/patching required to complete their work. All exposed finishes must be ready to receive paint, etc.; all concealed openings (piping, ductwork, conduit,

etc.) must be repaired to comply with specified wall or deck conditions.

f. Multiple Crews: To maintain the project schedule, each Prime Contractor is to provide multiple crews as required. Each crew is to be furnished with its own supervision, equipment, access and other means necessary to maintain the Project Milestone Schedule.

g. Supervision: The proposed project manager and field superintendent for the project is to have at least five years experience in the proposed position. Each successful bidder shall submit resumes to the Construction Manager for the proposed project manager and field superintendent for the project. This information will be reviewed with the Owner, Architect and Construction Manager for approval. Should the Project Manager and/or Superintendent prove unqualified for the position at any point in the project, the Construction Manager shall issue a letter stating that the person is to be removed from involvement in the project. Action by the contractor must be made within seven working days of receipt of such letter.

h. Each prime contractor shall return areas disturbed by their work activities to condition prior to start of work.

i. Each prime contractor shall maintain within its field office a complete and current set of Contract Documents (including any Addenda, Change Orders, and Modifications thereto), approved shop drawings, samples, color schedules and other data pertinent to the Project.

j. Each prime contractor is to survey existing work and submit to the Construction Manager a list of damaged areas (i.e. plaster walls, woodwork) prior to commencing work. Any damaged areas not identified prior to the work shall be the responsibility of the contractor/ Contractors working in that area. Construction Manager will have photos of existing conditions on file for reference. Failure to submit these photos, Contractor agrees that the location is free of damage/defect prior to the start of work.

k. The General Contractor is required to submit a construction schedule based on the milestone dates to the Construction Manager for review and comment no later than 2 weeks after a Notice to Proceed for the work is issued. Other prime contractors have 5 days to complete their construction and submittal schedules after the Construction Manager distributes the General Contractor's schedule. The GC will continue to develop the schedule until all input is entered and agreed upon.

l. Unless a specific item or material is noted as to remain the Owner's

property or to become the Contractor's property (or similar words), any material having salvage or reuse value shall be inspected by the Owner. If the Owner wishes to retain this material, it shall be turned over to him on the site where directed. If the Owner designates the material as scrap, it shall become the Construction Manager’s property and removed from the site by the Contractor. Material having salvage value shall be carefully removed. If the Construction Manager designates the material as scrap, it shall become the contractor’s property and removed from the site by the contractor. Material having salvage value shall be carefully removed.

m. When the building is occupied and fire alarm and safety system work is in progress, the Electrical Contractor shall continuously maintain the existing building's fire alarm and detection system and exit and emergency lighting system or provisions must be made by the Electrical Contractor to provide equivalent safety. Electrical Contractor must notify the local fire department of any non-operating systems.
n. All personnel required to be on site shall at all times have all required personnel protective equipment on at all times.
o. All personnel on site shall at all times have a photo ID displayed where visible. Those without will be removed from site at once. If the same individual fails to have the ID a second time they will be removed from site and not be allowed back on site.

1.13 TESTING

Required testing and test procedures are indicated under each Division of the Technical Specifications. Other testing shall be performed per generally accepted standards.

The Architect shall reserve the right to require additional information as is deemed necessary to fully evaluate testing results.

The Owner shall employ and pay for an independent testing and inspection agency for testing requirements of their work as assigned by this scope of work. All testing shall be per technical specification requirements The Prime Contractor requiring testing will notify the Construction Manager 48 hours in advance of the required testing to allow for coordination and scheduling. Failure to give sufficient notice will require the prime contractor to pay for alternate testing to satisfy the specification.

1.14 WORK SEQUENCE

The Work will be conducted to provide the least possible interference to the activities of the Owner's personnel.

All contract scopes of work in unoccupied areas of work can be performed weekdays from 7:00 AM to 3:30 PM unless otherwise noted. Work cannot be performed in occupied areas or adjacent to. Should work be required and coordinated, separation of work is mandatory per applicable codes/standards. When this is not feasible, work shall be scheduled off-hours, vacations and weekends for occupied areas. A Construction Manager Superintendent must be on site at all times that work is being performed. Second shift is considered after bus dismissal and coordinated for various after school clubs/activities/operations. For the purpose of the bid, the scopes of work below are assumed to be second, shift, weekends or off shift times and included with the Base Bid;

a. Completion of scope not delivered within the summer work period
b. Substantial Completion scope post Sept 1, 2024
c. Punchlist

For the purpose of this Bid, Contractor shall include within their schedule, work to be performed on all Saturdays between June 29th 2024 and August 31th 2024 with ample crews to maintain schedule. This shall include all Primes, all trades at all locations.

It is anticipated that the General and Electrical Contractors shall coordinate and utilize replacement of classroom ceilings and light fixtures during the District's Winter and Spring break weeks.

If a contractor fails to maintain the progress as indicated by the milestone schedule by no other fault but its own, and requires overtime to complete the work; the contractor shall make arrangements with the Construction Manager 24 hours in advance and pay for a Construction Manager's superintendent at $125.00 per hour. In the event that the cause for delay is multi-contract, then the costs shall be distributed evenly among contracts. Advise the Construction Manager 48 hours prior to commencing work inside the building.

Failure to progress the schedule in a fashion to maintain the overall completion date that causes other Primes to "accelerate" is subject to back charges as determined by the Architect and CM. Prime Contractor accelerating is to place CM and Prime on notice prior to any additional charges will be approved.

Coordination of any utility and/or power interruption must be done with the Construction Manager. Shutdowns must occur during off-hours and on days when the building is not occupied by the owner.

Construction access to the site shall be limited to those designated for contractor's personnel, equipment and deliveries by the Owner. Contractors' staging, parking and storage shall be coordinated by the Construction Manager.

Each Contractor shall inspect the site and review the AHERA report on file for the presence of asbestos. Unless otherwise noted, there will be asbestos containing material in place that will require work to take place in the vicinity of, around and/or next to. Each prime contractor that will be working above ceilings, demolishing, in crawl spaces, boiler rooms and all other areas that may contain asbestos per the AHERA report, shall employ "Allied Trades: certified/licensed tradesman as part of the onsite workforce".

1.15 OCCUPANCY REQUIREMENTS

The General Work Contractor shall provide indoor air quality management as specified by the Department of Labor and OSHA for the building, when the building is enclosed, as determined by the Construction Manager.

a. Provide an exhaust air system for the project indoor areas that could produce fumes, VOC's off-gasses, gasses, dusts, mists, or other emissions.
b. Exhaust air system for the project areas that could produce emissions listed in Paragraph 1 shall be utilized.
c. Provide temporary partitions and air seals to prevent the migration of airborne contaminants from unoccupied areas to occupied areas when applicable.

Quality assurance:

a. Maintain a negative pressure between the work area and the space surrounding the
b. Before start of work, submit a design for the exhaust air system. Do not begin work until approval of the Owner is obtained.
c. Location of the machines in the work space.
d. Description of the methods used to test air flow and pressure

differential.

System operation:

a. A sufficient quantity of exhaust fans in existing window openings or other approved locations shall be operated in accordance with the following applicable standards.
b. Exhaust air system shall operate for a minimum of 72 hours after work is completed, or until all materials have cured sufficiently as to stop out gassing of fumes or odors and area has been ventilated to remove all detectable traces of odors and fumes.
c. Maintain twenty-five (25) feet clearance from all temporary exhaust outlets to all active building outdoor air intakes.

1.16 PROJECT MILESTONE SCHEDULE

See the milestone schedule to be provided in Addendum.

All Prime Contractors are required to submit a schedule based on the milestone dates to the Construction Manager for review and comment no later than 10 days after a Notice to Proceed for the work is issued.

1.17 ALLOWANCES

See Specification Section 01 21 00. Allowances are to be included in the base bid.

1.18 ALTERNATES

The Contractor shall state where requested on the Bid Form the amount to be added to or deducted from the base bid for the alternates described in Section 01 23 00 - Alternates.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 011200

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SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor.

B. Types of allowances include the following:

1. Contingency Allowances

1.3 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance cost proposal.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance cost proposal.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.4 COORDINATION

A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.5 ALLOWANCES

A. Use the allowance only as directed by Architect for Owner's purposes and only by change documentation that indicate amounts to be charged against the allowance.

B. Contractor's overhead, administrative expenses, project management, profit, and related costs for labor, products and equipment ordered by Owner under allowances are to be included within the allowance, and thereby included in the Contract Sum.

C. Change Orders authorizing use of allowances will include all related Contractor's costs including but not limited to, procurement, installation, insurance, equipment rental, and similar costs as applicable to the specific allowance.

1.6 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowances, the Architect will prepare a Change Order reflective of approved costs, utilizing Unit Prices if applicable, that will result in Allowance Remaining, if any.

1. Contractor shall include installation costs in purchase amount only where indicated as part of the proposal request.
2. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
3. At Project closeout, credit unused amounts remaining in the allowance to Owner by deductive credit Change Order.

B. Contractor shall submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's work.

1. Contractor shall not include Contractor's or subcontractors' indirect expense in the cost proposal amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALLOWANCES:

A. Contingency Allowances to include in the base bid allowances in the amount listed below for all scope pertaining to Sitework.

1. For Contract HAZ-01:

a. **Allowance No. HAZ-01-001 –** Hazardous Materials Contingency Allowance for work at all buildings in the amount of **$40,000.00 Lump Sum**.

2. For Contract GC-02:

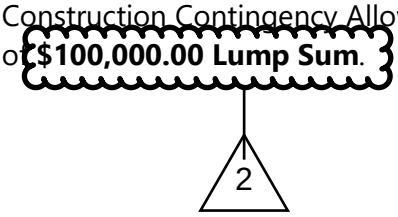
a. **Allowance No. GC-02-001 –** General Construction Contingency Allowance for work at all buildings in the amount of **$115,000.00 Lump Sum**.

3. For Contract MPC-03:

a. **Allowance No. MPC-03-001 –** Mechanical Plumbing Construction Contingency Allowance for work at all buildings in the amount of **$25,000.00 Lump Sum**.

4. For Contract EC-04:

a. **Allowance No. EC-04-001 –** Electrical Construction Contingency Allowance for work at all buildings in the amount of **$100,000.00 Lump Sum**.



END OF SECTION 012100

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SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether indicated as part of alternate or not.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

1. For Contract HAZ-01:

   a. **ADD Alternate No. HAZ-01-001-ES –** In addition to the Base Bid scope, provide additional floor tile and mastic abatement at First Floor Area 'E' and Second Floor Area 'E' of Highland Elementary School, where noted in drawings. Refer to drawings for additional information.

   b. **ADD Alternate No. HAZ-01-002-HS –** In addition to the Base Bid scope, provide additional abatement of lockers and associated partition materials at First Floor Area 'A' Highland High School, where noted in drawings. Refer to drawings for additional information.

2. For Contract GC-02:

   a. **ADD Alternate No. GC-02-001-ES –** In addition to the Base Bid scope, provide additional door & hardware removals and replacements, additional floor tile replacements, additional painting, and additional ceiling removals and replacements at First Floor Area 'E' and Second Floor Area 'E' of Highland Elementary School, where noted in drawings. Refer to drawings for additional information.

   b. **ADD Alternate No. GC-02-002-HS –** In addition to the Base Bid scope, provide additional partition material patching associated with lockers at First Floor Area 'A' Highland High School, where noted in drawings. Refer to drawings for additional information.

3. For Contract MPC-03: None

4. For Contract EC-04:

a. **ADD Alternate No. EC-04-001-ES –** In lieu of the Base Bid scope of installing new 24" x 48" light fixtures in existing 24" x 48" ceilings, where noted in the drawings at First Floor Area 'E' and Second Floor Area 'E' of Highland Elementary School, provide new 24" x 24" light fixtures in new 24" x 24" ceilings. **Also, provide additional magnetic hold open devices and associated fire alarm work**, **where noted in the drawings for Classrooms and Stairs located at First Floor Area 'E' and Second Floor Area 'E' of Highland Elementary School.** Refer to drawings for additional information.

END OF SECTION 012300

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SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes commercial door hardware for the following:

1. Swinging doors.

B. Door hardware includes, but is not necessarily limited to, the following:

1. Mechanical door hardware.
2. Cylinders specified for doors in other sections.

C. Related Requirements:

1. Section 081416 “Flush Wood Doors”
2. Section 088000 "Glazing"
3. Section 099100 "Painting"

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. NFPA 70 - National Electrical Code.
4. NFPA 80 - Fire Doors and Windows.
5. NFPA 101 - Life Safety Code.
6. NFPA 105 - Installation of Smoke Door Assemblies.
7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards:

1. ANSI/BHMA Certified Product Standards - A156 Series
2. UL10C – Positive Pressure Fire Tests of Door Assemblies

1.3 COORDINATION

A. Installation Templates: Distribute for doors, frames, and other work specified to be factory 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.

B. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

C. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

D. Existing Openings: Where hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify existing conditions and coordinate installation of door hardware to suit opening conditions and to provide proper door operation.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For electrified door hardware.

1. Include diagrams for power, signal, and control wiring.
2. Include details of interface of electrified door hardware and building safety and security systems.

C. Samples: For each exposed product in each finish specified, in manufacturer's standard size.

1. Tag Samples with full product description to coordinate Samples with door hardware schedule.

D. Samples for Initial Selection: For each type of exposed finish.

E. Samples for Verification: For each type of exposed product, in each finish specified.

1. Sample Size: Full-size units or minimum 2-by-4-inch Samples for sheet and 4-inch-long Samples for other products.

    a. Full-size Samples will be returned to Contractor. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated into the Work, within limitations of keying requirements.

2. Tag Samples with full product description to coordinate Samples with door hardware schedule.

F. Door Hardware Schedule: Prepared by or under the supervision of hardware supplier. Coordinate door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate the fabrication of other work that is critical in Project construction schedule.
2. Format: Use same scheduling sequence and format and use same door numbers as in door hardware schedule in the Contract Documents.
3. Content: Include the following information:

    a. Identification number, location, hand, fire rating, size, and material of each door and frame.
    b. Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
    c. Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
    d. Description of electrified door hardware sequences of operation and interfaces with other building control systems.
    e. Fastenings and other installation information.
    f. Explanation of abbreviations, symbols, and designations contained in door hardware schedule.
    g. Mounting locations for door hardware.
    h. List of related door devices specified in other Sections for each door and frame.

G. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Certificates: For each type of electrified door hardware.

1. Certify that door hardware for use on each type and size of labeled fire-rated doors complies with listed fire-rated door assemblies.

C. Product Test Reports: For compliance with accessibility requirements, for tests performed by manufacturer and witnessed by a qualified testing agency, for door hardware on doors located in accessible routes.

D. Sample Warranty: For special warranty.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: For each type of door hardware to include in maintenance manuals.

B. Schedules: Final door hardware and keying schedule.

1.8 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Door Hardware: Provide two (2) additional sets of each hardware product.
2. Electrical Parts: Provide two (2) additional sets of each electrical part.

1.9 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum five (5) years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Installer Qualifications: A minimum three (3) years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum five (5) years documented experience supplying both

mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

1.10 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site. Do not store electronic access control hardware, software, or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification coordinated with the final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

A. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software, and related accessories directly to Owner.

1.11 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.

C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.12 WARRANTY

A. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or

workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

B. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

C. Special Warranty Periods:

1. Ten (10) years for mortise locks and latches.
2. Five (5) years for exit hardware.
3. Twenty-five (25) years for manual surface door closer bodies.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain each type of door hardware from single manufacturer.

1. Provide electrified door hardware from same manufacturer as mechanical door hardware unless otherwise indicated. Manufacturers that perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Rated Door Assemblies: Where fire-rated doors are indicated, provide door hardware complying with NFPA 80 that is listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

B. Smoke and Draft Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that complies with requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.

1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. at the tested pressure differential of 0.3-inch water gauge of water.

C. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

D. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the DOJ's "2010 ADA Standards for Accessible Design".

1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.
2. Comply with the following maximum opening-force requirements:

    a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
    b. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.

3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.
4. Adjust door closer sweep periods so that, from an open position of 90 degrees, the door will take at least 5 seconds to move to a position of 12 degrees from the latch.
5. Adjust spring hinges so that, from an open position of 70 degrees, the door will take at least 1.5 seconds to move to the closed position.

2.3 SCHEDULED DOOR HARDWARE

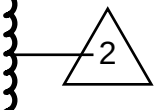
A. Provide products for each door that comply with requirements indicated in Part 2 and door hardware schedule.

1. Door Hardware is scheduled in Part 3.

2.4 CONTINUOUS HINGES

A. Continuous, Gear-Type Hinges: BHMA A156.26; Grade 1-600 certified continuous geared hinge with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible, and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.

~~1. Bommer Industries (BO).~~
~~2. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).~~
~~3. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).~~



2.5 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.

1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
2. Furnish dust proof strikes for bottom bolts.
3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.

~~5. Acceptable Manufacturers:~~

~~a. Door Controls International (DC).~~
~~b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).~~
~~c. Trimco (TC).~~

2

B. Coordinators: ANSI/BHMA A156.3 certified door coordinators consisting of active-leaf, hold-open lever and inactive-leaf release trigger. Model as indicated in hardware sets.

~~1. Acceptable Manufacturers:~~

~~a. Door Controls International (DC).~~
~~b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).~~

2

2.6 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years' experience designing secured master key systems and have on record a published security keying system policy.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

C. Cylinders: Original manufacturer cylinders complying with the following:

1. Mortise Type: Threaded cylinders with rings/ cams to suit hardware application.
2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
5. Keyway: Match Facility Standard.

D. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:

1. Interchangeable Cores: Core insert, removable by use of a special key; usable with other manufacturers' cylinders.

E. Keying System: Each type of lock and cylinders to be factory keyed.

1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. Existing System: Key locks to Owner's existing system.

F. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Three (3).
2. Master Keys (per Master Key Level/Group): Five (5).
3. Construction Keys (where required): Ten (10).

G. Construction Keying: Provide construction master keyed cylinders.

H. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

2.7 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.

~~1. Acceptable Manufacturers:~~

~~a. Corbin Russwin Hardware (RU) – ML2002 Series.~~
~~b. Sargent Manufacturing (SA) – 8200 Series.~~
~~c. Schlage (SC) – L9000 Series.~~

2

2.8 DOOR CLOSERS

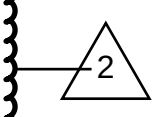
A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.

~~1. Acceptable Manufacturers:~~

~~a. Corbin Russwin Hardware (RU) – DC6000 Series.~~
~~b. LCN Closers (LC) - 4040 Series.~~
~~c. Sargent Manufacturing (SA) - 351 Series.~~
~~d. Norton Door Controls (NO) - 7500 Series.~~



2.9 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1″ LDW on stop side of pairs

of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.

3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:

    a. Stainless Steel: 300 grade, 050-inch thick.

5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. ~~Acceptable Manufacturers:~~

    ~~a. Hiawatha, Inc. (HI).~~
    ~~b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).~~
    ~~c. Trimco (TC).~~

2

2.10 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

1. ~~Acceptable Manufacturers:~~

    ~~a. Hiawatha, Inc. (HI).~~
    ~~b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).~~
    ~~c. Trimco (TC).~~

2

C. Overhead Door Stops and Holders: ANSI/BHMA A156.6, Grade 1 certified overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.

~~1. Acceptable Manufacturers:~~

~~a. Rixson Door Controls (RF).~~
~~b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).~~
~~c. Sargent Manufacturing (SA).~~

2

2.11 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.

1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

~~F. Acceptable Manufacturers:~~

~~1. National Guard Products (NG).~~
~~2. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).~~
~~3. Reese Enterprises, Inc. (RE).~~

2

2.12 FABRICATION

A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rating labels and as otherwise approved by Architect.

1. Manufacturer's identification is permitted on rim of lock cylinders only.

B. Base Metals: Produce door hardware units of base metal indicated, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.

C. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware unless otherwise indicated.

1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
2. Fire-Rated Applications:

a. Wood or Machine Screws: For the following:

1) Hinges mortised to doors or frames
2) Strike plates to frames.
3) Closers to doors and frames.

b. Steel Through Bolts: For the following unless door blocking is provided:

1) Surface hinges to doors.
2) Closers to doors and frames.
3) Surface-mounted exit devices.

3. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
4. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

2.13 FINISHES

A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. 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 of the Work.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Steel Frames: For surface-applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.

B. Wood Doors: Comply with door and hardware manufacturers' written instructions.

3.3 INSTALLATION

A. Mounting Heights: 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. Wood Doors: DHI's "Recommended Locations for Architectural Hardware for Wood Flush Doors."

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

C. Hinges: Install types and in quantities indicated in door hardware schedule, but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

D. Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in quantities indicated in door hardware schedule, but not fewer than one intermediate offset pivot per door and one additional intermediate offset pivot for every 30 inches of door height greater than 90 inches.

E. Lock Cylinders: Install construction cores to secure building and areas during construction period.

1. Replace construction cores with permanent cores as directed by Owner.
2. Furnish permanent cores to Owner for installation.

F. Key Control System:

1. Key Control Cabinet: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
2. Key Lock Boxes: Install where indicated or approved by Architect to provide controlled access for fire and medical emergency personnel.
3. Key Control System Software: Set up multiple-index system based on final keying schedule.

G. Boxed Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings. Verify location with Architect.

1. Configuration: Provide one power supply for each door opening with electrified door hardware.

H. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate

removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

I. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."

J. 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 will impede traffic.

K. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

1. Do not notch perimeter gasketing to install other surface-applied hardware.

L. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

M. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.4 FIELD QUALITY CONTROL

A. Independent Architectural Hardware Consultant: Engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

1. Independent Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.5 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. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
2. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 70 degrees and so that closing time complies with accessibility requirements of authorities having jurisdiction.

3. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.

3.6 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation and operating items as necessary to restore proper function and finish.

B. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.7 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

B. Maintenance Service: Beginning at Substantial Completion, maintenance service shall include 12 months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door and door hardware operation. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.

3.8 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain door hardware.

3.9 DOOR HARDWARE SCHEDULE

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should 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 and functionality.

B. Manufacturer’s Abbreviations:

~~3. SA - Sargent~~

1. BE - Best Access Systems

~~5. NO – Norton~~

~~6. PE – Pemko~~

2. DK – Dormakaba

3. RE – Reese

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C. Hardware Sets:

Set HW-1				
1	**Continuous Hinge**	**660-680 Series**	**CL**	**BE**
1	Classroom Lock	47H-7-R-15-R w/ Strike Package	626	BE
1	Permanent Core	compatible w/ facility's existing Key System	626	BE
1	**Door Closer**	**HD7000**	**689**	**BE**
1	**Kick Plate**	**DKP-SS-300**	**US32D**	**DK**
1	**Door Stop**	**DDS-NP-018**	**619**	**DK**
1	**Gasketing**	**793 Black**		**RE**
3	**Filler Plate**	**size as required**		**DK**
1	**Magnetic Door Holder**	**Compatible with Existing Fire Alarm System**		

Notes: Modify frame as required to accept new strike plate.

Set HW-2				
1	**Continuous Hinge**	**660-680 Series**	**CL**	**BE**
1	Storeroom Lock	45H-7-D-15-R w/ Strike Package	626	BE
1	Permanent Core	Compatible with Existing Key System	626	BE
1	**Door Closer**	**HD7000**	**689**	**BE**
1	**Kick Plate**	**DKP-SS-300**	**US32D**	**DK**
1	**Door Stop**	**DDS-NP-018**	**619**	**DK**
1	**Gasketing**	**793 Black**		**RE**
3	**Filler Plate**	**size as required**		**DK**

Notes: Modify frame as required to accept new strike plate.

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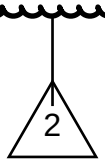
Set HW-3				
1	**Continuous Hinge**	**660-680 Series**	**CL**	**BE**
1	**Surface Vert Rod Exit**	**FL 2208 LD x V 4908A x S300 & S460**	**626**	**BE**
1	Permanent Core	Compatible with Existing Key System	626	BE
1	**Door Closer**	**HD7000**	**689**	**BE**
1	**Kick Plate**	**DKP-SS-300**	**US32D**	**DK**
1	**Gasketing**	**793 Black**		**RE**
3	**Filler Plate**	**size as required**		**DK**
1	Magnetic Door Holder	Compatible with Existing Fire Alarm System		

Notes: Modify frame as required to accept new strike plate.

Set HW-4				
1	**Continuous Hinge**	**660-680 Series**	**CL**	**BE**
1	Service Lock	45H-7-L-15-R w/ Strike Package	626	BE
1	Permanent Core	Compatible with Existing Key System	626	BE
1	**Door Closer**	**HD7000**	**689**	**BE**
1	**Kick Plate**	**DKP-SS-300**	**US32D**	**DK**
1	**Door Stop**	**DDS-NP-018**	**619**	**DK**
1	**Gasketing**	**793 Black**		**RE**
3	**Filler Plate**	**size as required**		**DK**

Notes: Modify frame as required to accept new strike plate.

END OF SECTION 087100



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SECTION 090561.13 - MOISTURE VAPOR EMISSION CONTROL

2

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Fluid-applied, resin-based, membrane-forming systems that control the moisture-vapor-emission rate of high-moisture, interior concrete to prepare it for floor covering installation.

1.3 DEFINITIONS

A. MVE: Moisture vapor emission.

B. MVER: Moisture vapor emission rate.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Test Reports: For each MVE-control system, for tests performed by a qualified testing agency.

C. Preinstallation testing reports.

D. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Employs factory-trained personnel who are available for consultation and Project-site inspection.

B. Installer Qualifications: An authorized representative who is trained and approved by the manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating directions for storage and mixing with other components.

1.8 FIELD CONDITIONS

A. Environmental Limitations: Comply with MVE-control system manufacturer's written instructions for substrate and ambient temperatures, humidity, ventilation, and other conditions affecting system installation.

1. Store system components in a temperature-controlled environment and protected from weather and at ambient temperature of not less than 65 deg F and not more than 85 deg F at least 48 hours before use.
2. Maintain ambient temperature and relative humidity in installation areas within range recommended in writing by MVE-control system manufacturer, but not less than 65 deg F or more than 85 deg F and not less than 40 or more than 60 percent relative humidity, for 48 hours before installation, during installation, and for 48 hours after installation unless longer period is recommended in writing by manufacturer.
3. Install MVE-control systems where concrete surface temperatures will remain a minimum of 5 deg F higher than the dew point for ambient temperature and relative humidity conditions in installation areas for 48 hours before installation, during installation, and for 48 hours after installation unless longer period is recommended in writing by manufacturer.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. MVE-Control System Capabilities: Capable of suppressing MVE without failure where installed on concrete that exhibits the following conditions:

1. MVER: Maximum 15 lb of water/1000 sq. ft. when tested according to ASTM F1869.
2. Relative Humidity: Maximum 100 percent when tested according to ASTM F2170 using in situ probes.

B. Water-Vapor Transmission: Through MVE-control system, maximum 0.10 perm when tested according to ASTM E96/E96M.

C. Tensile Bond Strength: For MVE-control system, greater than 300 psi with failure in the concrete according to ASTM D7234.

2.2 MVE-CONTROL SYSTEM

A. Manufacturer:

1. Basis of Design: Provide Vapor Ban ER moisture vapor barrier manufactured by Laticrete International, Inc. or an approved product manufactured by one of the following:

a. Ardex Americas
b. Mapei Corporation
c. Maxxon, Inc.
d. USG Corporation

B. MVE-Control System: ASTM F3010-qualified, fluid-applied, two-component, epoxy-resin, membrane-forming system; formulated for application on concrete substrates to reduce MVER to level required for installation of floor coverings indicated and acceptable to manufacturers of floor covering products indicated, including adhesives.

1. Substrate Primer: Provide MVE-control system manufacturer's concrete-substrate primer if required for system indicated by substrate conditions.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for maximum moisture content, installation tolerances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

1. Installation of system indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Preinstallation Testing:

1. Testing Agency: Engage a qualified testing agency to perform tests.
2. Moisture Testing: Perform tests so that each test area does not exceed 1000 sq. ft. and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.

    a. Internal Relative Humidity Test: Using in situ probes, ASTM F2170. Install MVE-control system in locations where concrete substrates exhibit relative humidity level greater than 75 percent.

3. Tensile-Bond-Strength Testing: For typical locations indicated to receive installation of MVE-control system, install minimum 100-sq. ft. area of MVE-control system to prepared concrete substrate and test according to ASTM D7234.

    a. Proceed with installation only where tensile bond strength is greater than 300 psi with failure in the concrete.

B. Concrete Substrates: Prepare and clean substrates according to MVE-control system manufacturer's written instructions to ensure adhesion of system to concrete.

1. Remove coatings and other substances that are incompatible with MVE-control system and that contain soap, wax, oil, or silicone, using mechanical methods recommended in writing by MVE-control system manufacturer. Do not use solvents.
2. Provide concrete surface profile complying with ICRI 310.2R CSP 3 by shot blasting using apparatus that abrades the concrete surface with shot, contains the dispensed shot within the apparatus, and recirculates the shot by vacuum pickup.
3. After shot blasting, repair damaged and deteriorated concrete according to MVE-control system manufacturer's written instructions.
4. Protect substrate voids and joints to prevent resins from flowing into or leaking through them.
5. Fill surface depressions and irregularities with patching and leveling material.
6. Fill surface cracks, grooves, control joints, and other nonmoving joints with crack-filling material.

7. Allow concrete to dry, undisturbed, for period recommended in writing by MVE-control system manufacturer after surface preparation, but not less than 24 hours.
8. Before installing MVE-control systems, broom sweep and vacuum prepared concrete.

C. Protect walls, floor openings, electrical openings, door frames, and other obstructions during installation.

3.3 INSTALLATION

A. Install MVE-control system according to ASTM F3010 and manufacturer's written instructions to produce a uniform, monolithic surface free of surface deficiencies such as pin holes, fish eyes, and voids.

1. Install primers as required to comply with manufacturer's written instructions.

B. Do not apply MVE-control system across substrate expansion, isolation, and other moving joints.

C. Apply system, including component coats if any, in thickness recommended in writing by MVE-control system manufacturer for MVER indicated by preinstallation testing.

D. Cure MVE-control system components according to manufacturer's written instructions. Prevent contamination or other damage during installation and curing processes.

E. After curing, examine MVE-control system for surface deficiencies. Repair surface deficiencies according to manufacturer's written instructions.

3.4 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform installation inspections.

B. Installation Inspections: Inspect substrate preparation and installation of system components to ensure compliance with manufacturer's written instructions and to ensure that a complete MVE-control system is installed without deficiencies.

1. Verify that surface preparation meets requirements.
2. Verify that component coats and complete MVE-control-system film thicknesses comply with manufacturer's written instructions.
3. Verify that MVE-control-system components and installation areas that evidence deficiencies are repaired according to manufacturer's written instructions.

3.5 PROTECTION

A. Protect MVE-control system from damage, wear, dirt, dust, and other contaminants before floor covering installation. Use protective methods and materials, including temporary coverings, recommended in writing by MVE-control system manufacturer.

B. Do not allow subsequent preinstallation examination and testing for floor covering installation to damage, puncture, or otherwise compromise the MVE-control system membrane.

END OF SECTION 090561.13

SECTION 275117 – GYMNASIUM SOUND SYSTEM

PART 1 - GENERAL

1.1 SYSTEM DESCRIPTION

A. Provide a complete operable gymnasium sound system using materials and equipment of types, sizes, ratings, and performances as indicated in both drawings and specifications. Equipment to include control equipment, amplifier, rack, microphones, microphone outlets, wireless hand held set microphones, tape player, CD player, speakers, back boxes, conduit, wire, and other miscellaneous components required for a complete installation.

1.2 QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of public address systems, of types, sizes, and electrical characteristics required, whose products have been in satisfactory use in similar service for not less than 5 years.

B. Installer: Qualified with at least 5 years of successful installation experience on projects with public address systems installation work similar to that provided for project, and factory authorized to provide service for that system.

C. NEC Compliance: Comply with NEC as applicable to installation and construction of public address system components and accessories.

D. UL Compliance and Labeling: Provide public address system components which are UL-listed and labeled.

E. EIA Compliance: Provide public address system which complies with the Electronics Industries Association Standards.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's data on public address systems including, but not limited to, roughing-in diagrams and instructions for installation, operations and maintenance, suitable for inclusion in maintenance manuals. Also include project specific riser and wiring diagrams, differentiating clearly between manufacturer-installed wiring and field-installed wiring.

B. Include data in operation and maintenance manuals.

PART 2 - PRODUCTS

2.01 GYMNASIUM SYSTEM

A. General: The gymnasium system shall be a complete system for amplifying sound signals from microphones and distributing them to several speakers, hung from roof structure in gymnasium.

B. Functional Performance: Components and system features and functions shall include, but are not limited to, the following:

1. Multiple Sources: Switch selectability of sources for sound amplification between various microphones and inputs designated and arranged for AM/FM tuner, combination cassette/digital compact disk player, and auxiliary equipment.
2. High-Quality Sound Reproduction: Freedom from noises such as pops, clicks, hiss and hum at the loudspeaker at all times during operation of the system, including standby mode with inputs off. Freedom from distortion and nonuniform coverage of amplified sound.

C. Available Manufacturers: Subject to compliance with requirements, manufacturers products that may be incorporated in the work include, but are not limited to the following:

1. Atlas/Soundolier
2. Electro-Voice, Inc.
3. Sonic Systems, Inc.

D. Gymnasium System shall include but not be limited to the following.

1. Equipment Rack: Wall mounted communication cabinet (min.) 24"x27"x18" steel cabinet. Middle Atlantic EWR-16-22-PD or equal.
2. Rack Mounted AC Power Panel: Provide (8) receptacle rack mounted power panel controlled by lighted toggle switch: Middle Atlantic PDLT-815RV-RN or equal.
3. Amplifiers: Provide rack mounted amplifier to control gymnasium speakers. Amplifier to control (4) gymnasium speakers each. Amplifiers to QSC CXD4.5 or equal.
4. Digital Signal Processor: Provide a digital signal processor to be used with amplifier. Ashly Protea Model No. ne24.24M 4x4 or equal.
5. Combination CD/Cassette Deck: Provide a CD/media player with Bluetooth/USB/SD/aux and AM/FM tuber. Denon Model No. DN-300Z or equal.
6. Professional Full Height Microphone Stand(s): Provide (2) professional full height microphone stands. Atlas Sound Model No. MS-12CE or equal.

7. Speakers: Provide (4) speakers with all necessary mounting hardware, cable and accessories, Community Model No. R.5-96MAX or equal. Coordinate color with architect.
8. Microphones: Provide (2) hardwired microphones, each with 25'-0' of portable microphone cable and (2) lavalier microphones designed to be used with wireless body pack transmitter. Hardwired Microphones Crown Model No. CM-310-ASW. Wireless microphones Shure Model No. WL-183 or equal.
9. Wireless Transmitters: Provide (2) body pack and (2) handheld transmitters associated with the wireless microphone system. Body pack shall be Shure Model No. LX-1, handheld transmitters shall be Shure Model No. LX2/58 or equal.
10. Antenna: Provide half wave antenna and all associated cabling, connectors and mounting hardware for wireless microphone system. Shure Model No. UA844 or equal.
11. Wireless Receivers: Provide (2) wireless mic receivers. Shure QLDX4 or equal.
12. Microphone Mixer: Provide a 12-channel microphone mixer for hardwired and wireless microphones. Denon Model No. DN-312X or equal.
13. Microphone Jack Wall Plate: Provide a microphone jack and stainless steel wall in locations shown on drawings. Whirlwind Model No. MIP3 or equal.
14. Microphone Outlets: Three-pole, polarized, locking type, female microphone receptacles in single-gage flush boxes as indicated. For wall outlets, provide a brush stainless steel device plate.
15. Wire and Cable: (PLENUM RATED)
    a. Control: Four conductor, shielded, stranded.
    b. Control: Twelve conductor, shielded.
    c. Audio: (8 ohm program speakers).

E. Riser and wiring diagrams prepared by engineer are not intended as final installation drawings but only as a guide for bidding. Install system based on final wiring drawings prepared by the manufacturer of the system.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install public address system as indicated on drawing and specifications, in accordance with equipment manufacturer's written instruction, and complying with applicable portions of NEC.

B. Impedance and Level Matching: Carefully match input and output impedances and signal levels at signal interfaces. Provide matching networks where required.

C. Provide physical isolation from each other for microphone, line level, speaker, and power wiring. Run in separate raceways or provide 12-inch minimum separation

where exposed or in same enclosure. Provide additional physical separation as recommended by equipment manufacturer.

D. Provide equipment grounding connections for public address system as indicated. Tighten connections to comply with tightening torques specified in UL Standard 486A to assure permanent and effective grounds. Ground equipment, conductor, and cable shields to eliminate shock hazard and to minimize to the greatest extent possible, ground loops, common mode returns, noise pickup, cross talk, and other impairments. Provide 5-ohm ground at main equipment location. Measure, record, and report ground resistance.

3.02 INSTALLATION OF BASIC IDENTIFICATION

A. Install electrical identification in accordance with Section 260553 "IDENTIFICATION FOR ELECTRICAL SYSTEMS".

3.03 INSTALLATION OF BASIC WIRING SYSTEM MATERIALS

A. Install wiring, raceways, and electrical boxes and fittings in accordance with Section 260533 "RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS" and 260519 "LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES".

B. Install fire-stopping products for all open cables runs through fire-rated construction as specified in specification Section 260544 “SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING”.

C. Control Circuit Wiring: Install control circuits in accordance with NFPA 70 and as indicated. Provide number of conductors as recommended by system manufacturer to provide control functions indicated or specified.

D. Wiring within Enclosures: Provide adequate length of conductors. Bundle, lace, and train the conductors to terminal points with no excess. Provide and use lacing bars.

3.04 FIELD QUALITY CONTROL

A. Provide services of a factory authorized service representative to supervise the field assembly and connection of components and the testing and adjustment of the system.

B. Operational Test: Perform an operational system test to verify conformance of system to these Specifications. Perform tests that include originating program and page material at microphone outlets, all preamplifier program inputs, and all other inputs. Observe sound reproduction for proper volume levels and freedom from noise.

C. Signal-To-Noise Ratio Test: Measure the ratio of signal to noise of the complete system at normal gain setting using the following procedure:

1. Disconnect a microphone at the connector or jack closest to it and replace it in the circuit with a signal generator using a 1,000-Hz signal. Replace all other microphones at the corresponding connectors with dummy loads, each equal in impedance to the microphone it replaces. Measure the ratio of signal to noise.
2. Repeat the test for each separately controlled zone of loudspeakers.
3. The minimum acceptance ratio is 50 dB.

D. Distortion Test: Measure distortion at normal gain settings and rated power. Feed signals at frequencies of 50, 200, 400, 1,000, 3,000, 8,000, and 12,000, Hz into each pre-amp channel and measure the distortion in the power amplifier output. The maximum distortion at any frequency is 3 percent total harmonics.

E. Acoustic Coverage Test: Feed pink noise into the system using octaves centered at 4,000 and 500 Hz. Use a sound level meter with octave band filters to measure the level at five locations in each zone. For spaces with seated audiences, the maximum permissible variation in level is plus or minus 2 dB and the levels between locations in the same zone and between locations in adjacent zones must not vary more than plus or minus 3 dB.

F. Power Output Test: Measure the electrical power output of each power amplifier at normal gain setting at 50, 1,000, and 12,000 Hz. The maximum variation in power output at these frequencies must not exceed plus or minus 1 dB.

G. Inspection: Make observations to verify that units and controls are properly labeled and interconnecting wires and terminals are identified. Provide a list of final tap settings of speaker line matching transformers.

H. Retesting: Rectify deficiencies indicated by tests and completely retest work affected by such deficiencies at Contractor's expense. Verify by the system test that the total system meets the Specifications and complies with applicable standards. Provide a written record of all retest results.

2

I. Provide **one** ~~**three**~~ service organization inspections for each system ~~**at four-month intervals**~~ during the year following final acceptance. Correct defects found in the systems at the time of these inspections.

3.05 COMMISSIONING

A. Train owner's maintenance personnel in the procedures involved in operating and preventative maintenance of the system.

END OF SECTION 275117

SECTION 275119 – ASSISTIVE LISTENING SYSTEMS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Section 1 Specification Sections, apply to this Section.

1.02 SYSTEM DESCRIPTION

A. Provide a complete operable assistive listening system using materials and equipment of types, sizes, ratings, and performances as indicated in both drawings and specifications. Use materials and equipment that comply with referenced standards and manufacturer's standard design and construction, in accordance with published product information.

1.03 QUALITY ASSURANCE

A. Manufacturers: Firms regularly engaged in manufacture of assistive listening systems, of types, sizes, and electrical characteristics required, whose products have been in satisfactory use in similar service for not less than 3 years.

B. Installer: Qualified with at least 5 years of successful installation experience on projects with assistive listening systems installation work similar to that provided for project, and factory authorized to provide service for that system.

C. New York State Compliance: Provide assistive listening system which complies with the requirements of Appendix BL of the Building Code of New York State.

D. NEC Compliance: Comply with NEC as applicable to installation and construction of assistive listening system components and accessories.

E. UL Compliance and Labeling: Provide assistive listening system components which are UL-listed and labeled.

F. EIA Compliance: Provide assistive listening system which complies with the Electronics Industries Association Standards.

1.04 SUBMITTALS

A. Product Data: Submit manufacturer's data on assistive listening systems including, but not limited to, roughing-in diagrams and instructions for installation, operations and maintenance, suitable for inclusion in maintenance manuals. Also include project specific riser and wiring diagrams, differentiating clearly between manufacturer-installed wiring and field-installed wiring.

B. Include data in operation and maintenance manuals.

PART 2 - PRODUCTS

2.01 ASSISTIVE LISTENING SYSTEMS

A. General: The assistive listening system shall be a complete system for transmitting sound signals from microphones and/or connected PA systems to battery powered personal FM receivers.

B. Available Manufacturers: Subject to compliance with requirements, manufacturers products that may be incorporated in the work include, but are not limited to the following:

1. Listen Technologies Corporation
2. Williams Sound Corporation

C. General: Provide equipment using all solid-state components fully rated for continuous duty at the ratings indicated or specified.

1. Base Transmitter:
    a. The stationary FM audio transmitter shall be capable of broadcasting on 57 channels at 72MHz and shall operate at the maximum allowable RF output power. The output power shall be adjustable to full, one-half and one-quarter.
    b. The device shall incorporate an integrated antenna using the chassis as a ground plane and the device shall have an external antenna jack.
    c. The transmitter shall be capable of broadcasting on many of the same channels of receivers manufactured by other suppliers.
    d. Channel tuning shall be capable of being locked once set to the transmitting channel. The channel will be displayed on an easy-to-read alphanumeric display on the front panel.
    e. The device shall deviate the FM carrier an average of +/-25KHz on wide band channels and +/- 7.5KHz on narrow band channels. The transmitter shall be stable to 50 PPM.

f. The audio frequency response of the device shall be within 3dB from 50Hz to 15KHz and shall be pre-emphasized using the standard 75 microsecond pre-emphasis curve.
g. System noise shall be equal to or better than 60dB.
h. Total harmonic system distortion will not exceed 2%.
i. It shall have two mixing audio inputs capable of accepting balanced microphone and line input levels (-55dBm, +4dBm, respectively) as well as an unbalanced line and speaker levels (-10dBm, +10dBm, respectively).
j. The unit shall incorporate an audio leveler on each input and a dynamic audio processor with limiting.
k. The device shall have the following audio controls: input level, process control and an adjustable low-pass shelving filter.
l. The device shall have an adjustable headset jack for monitoring the audio as well as three VU meters for each of the inputs and post-processed transmitted audio.
m. The device shall provide an unbalanced line level output of post-processed audio.
n. The transmitter shall be a Listen LT-800-072 or equivalent.
o. Technical Specifications:

RF Frequency Range:	72 MHz: 72.05 – 75.95 MHz
Transmitter Stability:	50 PPM
Output Power:	72 MHz: 8000uV at 3 meters
Signal to Noise ratio:	72 MHz: Wide band channels, 60dB: Narrow, 54dB
Available Channels:	72 MHz: 17 Wide band, 40 narrowband
RF Power Switch:	Full, ½, ¼
Physical Dimensions:	8″ W x 1.75″ H
Weight:	3 lbs. (1.4 kg)
Power:	115VAC/16 VAC/850mA
Audio Input 1:	F-XLR / ¼″ Phone, 50/600 ohms, balanced - 55dBm, selectable, adjustable
Audio Input 2:	Phono, 10k/50ohms, unbalanced - 10dBm / 20dBm, selectable, adjustable
Audio Output (Mix):	Phono, 10k ohms, unbalanced - 10dBm
Headphone Output:	250mW, 32ohms, unbalanced - 10dBm
Controls:	Mix, Process, Equalization, Headphone Level, Tone, RF Power Output, and ON/OFF
Visual Indicators:	Audio input levels 1, 2 and post processed modulation level, channel, RF power, test tone
Government approvals:	FCC and Industry Canada

p. A 78" half-wave coaxial antenna, integral with 25 ft. RG58 coax cable shall be permanently installed for each base transmitter. The antenna shall be a Listen Technologies Corporation LA-116 or equivalent.

~~2. Portable Transmitter:~~

~~a. The portable FM audio transmitter shall be capable of broadcasting on 57 channels at 72MHz.~~

~~b. The device shall incorporate an integrated antenna using the microphone cable as an antenna.~~

~~c. The transmitter shall be capable of broadcasting on many of the same channels as receivers manufactured by other suppliers.~~

~~d. Channel tuning shall be programmable to limit the number of channels available to the user.~~

~~e. The device shall deviate the FM carrier an average of +/- 25KHz on wide band channels and +/- 7.5KHz on narrow band channels.~~

~~f. The transmitter shall be stable to 50 PPM.~~

~~g. The audio frequency response of the device shall be within 3dB from 50Hz to15KHz and shall be pre-emphasized using the standard 75 microsecond pre-emphasis curve.~~

~~h. System noise shall be equal to or better than 60dB and total harmonic system distortion shall not exceed 2%.~~

~~i. It shall have two mixing audio inputs capable of accepting a phantom powered microphone and a line input.~~

~~j. The device will incorporate an easy-to-use and see mute switch.~~

~~k. The unit shall incorporate a dynamic audio processor with automatic gain control and compression.~~

~~l. The device shall be battery operated and shall be capable of continuous broadcasting of 16 hours with alkaline batteries and 8 hours with rechargeable NiMH batteries.~~

~~m. The transmitter shall incorporate automatic battery charging circuitry for recharging of NiMH batteries such that when connected to an external wall transformer, the batteries will be automatically charged. External battery tabs will be provided for use with a charging tray.~~

~~n. The transmitter shall be capable of being operated with an external wall transformer with or without batteries installed in the unit. The battery door shall be capable of being mechanically locked.~~

~~o. The device shall incorporate an integrated belt clip with a looped end that prevents it from being accidentally dropped~~

by the user The device shall incorporate an LCD display that indicates to the user the broadcast channel, battery level, low battery, battery charging, mute, charging status and programming status.

p. The device shall incorporate an LCD display that indicates to the user the broadcast channel, battery level, low battery, battery charging, mute, charging status and programming status.

q. A top mounted red LED will indicate on, mute, low battery and charging.

r. The transmitter shall be a Listen LT-700-072 or equivalent.

s. Technical Specifications:

RF Frequency Range:	72 MHz: 72.05 – 75.95 MHz
Transmitter Stability:	50 PPM
Output Power:	72 MHz: 8000uV at 3 meters
Signal to Noise ratio:	72 MHz: Wideband channels, 60dB, Narrowband, 54dB
Antenna:	Uses microphone cable
Available Channels:	72 MHz, 17 wideband, 40 narrowband
Physical Dimensions:	3″ W x 1″ D x 5″ H
Weight:	1 lb. (0.45 kg) with batteries
Power:	Two AA batteries, alkaline or NiMH rechargeable, external power connector 7.5 VDC, center positive, <300mA
Battery Charging:	Fully automatic, <13 hours
Phantom Power:	Included for microphone, 1.5VDC
Battery Life:	16 hours with high capacity alkaline, 8 hours with rechargeable NiMH
Microphone Input:	-55dBm, 50ohms, unbalanced, tip of 3.5MM connector
Line Input:	-10dBm, 10k ohms, unbalanced, ring of 3.5 MM connector
Audio Processing:	40dB automatic 3-speed dynamic control with noise gate
Government approvals:	FCC and Industry Canada

2

~~t. The Transmitter shall come with an omni-directional, condenser, lapel clip microphone. The microphone shall be a Listen Technologies Corporation Model LA-261, or equal.~~

3. Personal Receivers:
   a. The portable FM audio receiver shall be capable of receiving on 57 channels at 72MHz.
   b. The device shall incorporate an integrated antenna using the earphone cable as an antenna.
   c. The receiver shall be capable of receiving on many of the same channels transmitted by products manufactured by other suppliers.
   d. Channel tuning shall be programmable to limit the number of channels available to the user.
   e. The receiver shall be capable of being locked to a single channel by depressing a button for 3 seconds or more.
   f. The receiver shall be capable of seeking channels by depression of a button designed for this purpose.
   g. The device shall accept deviation of the FM carrier an average of +/-25KHz on wide band channels and +/- 7.5KHz on narrow band channels with a maximum deviation of +/-70KHz.
   h. The receiver shall be digitally tuned to prevent drifting due to environmental conditions.
   i. The sensitivity of the receiver shall be .6-microvolt typical and 1-microvolt maximum at 12dB SINAD.
   j. The audio frequency response of the device shall be within 3dB from 50Hz to 15KHz and shall be de-emphasized using the standard 75-microsecond de-emphasis curve.
   k. System noise shall be equal to or better than 60dB and total harmonic system distortion will not exceed 2%.
   l. The device will incorporate a stereo headset jack that allows the user to plug in either a mono or stereo headset and listen to the audio normally.
   m. The headset amplifier shall provide at least 750 MV RMS at 25KHz deviation into a 32 ohm load.
   n. The device shall be battery operated and shall be capable of continuously receiving for 40 hours with alkaline batteries and 20 hours with rechargeable NiMH batteries.
   o. The receiver shall incorporate automatic battery charging circuitry for recharging of NiMH batteries such that when connected to an external wall transformer, the batteries will be automatically charged. External battery tabs will be provided for use with a charging tray.

p. The receiver shall be capable of being operated with an external wall transformer with or without batteries installed in the unit. The battery door shall be capable of being mechanically locked.

q. The device shall incorporate an integrated belt clip with a looped end that prevents it from being accidentally dropped by the user.

r. The device shall incorporate a LCD display that indicates to the user the receive channel, battery level, low battery, battery charging, RF signal strength in five levels, charging status, programming status an channel locked.

s. A top mounted red LED will indicate on, low battery and charging.

2

t. The receivers shall be Listen Technologies Corporation **LR-3200-072** ~~**LR-5200-072**~~, or equal.

u. Provide twelve (12) receivers, with NiMH rechargeable batteries and storage/charger case, for each base transmitter system and each portable transmitter system. Storage/charger case to be Listen Technologies Corporation model LA-380.

v. Technical Specification:

RF Frequency Range:	72 MHz: 72.05 – 75.95 MHz
Sensitivity:	.6uV typical, 1uV maximum for 12dB SINAD
Signal to Noise ratio:	72MHz, Wide band channels, 60dB, narrow, 54dB
Frequency Response:	72 MHz, 50Hz to 15KHz
Distortion:	<2% THD
Squelch:	On loss of RF signal
Antenna:	Uses headphone cable
Available Channels:	72 MHz, 17 wideband, 40 narrowband
Physical Dimensions:	3" W x 1" D x 5" H
Weight:	< 1lb. (.45 kg) with batteries
Power:	Two AA batteries, high capacity alkaline or NiMH rechargeable, external power connector 7.5 VDC, tip positive, <300mA
Battery Life:	40 hours with high capacity alkaline, 20 hours with rechargeable NiMH

w. Each receiver shall come with a pair of lightweight headphones. Headphones shall be Listen Technologies Corporation model LA-165, or equal.

x. Provide quantity of receivers required per 1108.2.4 of the Building Code of New York State. Each receiver shall be equipped with Ni-Cad Listen Technologies Corporation model LA-362 rechargeable batteries.

y. Provide 12-unit storage/charger case(s). Listen Technologies Corporation model LA-380, or equal.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install assistive listening systems as indicated on drawing and specifications, in accordance with equipment manufacturer's written instruction, and complying with applicable portions of NEC.

B. Install assistive listening systems in compliance with 1108.2.4 of the Building Code of New York State.

3.02 INSTALLATION OF BASIC IDENTIFICATION

A. Install electrical identification in accordance with Section 260553 "IDENTIFICATION FOR ELECTRICAL SYSTEMS".

A. Provide engraved plastic laminate wall plaques with self-adhesive back at all doorways into each room equipped with a base transmitter unit. Wall plaques to be Listen Technologies Corporation Model IDP 007, or equal.

3.03 INSTALLATION OF BASIC WIRING SYSTEM MATERIALS

A. Install wiring, raceways, and electrical boxes and fittings in accordance with Section 260533 "RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS" and 260519 "LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES".

B. Install fire-stopping products for all open cables runs through fire-rated construction as specified in specification Section Section 260544 “SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING”.

C. Control Circuit Wiring: Install control circuits in accordance with NFPA 70 and as indicated. Provide number of conductors as recommended by system manufacturer to provide control functions indicated or specified.

D. Wiring within Enclosures: Provide adequate length of conductors. Bundle, lace, and train the conductors to terminal points with no excess. Provide and use lacing bars.

3.04 FIELD QUALITY CONTROL

A. Provide services of a factory authorized service representative to supervise the field assembly and connection of components and the testing and adjustment of the system.

B. Operational Test: Perform an operational system test to verify conformance of system to these Specifications and the requirements of Appendix BL of the Building Code of New York State.

C. Inspection: Make observations to verify that units and controls are properly labeled, and interconnecting wires and terminals are identified.

D. Retesting: Rectify deficiencies indicated by tests and completely retest work affected by such deficiencies at Contractor's expense. Verify by the system test that the total system meets the Specifications and complies with applicable standards. Provide a written record of all retest results.

E. Provide three service organization inspections for each system at four-month intervals during the year following final acceptance. Correct defects found in the systems at the time of these inspections.

3.05 COMMISSIONING

A. Train owner's maintenance personnel in the procedures involved in operating and preventative maintenance of the system.

END OF SECTION 275119

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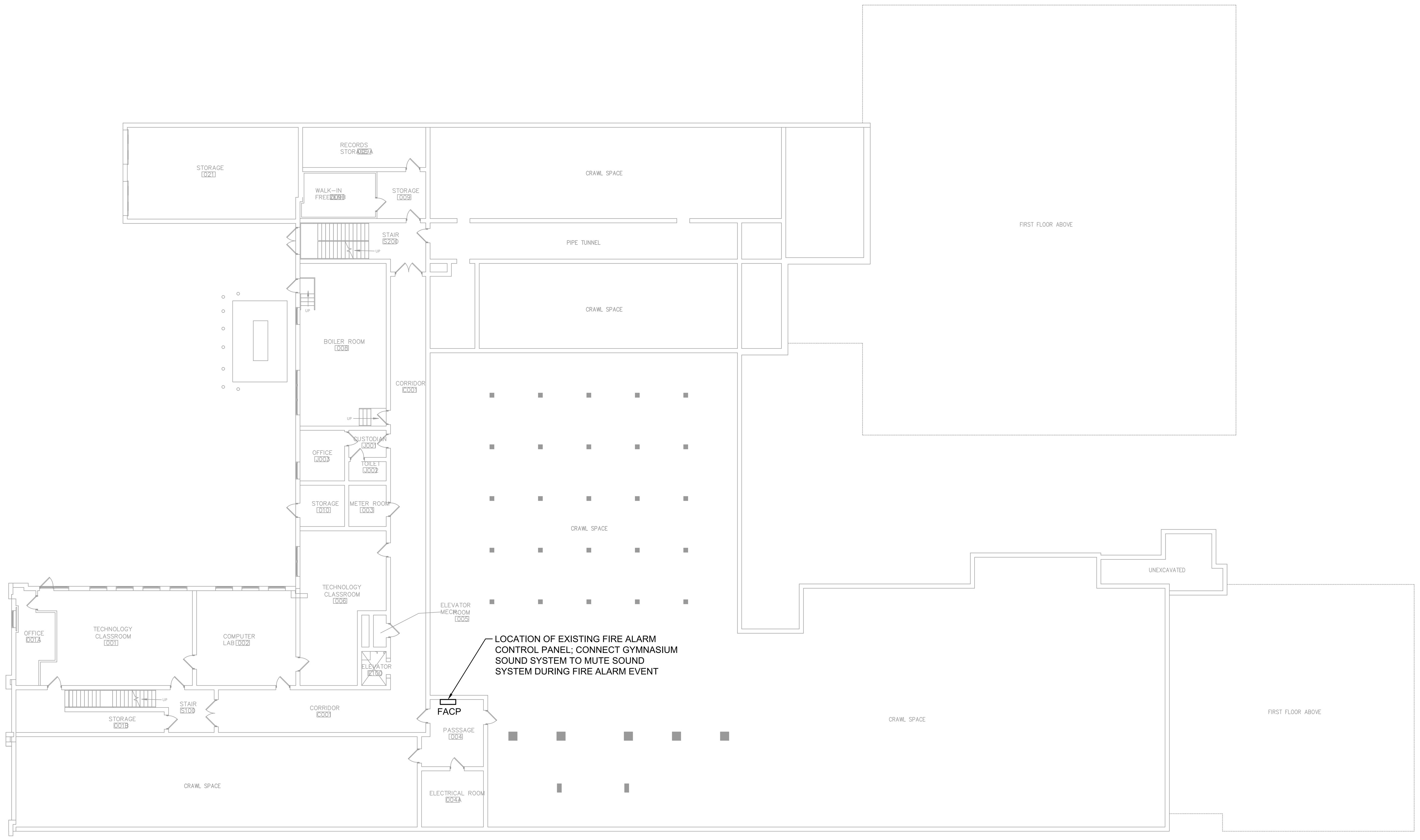
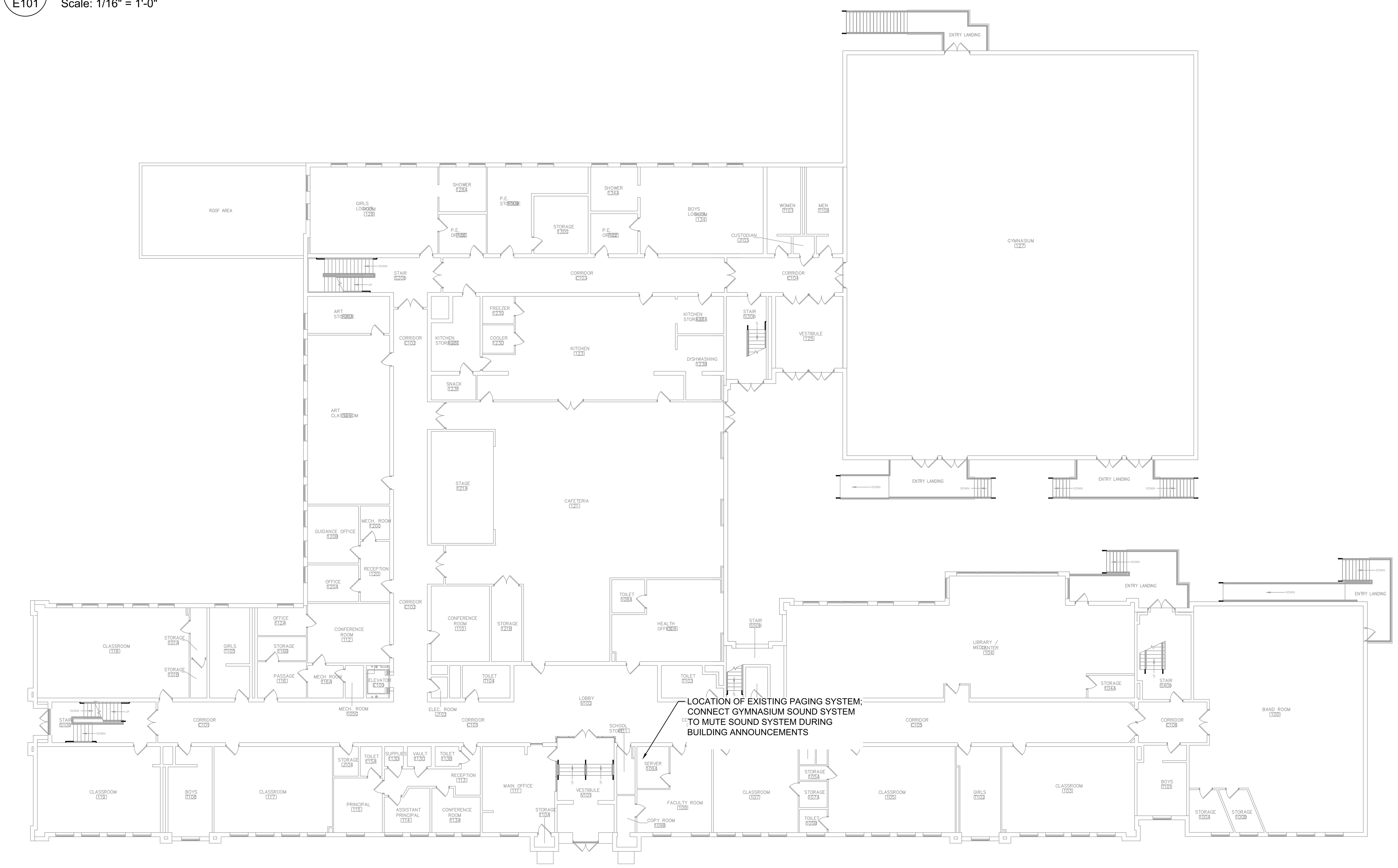


1 E101 Overall Basement Plan
Scale: 1/16" = 1'-0"



2 E101 Overall First Floor Plan
Scale: 1/16" = 1'-0"

ELECTRICAL LEGEND:

- MOTOR
- EARTH GROUND
- JUNCTION BOX
- PULL BOX
- FUSE WITH RATING
- MOLDED CASE CIRCUIT BREAKER
- DISCONNECT SWITCH, FUSED
- DISCONNECT SWITCH, UNFUSED
- STARTER, COMBINATION WITH DISCONNECT SWITCH
- STARTER OR MOTOR CONTROLLER
- METER
- 20A 120V DUPLEX CEILING MOUNTED RECEPTACLE
- 20A 120V DUPLEX WALL MOUNTED RECEPTACLE; 18" A.F.F. UNLESS OTHERWISE NOTED
- 20A 120V DUPLEX WALL MOUNTED RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER
- 20A 120V QUADRAPLEX RECEPTACLE
- WALL MOUNTED SPECIAL PURPOSE RECEPTACLE
- USB: 20A 120V WALL MOUNTED USB CHARGER RECEPTACLE TYPICAL OF HUBBELL USB20X OR ACCEPTABLE EQUAL
- F: FLOOR BOX WITH STAINLESS COVER TYPICAL OF LEW EECTRIC #OB-1-SP OR ACCEPTABLE EQUAL; PUSH BUTTON OPEN; FULLY IP66 RATED WATER PROOF (WHEN IN CLOSED POSITION); W/ 20A 125V E60120 GFCI RECEPTACLE (UNLESS OTHERWISE NOTED)
- W: WALL PHONE OUTLET MTD. 48" A.F.F.; 3/4" EMT CDT. IN WALL TO ABOVE CEILING W/ PULL CORD
- WALL BOX FOR TELEVISION CONNECTION; 1-1/4" EMT CDT. IN WALL TO ABOVE CEILING W/ PULL CORD
- TELEPHONE/DATA COMMUNICATION BOX W/ (2) 3/4" EMT CDT. IN WALL TO ABOVE CEILING W/ PULL CORD; NO FACE PLATE
- BRANCH CIRCUIT HOMERUN; LINES INDICATE NUMBER OF CIRCUITS, NEUTRAL, AND SWITCH LEG CONDUCTORS; ONE SEPARATE GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH HOMERUN; NOT SHOWN
- $2 SWITCH
  - BLANK = SINGLE POLE — 2 = DOUBLE POLE
  - 3 = THREE-WAY — 4 = FOUR-WAY
  - D = DIMMER — K = KEY OPERATED
  - P = WITH PILOT LIGHT — PB= PUSH BUTTON
  - T = TIMER OPERATED — WP= WEATHER PROOF
  - X = EXPLOSION PROOF — OC= OCCUPANCY SENSOR
- HORN/STROBE DEVICE, ONE ASSEMBLY; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15 CANDELA UNLESS OTHERWISE NOTED
- STROBE DEVICE; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15 CANDELA UNLESS OTHERWISE NOTED
- F: MANUAL PULL STATION; MTD. 48" A.F.F.
- WF: WATER FLOW SWITCH
- TS: VALVE TAMPER SWITCH
- X: DETECTOR; LETTER INDICATES AS FOLLOWS:
  - BLANK = SMOKE DETECTOR
  - P = PHOTOELECTRIC SMOKE
  - M = MULTIPLE STATION SMOKE ALARM
  - D = PHOTOELECTRIC DUCT SMOKE DETECTOR
- H R: RATE OF RISE HEAT DETECTOR, 135°F
- CO: CARBON MONOXIDE DETECTOR; MTD. 60" A.F.F.
- FACP: ADDRESSABLE FIRE ALARM CONTROL PANEL
- FAAP: FIRE ALARM ANNUNCIATOR PANEL

ELECTRICAL NOTES:

1. ALL MATERIALS AND EQUIPMENT ARE TO BE NEW, UNUSED, AND FREE FROM DEFECTS OF ANY KIND. THE BASIS OF QUALITY SHALL BE THE LATEST REVISION OF ASTM, ANSI, OR OTHER ACCEPTABLE STANDARDS.
2. THESE DRAWINGS ARE DIAGRAMMATIC, AND INDICATE GENERAL ARRANGEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE REVIEWED THE SITE FOR HIS WORK PRIOR TO HAVING SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF THE CONTRACT.
3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES.
4. ALL WORK INCLUDING LABOR AND MATERIALS SHALL BE FULLY GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PAYMENT AND FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
5. ALL CUTTING, PATCHING, FIRE-STOPPING, AND SURFACE RESTORATION IN CONNECTION WITH THIS TRADE SHALL BE COMPLETED BY THIS CONTRACTOR.
6. A MINIMUM OF FOUR (4) COPIES OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION OF THE EQUIPMENT AND/OR MATERIALS. BY SUBMITTING SHOP DRAWINGS, THE CONTRACTOR REPRESENTS THAT ACTUAL FIELD CONDITIONS ARE VERIFIED BY HIM AND ARE REFLECTED ON HIS SUBMITTALS.
7. THIS CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS, AND OBTAIN ALL PERMITS, INSPECTIONS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT.
8. EQUIPMENT AND MATERIALS FOR WHICH UNDERWRITERS LABORATORIES INC. (UL) PROVIDES PRODUCT LISTING SERVICE SHALL BE LISTED AND BEAR THE LISTING MARK.
9. ALL WORK IN ASSOCIATION WITH THIS CONTRACT SHALL BE COMPLETED IN STRICT COMPLIANCE WITH THE 2017 NATIONAL ELECTRIC CODE, 2020 BUILDING CODE OF NEW YORK STATE, 2020 FIRE CODE OF NEW YORK STATE & 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.
10. ALL NEW LIGHTING FIXTURES SHALL BE INSTALLED FULLY LAMPED AND OPERABLE. THE CONTRACTOR SHALL TURN OVER TO THE OWNER SPARE LAMPS OF EVERY TYPE ON THE PROJECT IN AN AMOUNT NOT LESS THAN 20% OF THE TOTAL NUMBER OF EACH TYPE (MINIMUM 1 PER TYPE).
11. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, APPLICATIONS AND FEES OF ALL WORK ASSOCIATED WITH THE LOCAL UTILITY COMPANY AND/OR THE TELEPHONE COMPANY. ALL WORK INVOLVING THE UTILITY COMPANY SHALL BE COMPLETED IN ACCORDANCE WITH THEIR REGULATIONS AND GUIDELINES.
12. ALL CONDUCTORS SHALL BE COPPER, SHALL NOT BE LESS THAN #12 AWG, AND SHALL NOT EXCEED 70 FEET FROM PANEL BOARD TO FURTHEST CONNECTION UNLESS OTHERWISE NOTED ON PLANS.
13. LIGHTING LOADS SHALL NOT BE COMBINED ON THE SAME CIRCUIT AS ANY OTHER ELECTRICAL LOADS.
14. CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH & INSTALL ALL SMALL DETAILS AND INCIDENTAL WORK NOT SHOWN OR SPECIFIED, BUT WHICH CAN BE REASONABLY INFERRED AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM OF HIGH QUALITY MEETING ALL APPLICABLE CODES AND REGULATIONS.
15. FOR EACH NEW OR MODIFIED ELECTRICAL PANEL, THE CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD TO REFLECT ALL CIRCUITING. ADDITIONALLY, THE CONTRACTOR SHALL LABEL (WITH A PERMANENT MARKER OR LABEL) EACH RECEPTACLE ON THE INSIDE OF EACH FACE PLATE WITH PANEL AND CIRCUIT NUMBER DESIGNATION.
16. MINIMUM REQUIREMENT FOR EQUIPMENT GROUNDING SHALL BE GOVERNED BY THE NEC. ALL GROUNDS, BONDING, ETC. SHALL MEET THESE REQUIREMENTS. THE CONTRACTOR SHALL FURNISH AND INSTALL ANY AND ALL ITEMS NECESSARY TO MEET THESE REQUIREMENTS AT NO EXTRA COST, EVEN IF SUCH ITEMS ARE NOT DETAILED ON THE DRAWINGS.
17. ALL CONDUIT AND CABLE SHALL BE PROPERLY SUPPORTED AND ROUTED PARALLEL OR PERPENDICULAR TO BUILDING WALLS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK.
18. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, WIRING, DEVICES, AND SYSTEMS INSTALLED UNDER THIS CONTRACT TO ENSURE PROPER OPERATION PRIOR TO FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
19. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.

WIRE COLOR CODING TABLE

PHASE	WIRES	VOLTAGE	L1	L2	L3	NEUTRAL	GROUND
1	2 (1)	120	BLACK	-	-	WHITE	-
1	2 (1)	208	BLACK	RED	-	-	-
1	3	120	BLACK	-	-	WHITE	GREEN (2)
1	3	208	BLACK	RED	-	-	GREEN (2)
3	4	208	BLACK	RED	BLUE	-	GREEN (2)
3	5	208	BLACK	RED	BLUE	WHITE	GREEN (2)
1	3	277	BROWN	-	-	GRAY	GREEN (2)
1	3	480	BROWN	ORANGE	-	-	GREEN (2)
3	4	480	BROWN	ORANGE	YELLOW	-	GREEN (2)
3	5	480	BROWN	ORANGE	YELLOW	GRAY	GREEN (2)

NOTES:
1. FOR DOUBLE INSULATED EQUIPMENT ONLY.
2. GREEN/YELLOW MAY BE USED:
   - GREEN/YELLOW SHALL BE GREEN WITH ONE OR MORE YELLOW STRIPES.
   - GREEN = 50 TO 70%, YELLOW = 50 TO 30%.
   - GREEN/YELLOW IS THE ONLY COLOR INTERNATIONALLY ACCEPTED FOR USE AS AN EQUIPMENT GROUNDING CONDUCTOR.
   - GREEN OR GREEN/YELLOW MUST ONLY BE USED FOR GROUNDING CONDUCTORS.

DEVICE MOUNTING HEIGHTS

POWER RECEPTACLES (INTERIOR)	18" A.F.F.
POWER RECEPTACLES (EXTERIOR)	36" A.F.G.
POWER RECEPTACLES (@ COUNTER)	44" A.F.F.
LIGHT SWITCHES	44" A.F.F. TO TOP OF DEVICE
DISCONNECT SWITCHES	SEE NEC 404.8(A)
TELEPHONE/DATA RECEPTACLES	18" A.F.F.
TELEPHONE/DATA RECEPTACLES (@ COUNTER)	44" A.F.F.
WALL TELEPHONE RECEPTACLES	48" A.F.F. TO TOP OF DEVICE
FIRE ALARM PULL STATIONS	42" A.F.F. MIN./44" A.F.F. MAX.
FIRE ALARM AUDIO/VISUAL DEVICES	80" A.F.F. MIN./96" A.F.F. MAX.
EXIT LIGHTS (WALL MOUNTED)	12" ABOVE DOOR
EMERGENCY LIGHTS (WALL MOUNTED)	90" A.F.F.
TV & A/V OUTLETS	18" A.F.F.

NOTE: ALL DIMENSIONS ARE TO CENTER OF DEVICE UNLESS OTHERWISE NOTED

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Consultant
BLAKE ENGINEERING PLLC

Project Title
HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND MIDDLE SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

STATE OF NEW YORK · MATTHEW GEORGE BLAKE · 089039 · LICENSED PROFESSIONAL ENGINEER
Expiration Date: 05-31-2025

#	DATE	DESCRIPTION
1	9/8/23	BID ADDENDUM #2

Drawn By:	BJK
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Proj. #:	62-08-03-04-0-001-010
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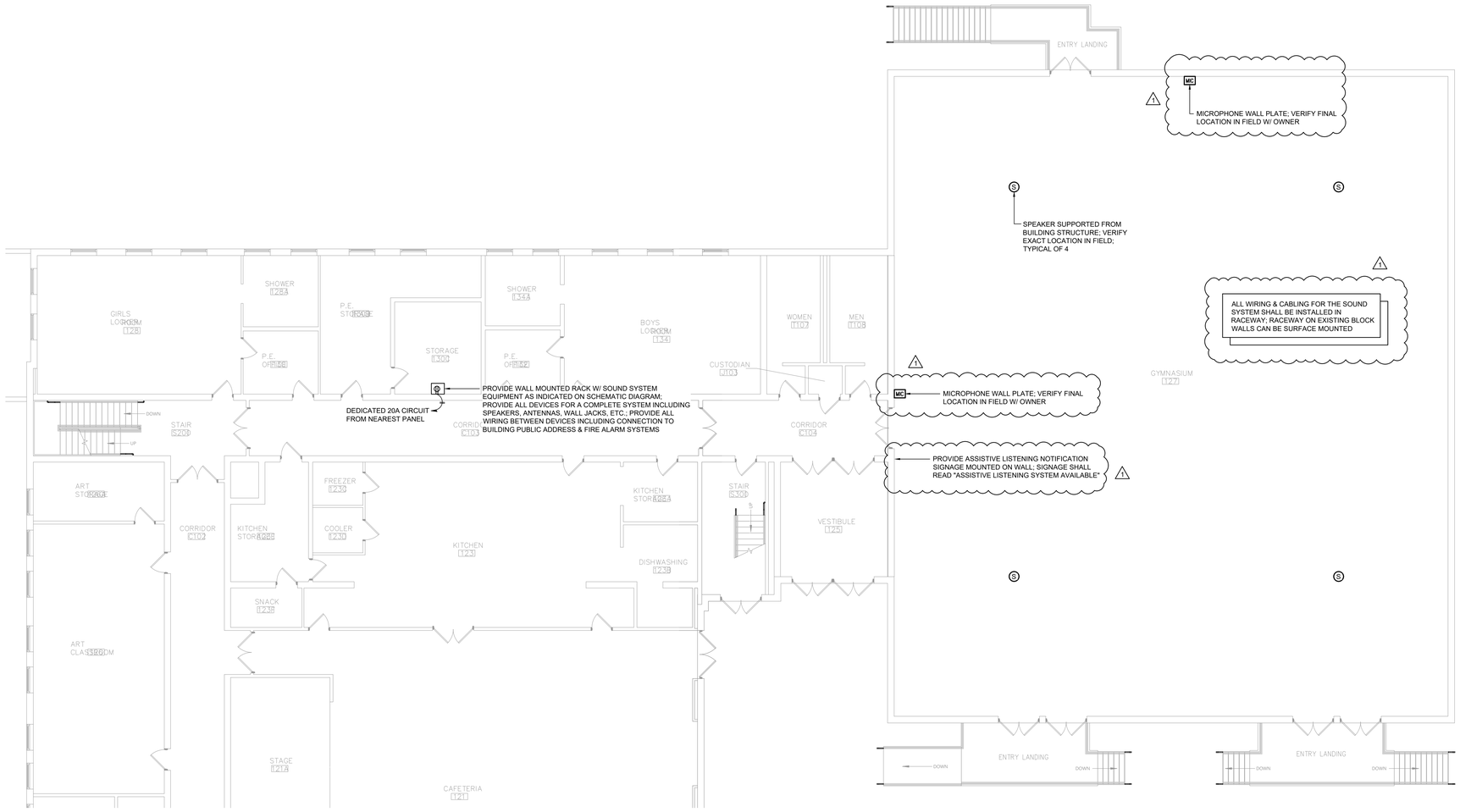
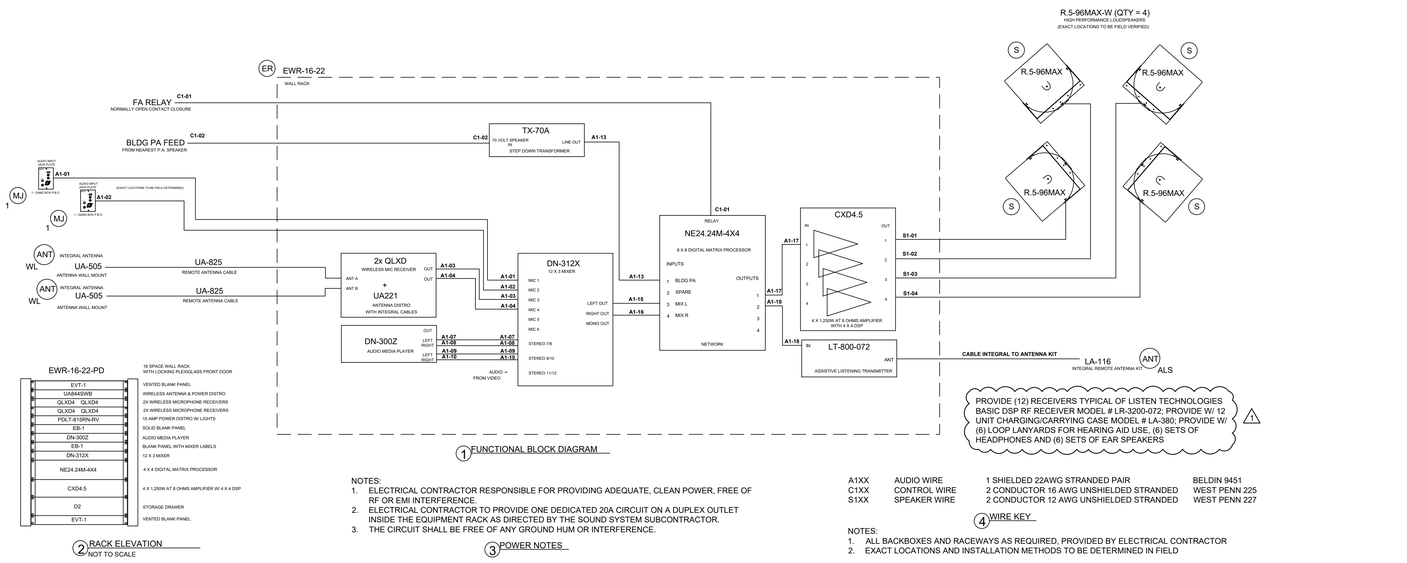
Sheet Title
ELECTRICAL NOTES, LEGEND SCHEDULES & DETAILS

Sheet No.
HMS E101

CONSTRUCTION DOCUMENTS



1 Gymnasium Sound System Plan
E201 Scale: 1/8" = 1'-0"



1 FUNCTIONAL BLOCK DIAGRAM

EWR-16-22-PD
16 SPACE WALL RACK WITH LOCKING PLEXIGLASS FRONT DOOR

EVT-1	VENTED BLANK PANEL
UA844SWB	WIRELESS ANTENNA & POWER DISTRO
QLXD4 QLXD4	2X WIRELESS MICROPHONE RECEIVERS
QLXD4 QLXD4	2X WIRELESS MICROPHONE RECEIVERS
PDLT-815RN-RV	15 AMP POWER DISTRO W/ LIGHTS
EB-1	SOLID BLANK PANEL
DN-300Z	AUDIO MEDIA PLAYER
EB-7	BLANK PANEL WITH MIXER LABELS
DN-312X	12 X 3 MIXER
NE24.24M-4X4	4 X 4 DIGITAL MATRIX PROCESSOR
CXD4.5	4 X 1.250W AT 8 OHMS AMPLIFIER W/ 4 X 4 DSP
D2	STORAGE DRAWER
EVT-1	VENTED BLANK PANEL

2 RACK ELEVATION
NOT TO SCALE

NOTES:
1. ELECTRICAL CONTRACTOR RESPONSIBLE FOR PROVIDING ADEQUATE, CLEAN POWER, FREE OF RF OR EMI INTERFERENCE.
2. ELECTRICAL CONTRACTOR TO PROVIDE ONE DEDICATED 20A CIRCUIT ON A DUPLEX OUTLET INSIDE THE EQUIPMENT RACK AS DIRECTED BY THE SOUND SYSTEM SUBCONTRACTOR.
3. THE CIRCUIT SHALL BE FREE OF ANY GROUND HUM OR INTERFERENCE.

3 POWER NOTES

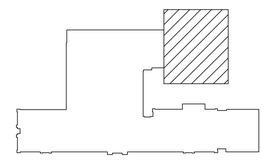
A1XX	AUDIO WIRE	1 SHIELDED 22AWG STRANDED PAIR	BELDIN 9451
C1XX	CONTROL WIRE	2 CONDUCTOR 16 AWG UNSHIELDED STRANDED	WEST PENN 225
S1XX	SPEAKER WIRE	2 CONDUCTOR 12 AWG UNSHIELDED STRANDED	WEST PENN 227

4 WIRE KEY

NOTES:
1. ALL BACKBOXES AND RACEWAYS AS REQUIRED, PROVIDED BY ELECTRICAL CONTRACTOR
2. EXACT LOCATIONS AND INSTALLATION METHODS TO BE DETERMINED IN FIELD

2 Gymnasium Sound System Schematic
E201 Scale: None

KEY PLAN



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Project Title
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HIGHLAND MIDDLE SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

STATE OF NEW YORK · MATTHEW GEORGE BLAKE · 092079 · LICENSED PROFESSIONAL ENGINEER
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Sheet Title
GYMNASIUM SOUND SYSTEM PLAN

Sheet No.
HMS
E201

CONSTRUCTION DOCUMENTS

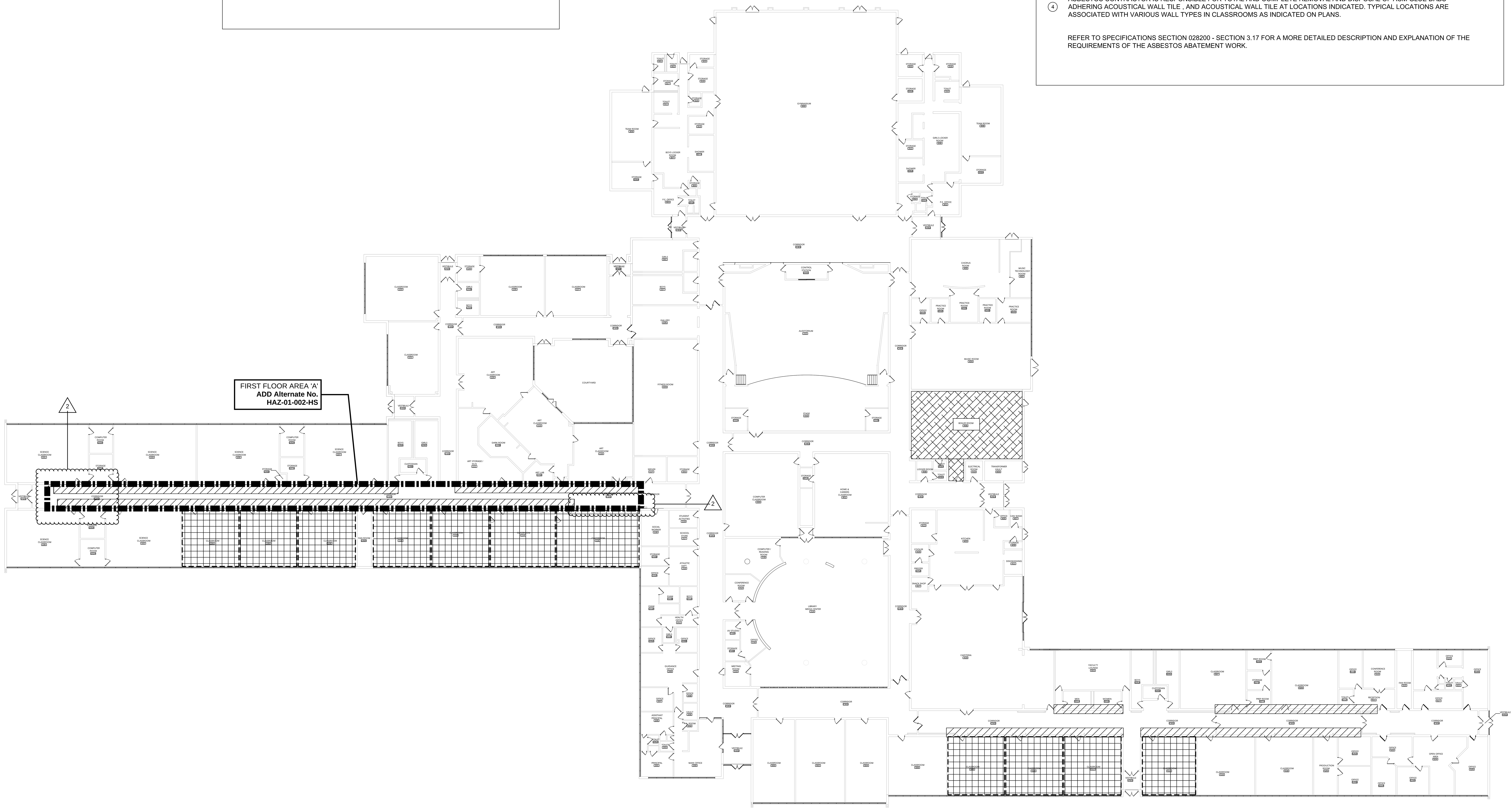
ASBESTOS ABATEMENT LEGEND

1. REMOVE AND DISPOSE OF FRIABLE ACM JOINT COMPOUND AND SHEETROCK AT WALL AND CEILING LOCATIONS. REFER TO NOTE 1
2. REMOVE AND DISPOSE OF ACM MUDDED JOINT PACKING (MJP) AND THERMAL SYSTEMS INSULATION AT DESIGNATED LOCATIONS. REFER TO NOTE 2
3. REMOVE AND DISPOSE OF ACM FLOOR TILE AND MASTIC AT DESIGNATED LOCATIONS. REMOVE AND DISPOSE OF RUBBER WALL BASE AS ACM AT DESIGNAGETED LOCATIONS. REFER TO NOTE 3
4. CONTRACTOR TO REMOVE AND DISPOSE OF ACM CONTAMINATED GLUE DABS AT DESIGNATED LOCATIONS. REFER TO NOTE 4.

ASBESTOS ABATEMENT NOTES

1. ASBESTOS CONTRACTOR IS RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF FRIABLE ACM CONTAINING JOINT COMPOUND AND ASSOCIATED SHEETROCK WALLS TO A HEIGHT OF SIX FEET, TYPICAL AT CORRIDOR LOCKER REMOVAL LOCATIONS. LIGHT FIXTURES WILL BE STABILIZED, HEPA VACUUMED, WET WIPED, PLASTICIZED AND REMAIN IN PLACE. ALL SMOKE AND CARBON MONOXIDE (CO) DETECTORS WILL BE PROTECTED WITH 2 LAYERS OF SIX MIL THICKNESS, FIRE RETARDANT POLY.
2. ASBESTOS ABATEMENT CONTRACTOR IS RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF FRIABLE ASBESTOS CONTAINING MUDDED JOINT PIPE (MJP) THERMAL SYSTEMS INSULATION LOCATED IN THE BOILER ROOM. SUSPENDED LIGHT FIXTURES WILL BE STABILIZED, HEPA VACUUMED, WET WIPED, PLASTICIZED AND REMAIN IN PLACE. GRID TO BE REMOVED UNDER CONTAINMENT TO ACCESS ACM. ALL SMOKE AND CARBON MONOXIDE (CO) DETECTORS WILL BE PROTECTED WITH 2 LAYERS OF SIX MIL THICKNESS, FIRE RETARDANT POLY.
3. ASBESTOS CONTRACTOR IS RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF NON-FRIABLE ACM FLOOR TILE AND MASTIC AT LOCATIONS INDICATED ON THE PLANS.
4. ASBESTOS CONTRACTOR IS RESPONSIBLE FOR TOTAL AND COMPLETE REMOVAL AND DISPOSAL OF ACM GLUE DABS ADHERING ACOUSTICAL WALL TILE , AND ACOUSTICAL WALL TILE AT LOCATIONS INDICATED. TYPICAL LOCATIONS ARE ASSOCIATED WITH VARIOUS WALL TYPES IN CLASSROOMS AS INDICATED ON PLANS.

REFER TO SPECIFICATIONS SECTION 028200 - SECTION 3.17 FOR A MORE DETAILED DESCRIPTION AND EXPLANATION OF THE REQUIREMENTS OF THE ASBESTOS ABATEMENT WORK.



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HIGHLAND HIGH SCHOOL
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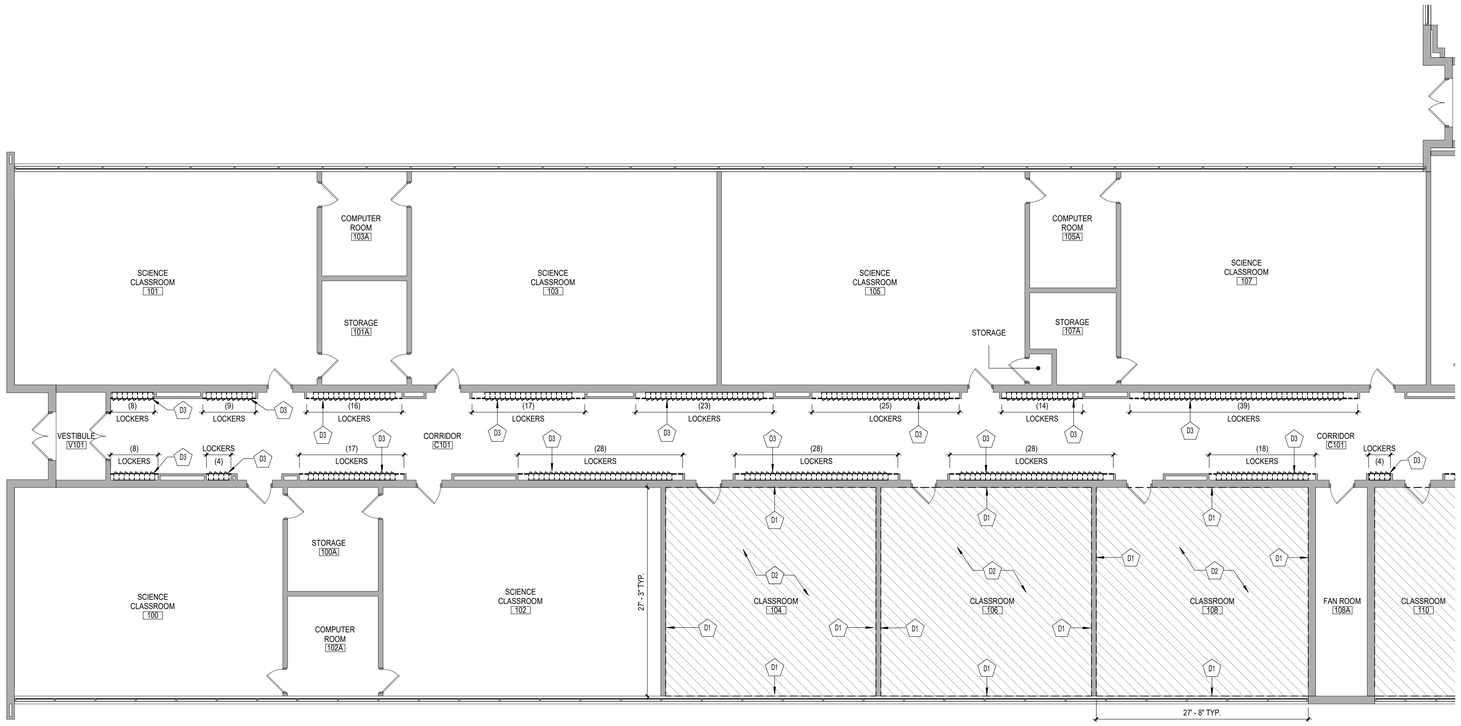
Sheet Title
HIGH SCHOOL FIRST FLOOR ABATEMENT PLAN

Sheet No.
HHS HAZ-101

CONSTRUCTION DOCUMENTS



1 FIRST FLOOR DEMOLITION PLAN - AREA 'A'
AD111 1/8" = 1'-0"

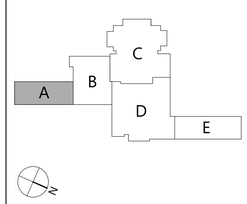
GENERAL NOTES

1. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION.
2. PATCH AND REPLACE EXISTING AND NEWLY CREATED HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION.
3. SALVAGED ITEMS SHALL BE TURNED OVER TO OWNER, UNO
4. ALL KEYED REMOVALS SHALL INCLUDE REMOVAL OF ANY AND ALL ANCHORING SYSTEMS INCLUDING OBJECTS EMBEDDED INTO EXISTING WALLS.
5. REFER TO ASBESTOS AND MEP DRAWINGS FOR ADDITIONAL REMOVAL INFORMATION.
6. PROVIDE TEMPORARY SHORING AS NECESSARY AT ALL AREAS OF WALL REMOVAL AND NEW WALL PENETRATIONS.
7. DRILL CORNERS OF ALL NEW SAWCUT OPENING PRIOR TO SAWCUTTING, TO PREVENT CUTTING INTO SCHEDULED CONSTRUCTION TO REMAIN.
8. ALL EXISTING LOCKERS ARE 8" WIDE x10" DEEP & SINGLE TIER

KEY NOTES - DEMOLITION

KEY	DESCRIPTION
D1	REMOVE WALL MOUNTED ACOUSTICAL PANELS IN THEIR ENTIRETY AND PATCH AS REQUIRED. COORDINATE WITH HAZARDOUS MATERIALS DRAWINGS. ALL WALL MOUNTED DEVICES SHALL BE TEMPORARILY DISCONNECTED AND RELOCATED BY PRIME CONTRACTOR RESPONSIBLE FOR REMOVING THE WALL MOUNTED ACOUSTICAL PANELS.
D2	REMOVE EXISTING RESILIENT TILE FLOORING, WALL BASE, AND MASTIC IN ITS ENTIRETY. COORDINATE WITH HAZARDOUS MATERIALS DRAWINGS.
D3	EXISTING CORRIDOR LOCKERS INCLUDING OVERHEAD GYPSUM/PLASTER SOFFIT AND RUBBER WALL BASE TO BE REMOVED. COORDINATE WITH HAZARDOUS MATERIAL DRAWINGS. ALL WALL MOUNTED DEVICES SHALL BE TEMPORARILY DISCONNECTED AND RELOCATED BY PRIME CONTRACTOR RESPONSIBLE FOR REMOVING THE GYPSUM/PLASTER SOFFIT.

KEYPLAN



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HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND HIGH SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

Project Title

REGISTERED ARCHITECT · DAVID M. RITSEMA · 023344 · STATE OF NEW YORK

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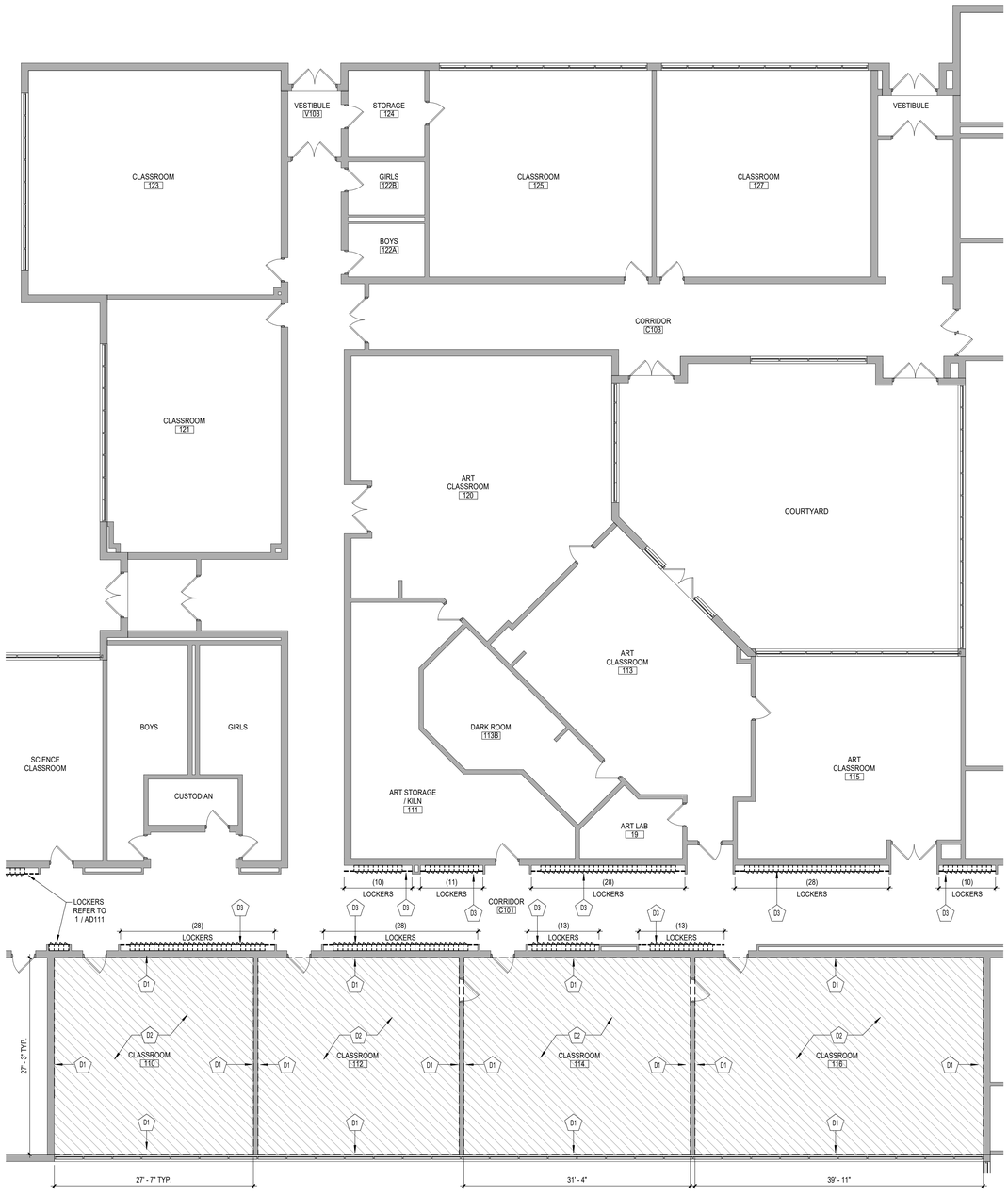
Sheet Title
FIRST FLOOR DEMOLITION PLAN - AREA 'A'

Sheet No.
HHS AD111

CONSTRUCTION DOCUMENTS



1 FIRST FLOOR DEMOLITION PLAN - AREA 'B'
AD112 1/8" = 1'-0"

GENERAL NOTES

1. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION.
2. PATCH AND REPLACE EXISTING AND NEWLY CREATED HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION.
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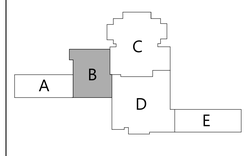
7. DRILL CORNERS OF ALL NEW SAWCUT OPENING PRIOR TO SAWCUTTING, TO PREVENT CUTTING INTO SCHEDULED CONSTRUCTION TO REMAIN.
8. ALL EXISTING LOCKERS ARE 8" WIDE x10" DEEP & SINGLE TIER

KEY NOTES - DEMOLITION

KEY	DESCRIPTION
D1	REMOVE WALL MOUNTED ACOUSTICAL PANELS IN THEIR ENTIRETY AND PATCH AS REQUIRED. COORDINATE WITH HAZARDOUS MATERIALS DRAWINGS. ALL WALL MOUNTED DEVICES SHALL BE TEMPORARILY DISCONNECTED AND RELOCATED BY PRIME CONTRACTOR RESPONSIBLE FOR REMOVING THE WALL MOUNTED ACOUSTICAL PANELS.
D2	REMOVE EXISTING RESILIENT TILE FLOORING, WALL BASE, AND MASTIC IN ITS ENTIRETY. COORDINATE WITH HAZARDOUS MATERIALS DRAWINGS.
D3	EXISTING CORRIDOR LOCKERS INCLUDING OVERHEAD GYPSUM/PLASTER SOFFIT AND RUBBER WALL BASE TO BE REMOVED. COORDINATE WITH HAZARDOUS MATERIAL DRAWINGS. ALL WALL MOUNTED DEVICES SHALL BE TEMPORARILY DISCONNECTED AND RELOCATED BY PRIME CONTRACTOR RESPONSIBLE FOR REMOVING THE GYPSUM/PLASTER SOFFIT.

KEYPLAN



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HIGHLAND HIGH SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

Project Title

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Sheet Title
FIRST FLOOR DEMOLITION PLAN - AREA 'B'

Sheet No.
HHS AD112

CONSTRUCTION DOCUMENTS

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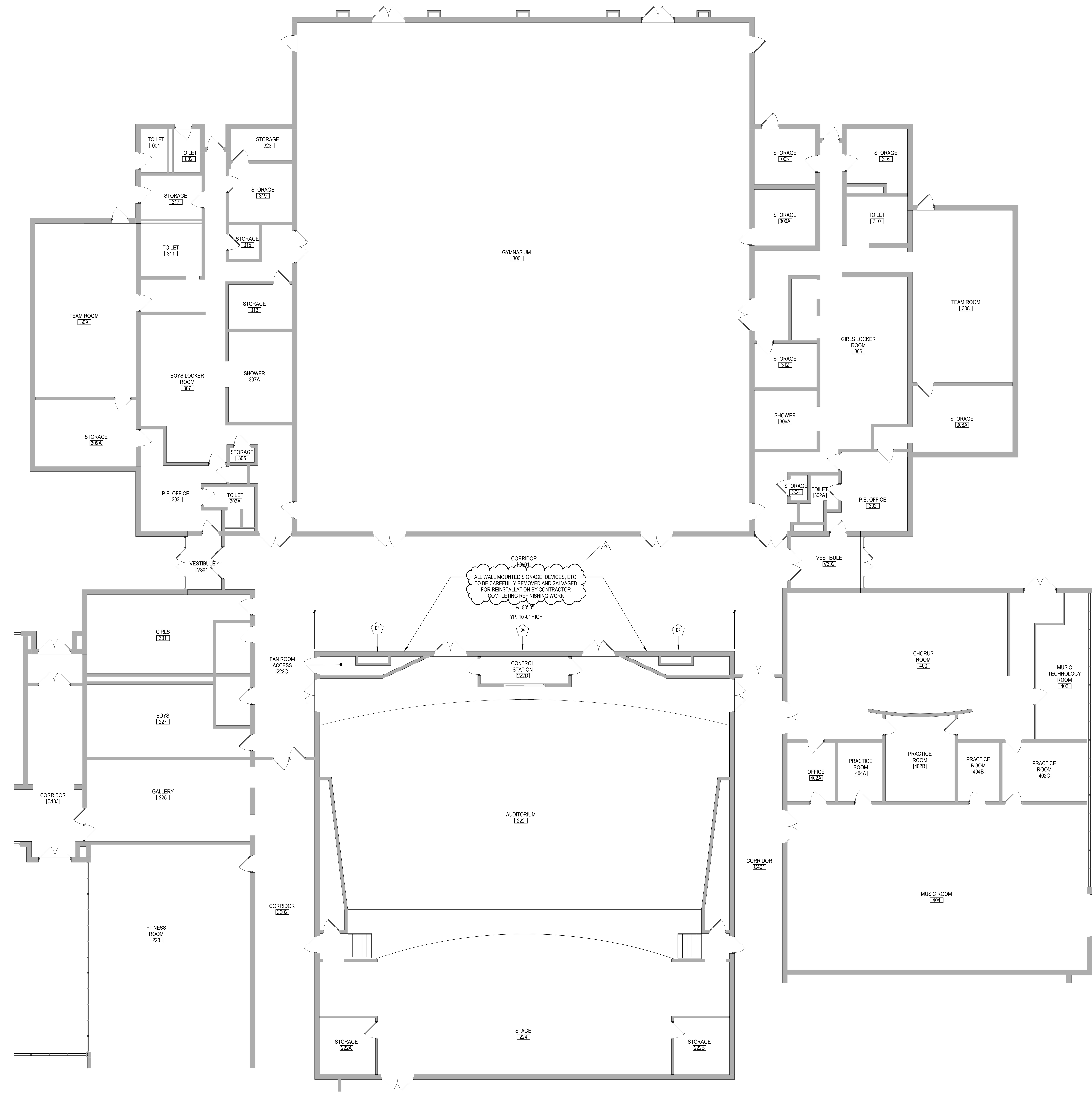


1 FIRST FLOOR DEMOLITION PLAN - AREA 'C'
AD113 1/8" = 1'-0"

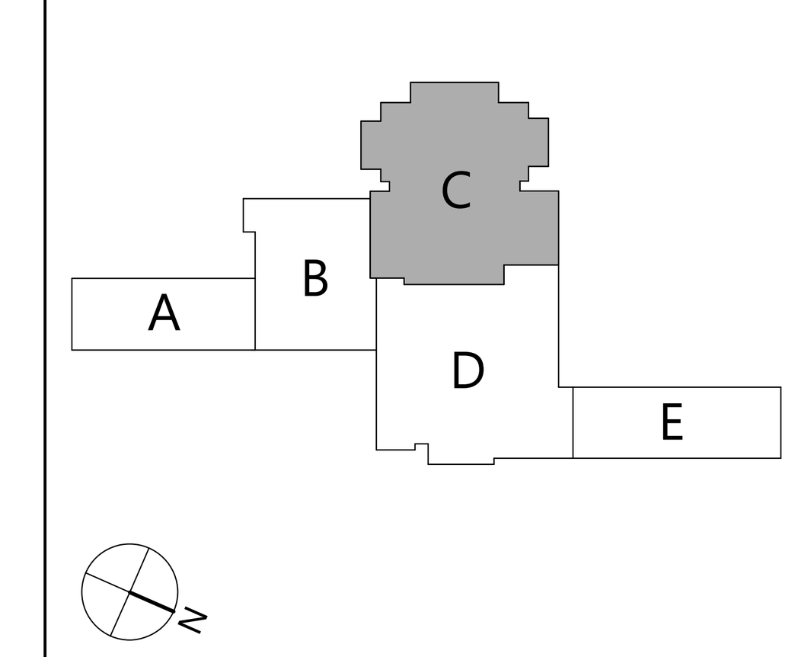
GENERAL NOTES

1. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION.
2. PATCH AND REPLACE EXISTING AND NEWLY CREATED HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION.
3. SALVAGED ITEMS SHALL BE TURNED OVER TO OWNER, UNO
4. ALL KEYED REMOVALS SHALL INCLUDE REMOVAL OF ANY AND ALL ANCHORING SYSTEMS INCLUDING OBJECTS EMBEDDED INTO EXISTING WALLS.
5. REFER TO ASBESTOS AND MEP DRAWINGS FOR ADDITIONAL REMOVAL INFORMATION.
6. PROVIDE TEMPORARY SHORING AS NECESSARY AT ALL AREAS OF WALL REMOVAL AND NEW WALL PENETRATIONS.
7. DRILL CORNERS OF ALL NEW SAWCUT OPENING PRIOR TO SAWCUTTING, TO PREVENT CUTTING INTO SCHEDULED CONSTRUCTION TO REMAIN.
8. ALL EXISTING LOCKERS ARE 8" WIDE x10" DEEP & SINGLE TIER

KEY NOTES - DEMOLITION

X	DESCRIPTION
D4	REMOVE FINISH AND SEALER FROM EXISTING WOOD PANEL WALL WITH WOOD STRIPPING MATERIAL SPECIFIED. SAND WOOD PANELS AND PREP FOR REFINISHING.

KEYPLAN



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HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND HIGH SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

REGISTERED ARCHITECT THOMAS M. RITZENTHALER 023344 STATE OF NEW YORK

Expiration Date: 02/28/2025

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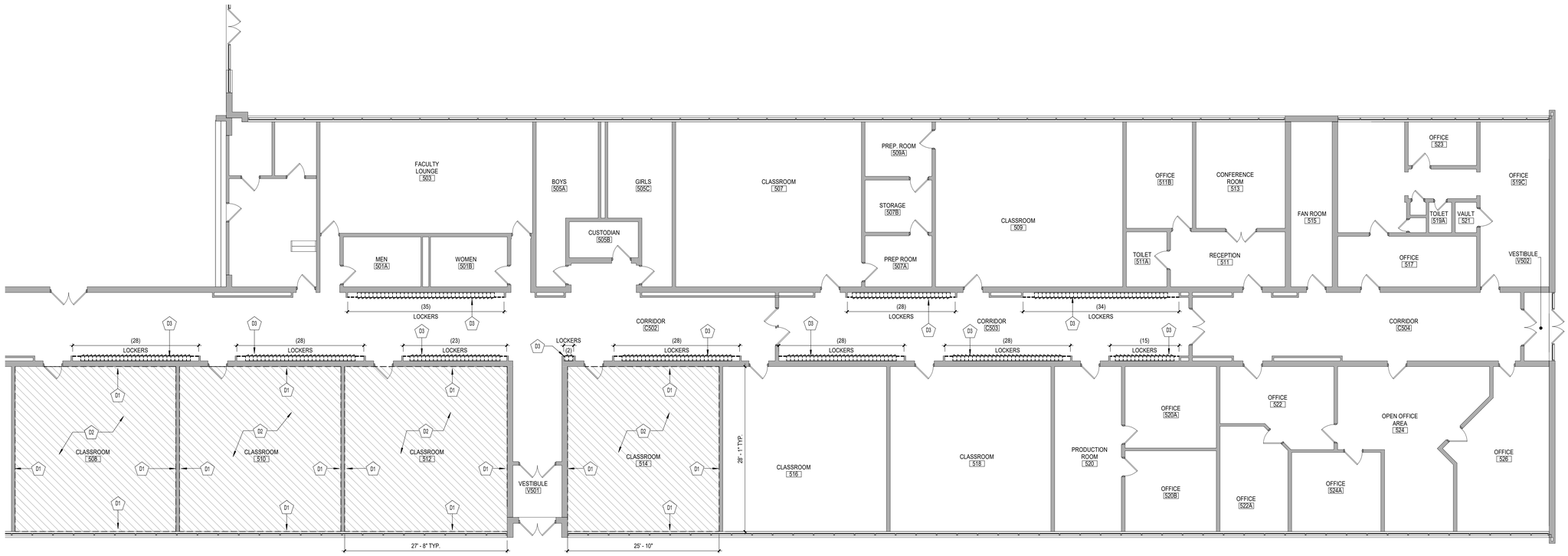
Sheet Title
FIRST FLOOR DEMOLITION PLAN - AREA 'C'

Sheet No.
HHS AD113

CONSTRUCTION DOCUMENTS



1 FIRST FLOOR DEMOLITION PLAN - AREA 'E'

AD115 1/8" = 1'-0"

GENERAL NOTES

1. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION.
2. PATCH AND REPLACE EXISTING AND NEWLY CREATED HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION.
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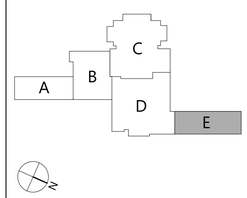
8. ALL EXISTING LOCKERS ARE 8" WIDE x10" DEEP & SINGLE TIER

KEY NOTES - DEMOLITION

KEY	DESCRIPTION
D1	REMOVE WALL MOUNTED ACOUSTICAL PANELS IN THEIR ENTIRETY AND PATCH AS REQUIRED. COORDINATE WITH HAZARDOUS MATERIALS DRAWINGS. ALL WALL MOUNTED DEVICES SHALL BE TEMPORARILY DISCONNECTED AND RELOCATED BY PRIME CONTRACTOR RESPONSIBLE FOR REMOVING THE WALL MOUNTED ACOUSTICAL PANELS.
D2	REMOVE EXISTING RESILIENT TILE FLOORING, WALL BASE, AND MASTIC IN ITS ENTIRETY. COORDINATE WITH HAZARDOUS MATERIALS DRAWINGS.
D3	EXISTING CORRIDOR LOCKERS INCLUDING OVERHEAD GYPSUM/PLASTER SOFFIT AND RUBBER WALL BASE TO BE REMOVED. COORDINATE WITH HAZARDOUS MATERIAL DRAWINGS. ALL WALL MOUNTED DEVICES SHALL BE TEMPORARILY DISCONNECTED AND RELOCATED BY PRIME CONTRACTOR RESPONSIBLE FOR REMOVING THE GYPSUM/PLASTER SOFFIT.

KEYPLAN



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2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

Project Title

EXPIRES 02/28/2025 REGISTERED ARCHITECT JAMES D. MILLER STATE OF NEW YORK

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Sheet Title
FIRST FLOOR DEMOLITION PLAN - AREA 'E'

Sheet No.
HHS AD115

CONSTRUCTION DOCUMENTS

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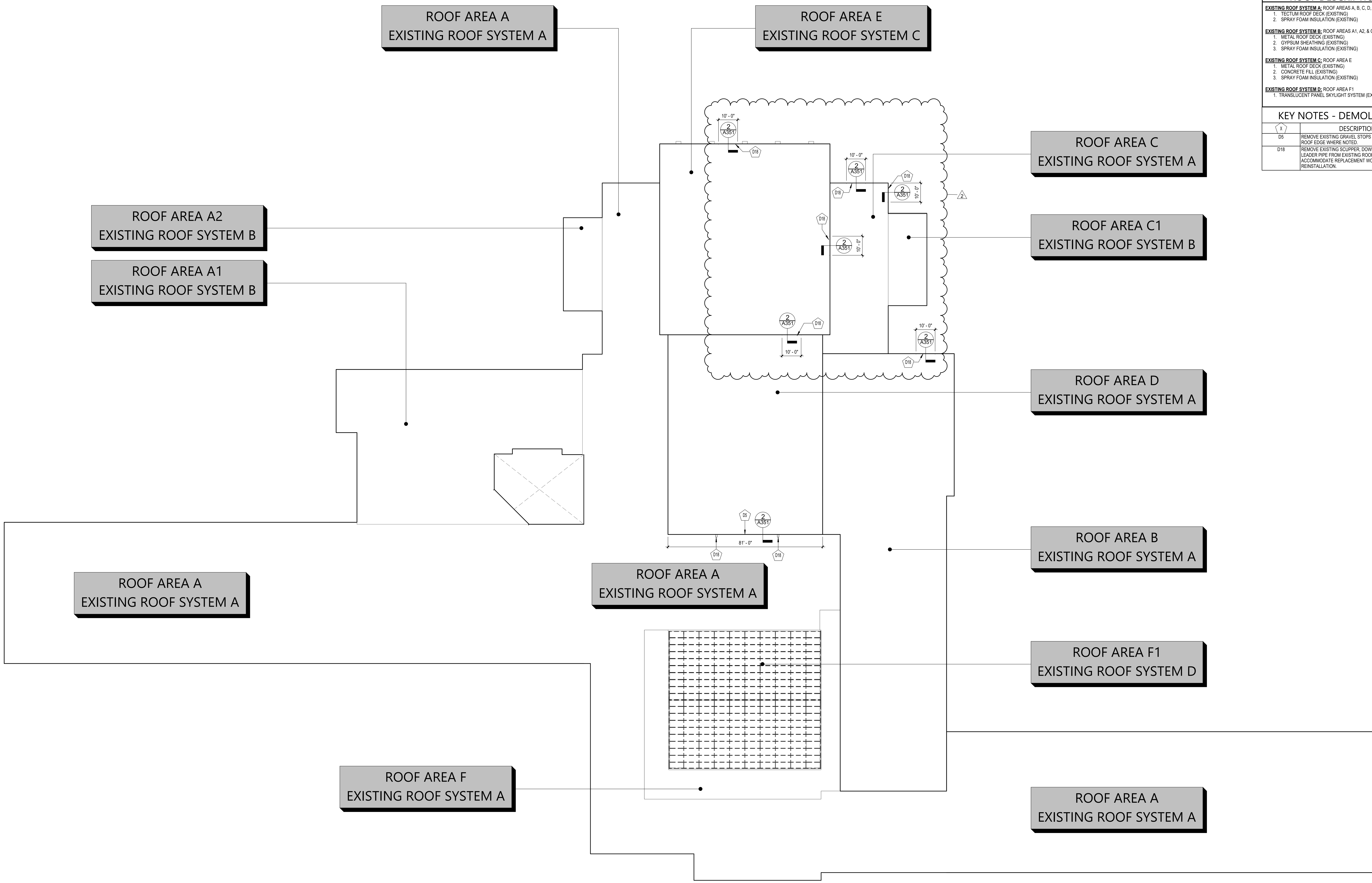

1 OVERALL ROOF DEMOLITION PLAN
AD400 1" = 20'-0"

ROOF DESCRIPTIONS

EXISTING ROOF SYSTEM A: ROOF AREAS A, B, C, D, & F
1. TECTUM ROOF DECK (EXISTING)
2. SPRAY FOAM INSULATION (EXISTING)

EXISTING ROOF SYSTEM B: ROOF AREAS A1, A2, & C1
1. METAL ROOF DECK (EXISTING)
2. GYPSUM SHEATHING (EXISTING)
3. SPRAY FOAM INSULATION (EXISTING)

EXISTING ROOF SYSTEM C: ROOF AREA E
1. METAL ROOF DECK (EXISTING)
2. CONCRETE FILL (EXISTING)
3. SPRAY FOAM INSULATION (EXISTING)

EXISTING ROOF SYSTEM D: ROOF AREA F1
1. TRANSLUCENT PANEL SKYLIGHT SYSTEM (EXISTING)

KEY NOTES - DEMOLITION

X	DESCRIPTION
D5	REMOVE EXISTING GRAVEL STOPS AND FASCIAS FROM ROOF EDGE WHERE NOTED.
D18	REMOVE EXISTING SCUPPER, DOWNSPOUT, AND LEADER PIPE FROM EXISTING ROOF EDGE TO ACCOMMODATE REPLACEMENT WORK. SALVAGE FOR REINSTALLATION.

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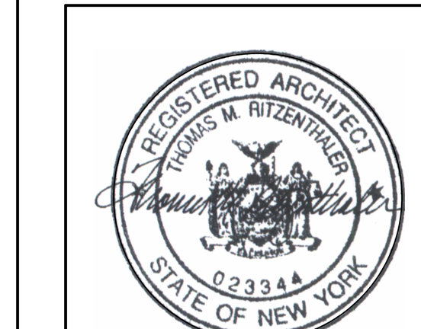

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Sheet Title

OVERALL ROOF DEMOLITION PLAN

Sheet No.

HHS AD400

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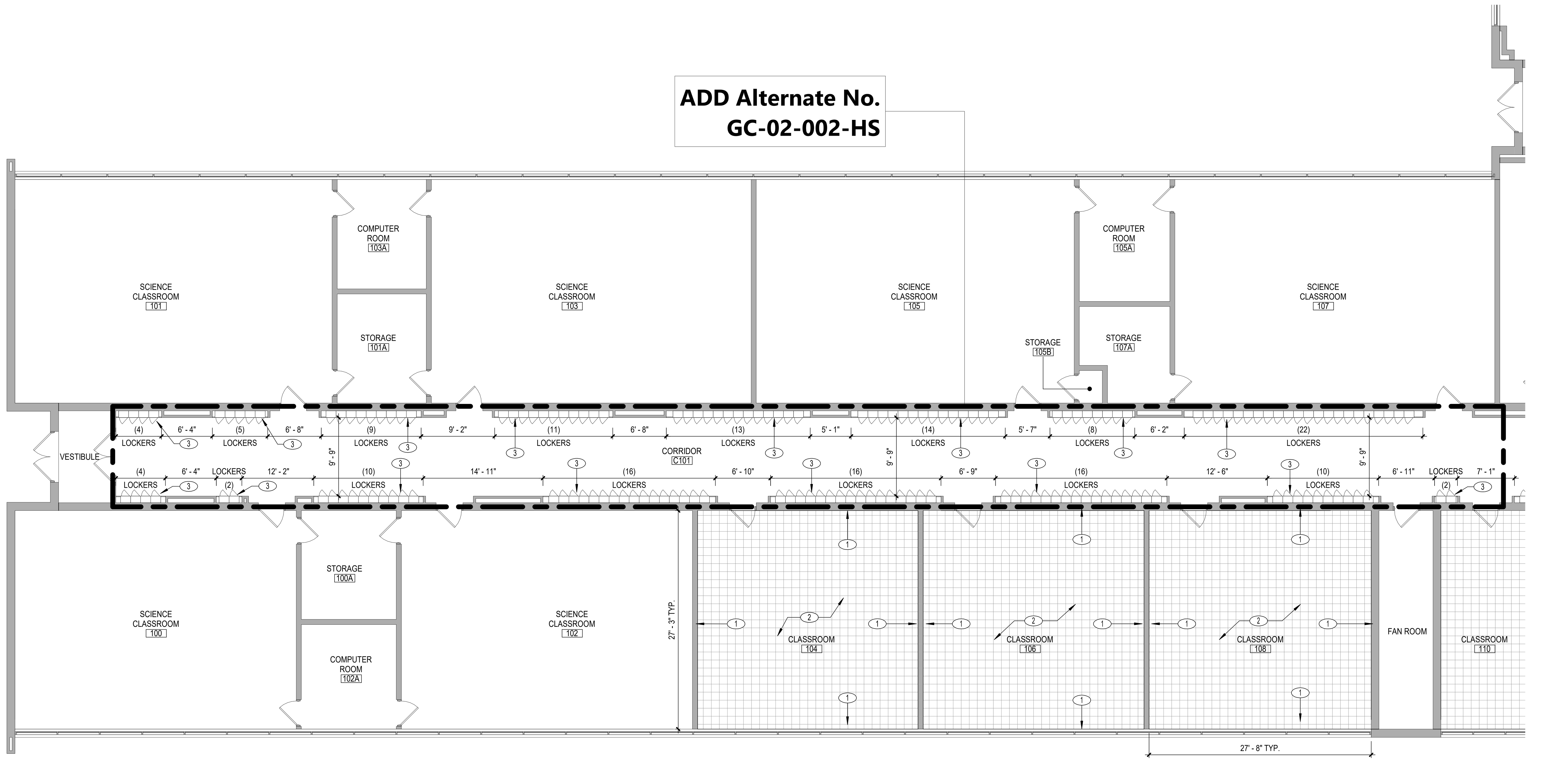


1 FIRST FLOOR NEW WORK PLAN - AREA 'A'

A111 1/8" = 1'-0"

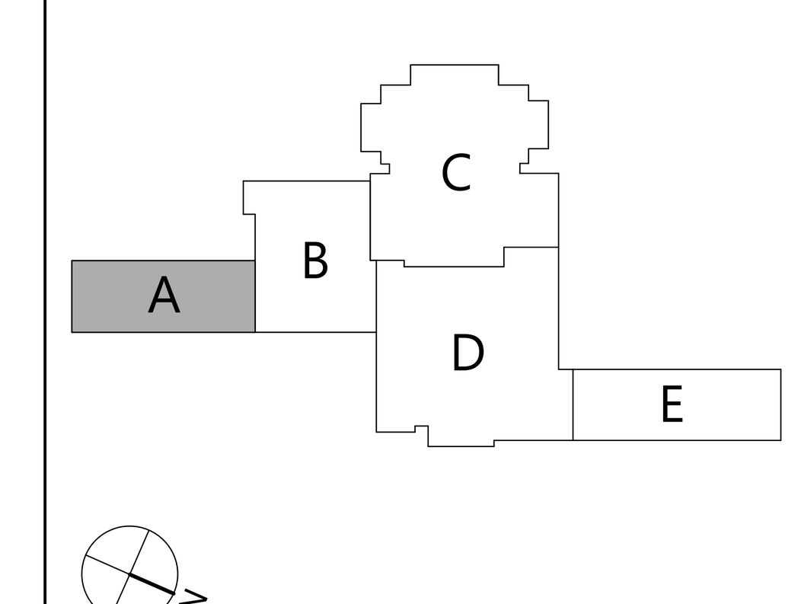
GENERAL NOTES

1. REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
2. REFER TO A700 SERIES DRAWINGS PARTITION TYPES AND ADDITIONAL NOTES.
3. REFER TO A900 SERIES DRAWINGS FOR DOOR, STOREFRONT, CURTAINWALL, WINDOW AND LOUVER SCHEDULES, DETAILS AND NOTES.
4. ALL NEW LOCKERS ARE 15" WIDE x 10" DEEP & TWO TIER

KEY NOTES - NEW WORK

X	DESCRIPTION
1	PAINT ENTIRE WALL INCLUDING AREA WHERE ACOUSTICAL WALL PANELS WERE PREVIOUSLY REMOVED. PATCH ANY DAMAGED SURFACES WITH PAINTED GYPSUM WALL BOARD. ALL WALL MOUNTED DEVICES SHALL BE RECONNECTED AND REINSTALLED BY PRIME CONTRACTOR RESPONSIBLE FOR PAINTING AND PATCHING WHERE ACOUSTICAL PANELS WHERE PREVIOUSLY REMOVED.
2	PROVIDE NEW 12"x12" VCT FLOORING WITH MOISTURE MITIGATION SYSTEM AND RUBBER WALL BASE OVER EXISTING SUBSTRATE.
3	PROVIDE GYPSUM BOARD PATCHING AND NEW 4" RUBBER WALL BASE AT NEW LOCKERS. NEW LOCKER SYSTEMS TO BE PROVIDED BY LOCKER VENDOR. REFER TO DETAILS FOR ADDITIONAL INFORMATION. ALL WALL MOUNTED DEVICES SHALL BE RECONNECTED AND REINSTALLED BY PRIME CONTRACTOR RESPONSIBLE FOR PROVIDING GYPSUM WALL BOARD PATCHING WHERE PREVIOUSLY REMOVED.

KEYPLAN



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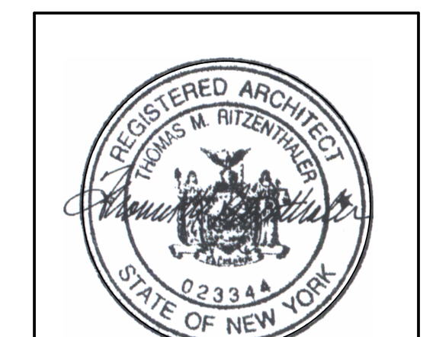
Project Title

HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND HIGH SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1



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Proj. #:	62-08-03-04-0-009-014
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Sheet Title

FIRST FLOOR NEW WORK PLAN - AREA 'A'

Sheet No.

HHS A111

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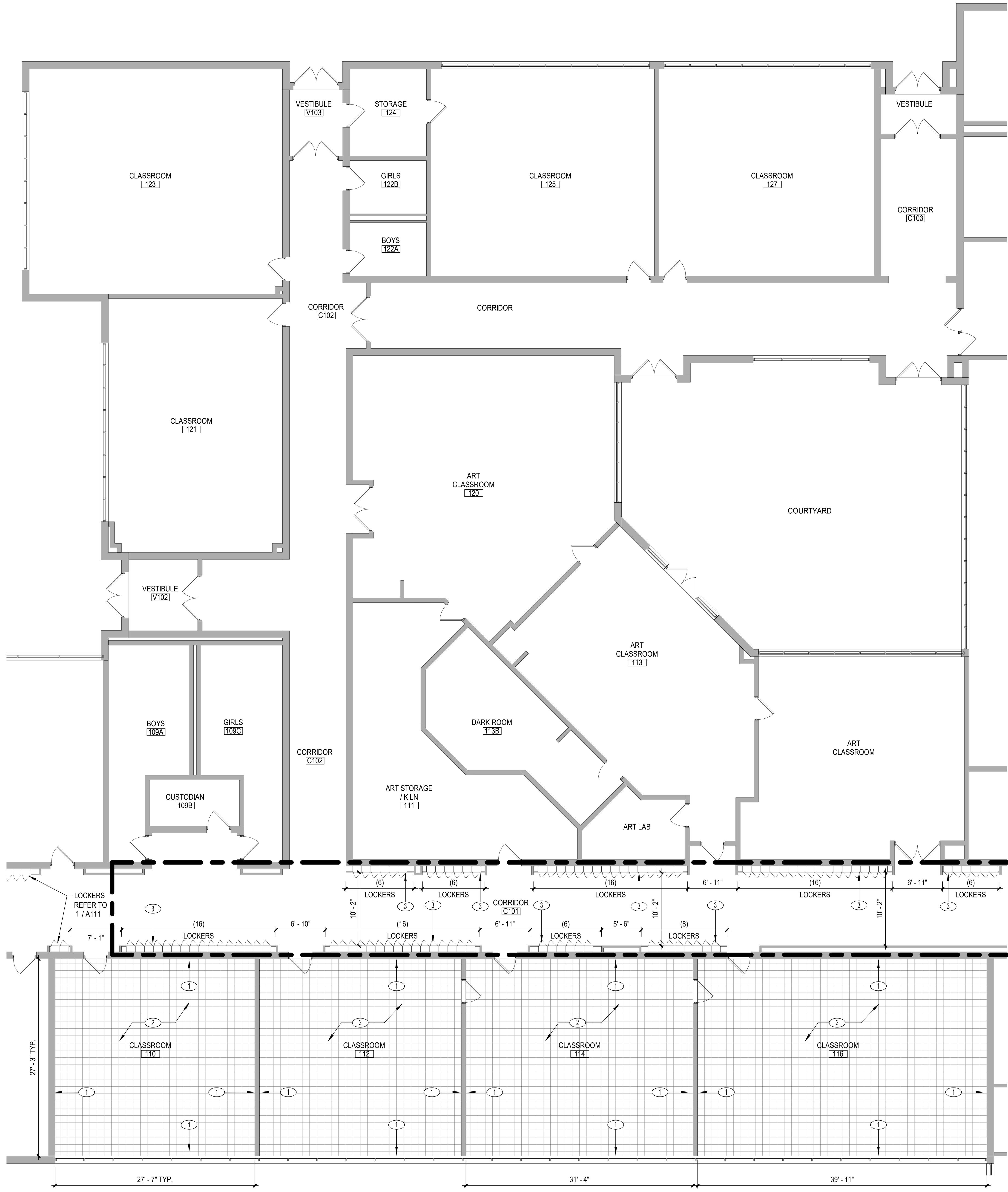


ADD Alternate No. GC-02-002-HS

1 FIRST FLOOR NEW WORK PLAN - AREA 'B'
A112 1/8" = 1'-0"

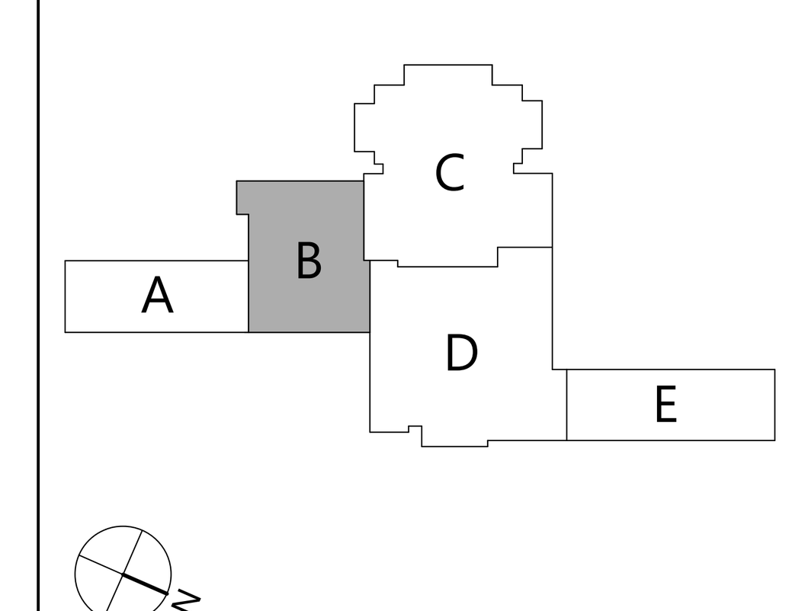
GENERAL NOTES

1. REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
2. REFER TO A700 SERIES DRAWINGS PARTITION TYPES AND ADDITIONAL NOTES.
3. REFER TO A900 SERIES DRAWINGS FOR DOOR, STOREFRONT, CURTAINWALL, WINDOW AND LOUVER SCHEDULES, DETAILS AND NOTES.
4. ALL NEW LOCKERS ARE 15" WIDE x 10" DEEP & TWO TIER

KEY NOTES - NEW WORK

X	DESCRIPTION
1	PAINT ENTIRE WALL INCLUDING AREA WHERE ACOUSTICAL WALL PANELS WERE PREVIOUSLY REMOVED. PATCH ANY DAMAGED SURFACES WITH PAINTED GYPSUM WALL BOARD. ALL WALL MOUNTED DEVICES SHALL BE RECONNECTED AND REINSTALLED BY PRIME CONTRACTOR RESPONSIBLE FOR PAINTING AND PATCHING WHERE ACOUSTICAL PANELS WHERE PREVIOUSLY REMOVED.
2	PROVIDE NEW 12"x12" VCT FLOORING WITH MOISTURE MITIGATION SYSTEM AND RUBBER WALL BASE OVER EXISTING SUBSTRATE.
3	PROVIDE GYPSUM BOARD PATCHING AND NEW 4" RUBBER WALL BASE AT NEW LOCKERS. NEW LOCKER SYSTEMS TO BE PROVIDED BY LOCKER VENDOR. REFER TO DETAILS FOR ADDITIONAL INFORMATION. ALL WALL MOUNTED DEVICES SHALL BE RECONNECTED AND REINSTALLED BY PRIME CONTRACTOR RESPONSIBLE FOR PROVIDING GYPSUM WALL BOARD PATCHING WHERE PREVIOUSLY REMOVED.

KEYPLAN



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Project Title

HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND HIGH SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

REGISTERED ARCHITECT THOMAS M. RITZENTHALER 023344 STATE OF NEW YORK

Expiration Date: 02/28/2025

#	DATE	DESCRIPTION
2	9/8/23	BID ADDENDUM #2

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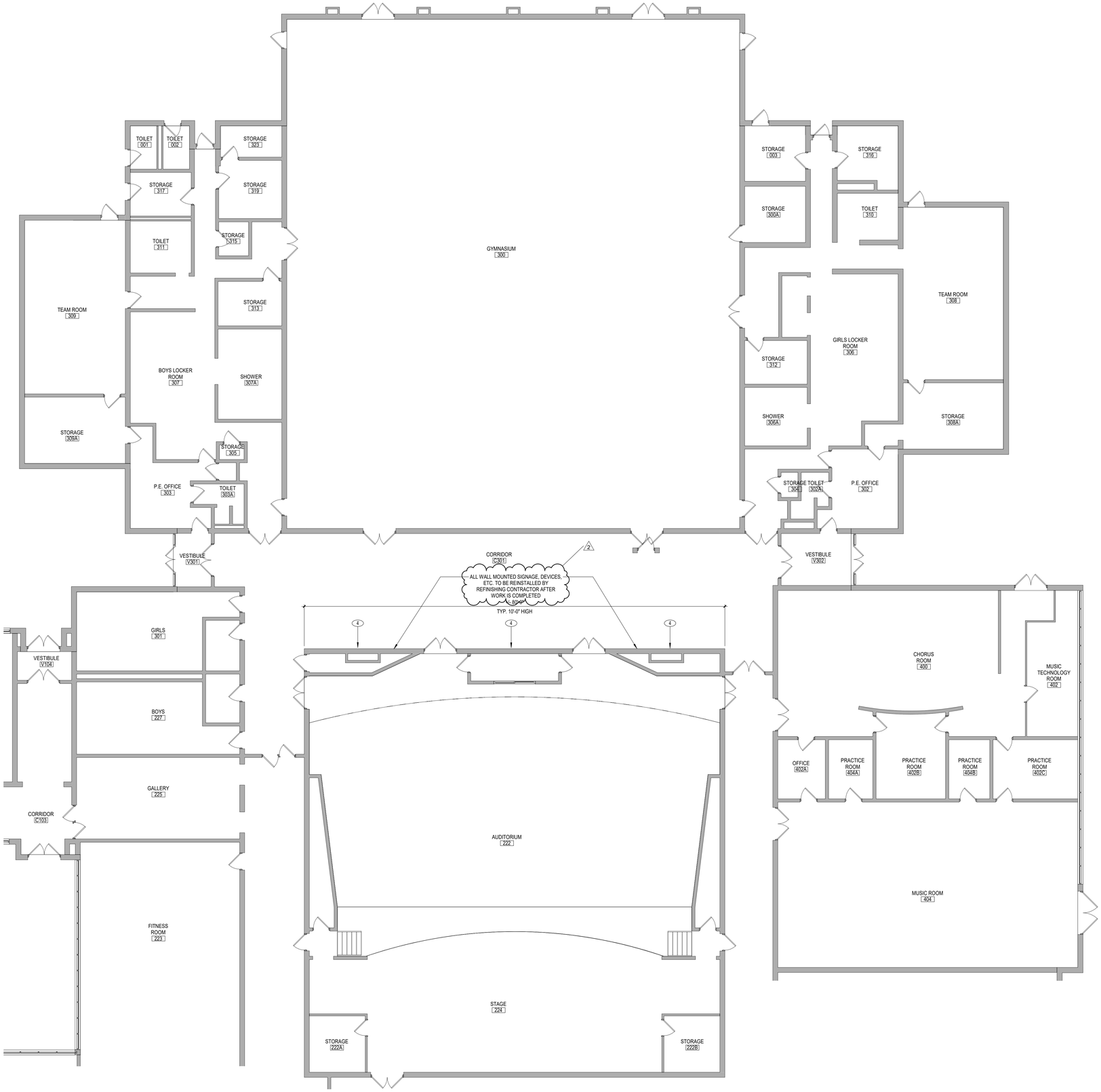
Sheet Title

FIRST FLOOR NEW WORK PLAN - AREA 'B'

Sheet No.

HHS A112

CONSTRUCTION DOCUMENTS



1 FIRST FLOOR NEW WORK PLAN - AREA 'C'
A113 1/8" = 1'-0"

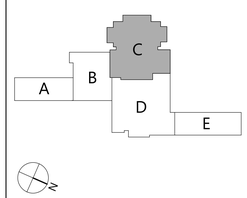
GENERAL NOTES

1. REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
2. REFER TO A700 SERIES DRAWINGS PARTITION TYPES AND ADDITIONAL NOTES.
3. REFER TO A900 SERIES DRAWINGS FOR DOOR, STOREFRONT, CURTAINWALL, WINDOW AND LOUVER SCHEDULES, DETAILS AND NOTES.
4. ALL NEW LOCKERS ARE 15" WIDE x 10" DEEP & TWO TIER

KEY NOTES - NEW WORK

X	DESCRIPTION
4	PROVIDE NEW STAIN AND CLEAR COAT PROTECTIVE SEALER FOR WOOD PANEL WALL AS SPECIFIED.

KEYPLAN



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HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND HIGH SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

Project Title

Expiration Date: 02/28/2025

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Sheet Title

FIRST FLOOR NEW WORK PLAN - AREA 'C'

Sheet No.

HHS A113

CONSTRUCTION DOCUMENTS

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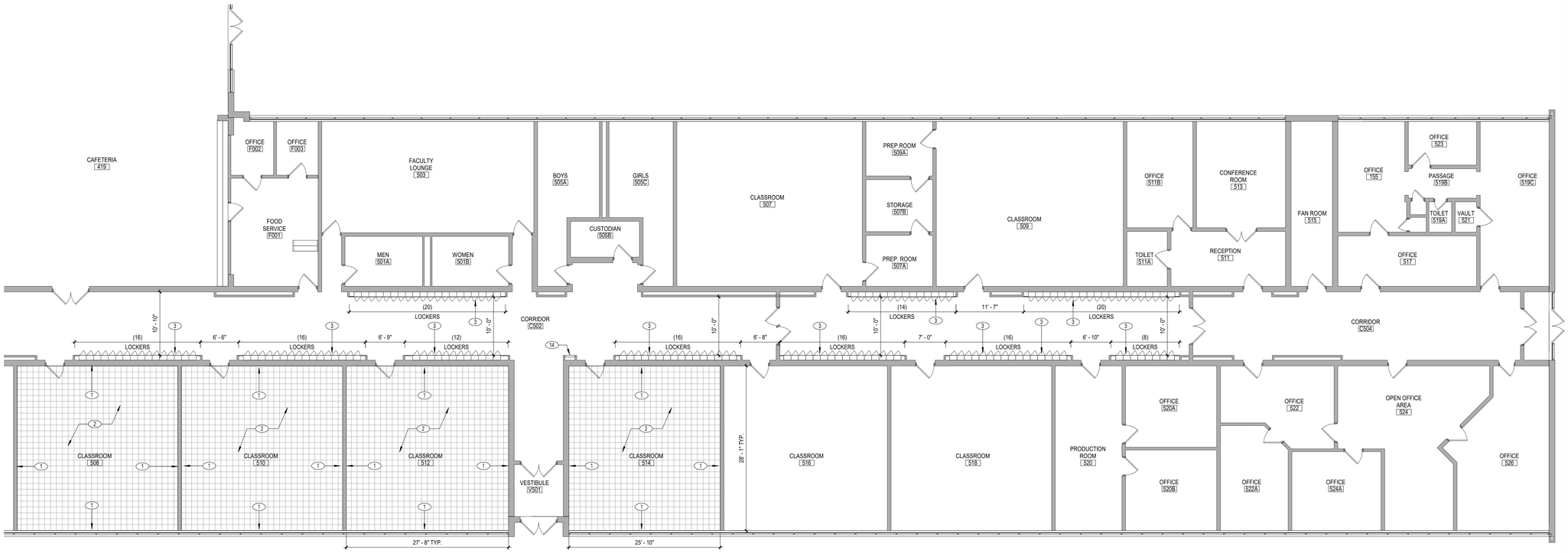


1 FIRST FLOOR NEW WORK PLAN - AREA 'E'
A115 1/8" = 1'-0"

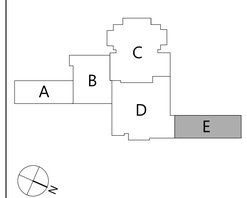
GENERAL NOTES

1. REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
2. REFER TO A700 SERIES DRAWINGS PARTITION TYPES AND ADDITIONAL NOTES.
3. REFER TO A900 SERIES DRAWINGS FOR DOOR, STOREFRONT, CURTAINWALL, WINDOW AND LOUVER SCHEDULES, DETAILS AND NOTES.
4. ALL NEW LOCKERS ARE 15" WIDE x 10" DEEP & TWO TIER

KEY NOTES - NEW WORK

KEY NOTE	DESCRIPTION
1	PAINT ENTIRE WALL INCLUDING AREA WHERE ACOUSTICAL WALL PANELS WERE PREVIOUSLY REMOVED. PATCH ANY DAMAGED SURFACES WITH PAINTED GYPSUM WALL BOARD. ALL WALL MOUNTED DEVICES SHALL BE RECONNECTED AND REINSTALLED BY PRIME CONTRACTOR RESPONSIBLE FOR PAINTING AND PATCHING WHERE ACOUSTICAL PANELS WHERE PREVIOUSLY REMOVED.
2	PROVIDE NEW 12"x12" VCT FLOORING WITH MOISTURE MITIGATION SYSTEM AND RUBBER WALL BASE OVER EXISTING SUBSTRATE.
3	PROVIDE GYPSUM BOARD PATCHING AND NEW 4" RUBBER WALL BASE AT NEW LOCKERS. NEW LOCKER SYSTEMS TO BE PROVIDED BY LOCKER VENDOR. REFER TO DETAILS FOR ADDITIONAL INFORMATION. ALL WALL MOUNTED DEVICES SHALL BE RECONNECTED AND REINSTALLED BY PRIME CONTRACTOR RESPONSIBLE FOR PROVIDING GYPSUM WALL BOARD PATCHING WHERE PREVIOUSLY REMOVED.
14	INFILL WALL WHERE LOCKERS WERE PREVIOUSLY REMOVED WITH GYPSUM WALL BOARD. ALL WALL MOUNTED DEVICES SHALL BE RECONNECTED AND REINSTALLED BY PRIME CONTRACTOR RESPONSIBLE FOR PROVIDING GYPSUM WALL BOARD PATCHING WHERE PREVIOUSLY REMOVED.

KEYPLAN



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HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND HIGH SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

Project Title

REGISTERED ARCHITECT
JOHN M. RITZENTHALER
043344
STATE OF NEW YORK

Expiration Date: 02/28/2025

NO.	DATE	DESCRIPTION
2	9/8/23	BID ADDENDUM #2

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Sheet Title
FIRST FLOOR NEW WORK PLAN - AREA 'E'

Sheet No.
HHS
A115

CONSTRUCTION DOCUMENTS

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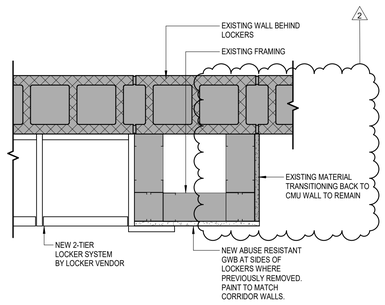
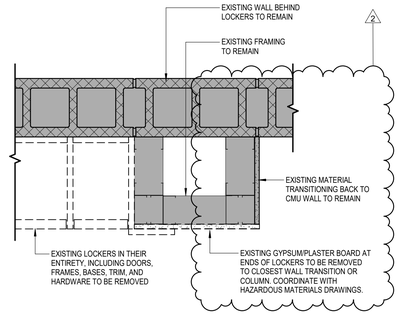
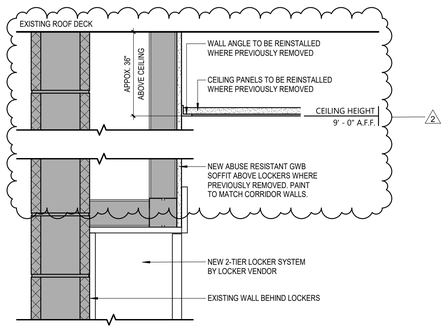


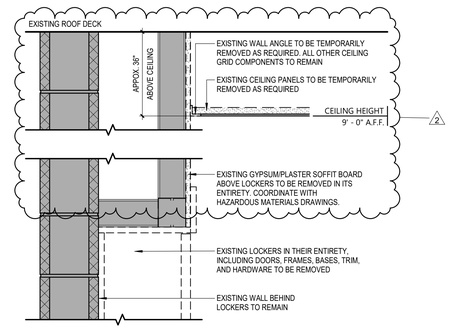
5C NEW LOCKER - ENDS (TYP.)
A351 1 1/2" = 1'-0"



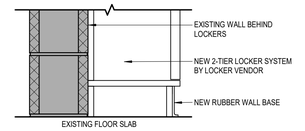
4C LOCKER DEMOLITION - ENDS (TYP.)
A351 1 1/2" = 1'-0"



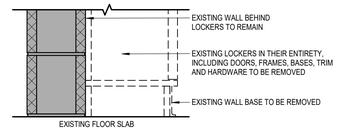
5B NEW LOCKER - SOFFIT
A351 1 1/2" = 1'-0"



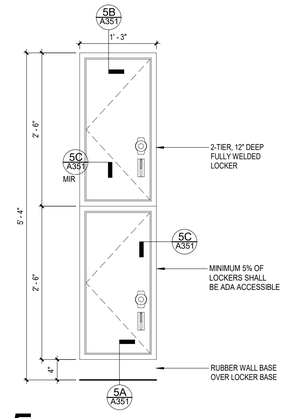
4B LOCKER DEMOLITION - SOFFIT
A351 1 1/2" = 1'-0"



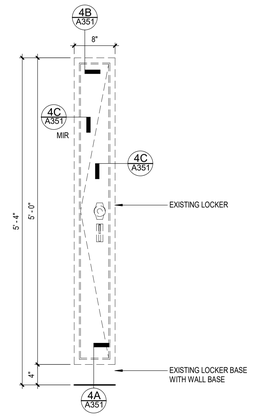
5A NEW LOCKER - BASE
A351 1 1/2" = 1'-0"



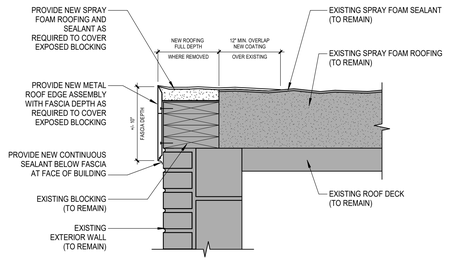
4A LOCKER DEMOLITION - BASE
A351 1 1/2" = 1'-0"



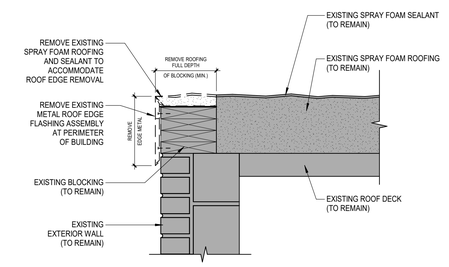
5 NEW LOCKER - TYPE L1
A351 1" = 1'-0"



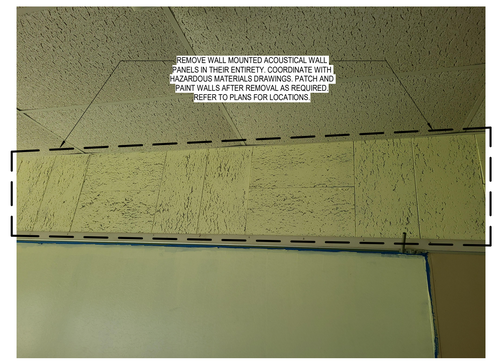
4 EXISTING LOCKER DEMOLITION
A351 1" = 1'-0"



3 NEW ROOF EDGE FLASHING
A351 1 1/2" = 1'-0"



2 ROOF EDGE FLASHING DEMOLITION
A351 1 1/2" = 1'-0"



1 TYP. ACOUSTICAL WALL PANELS
A351 1/2" = 1'-0"

ADA ACCESSIBILITY FOR LOCKERS

ADA LOCKERS:
PROVIDE MINIMUM (40) ADA ACCESSIBLE LOCKER TYPE L1.

GENERAL LOCKER NOTES:
- PROVIDE FILLER PANELS BETWEEN LOCKERS AND WALLS AS NEEDED.
- PROVIIDE FILLER PANELS BETWEEN LOCKERS AT CORNER AREAS AS NEEDED.
- PROVIDE FINISHED END PANELS AT EACH EXPOSED END OF LOCKERS

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Project Title
HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND HIGH SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

REGISTERED ARCHITECT JOHN M. FITZPATRICK 032334 STATE OF NEW YORK

Expiration Date: 02/28/2025

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Sheet Title
SECTION DETAILS

Sheet No.
HHS A351

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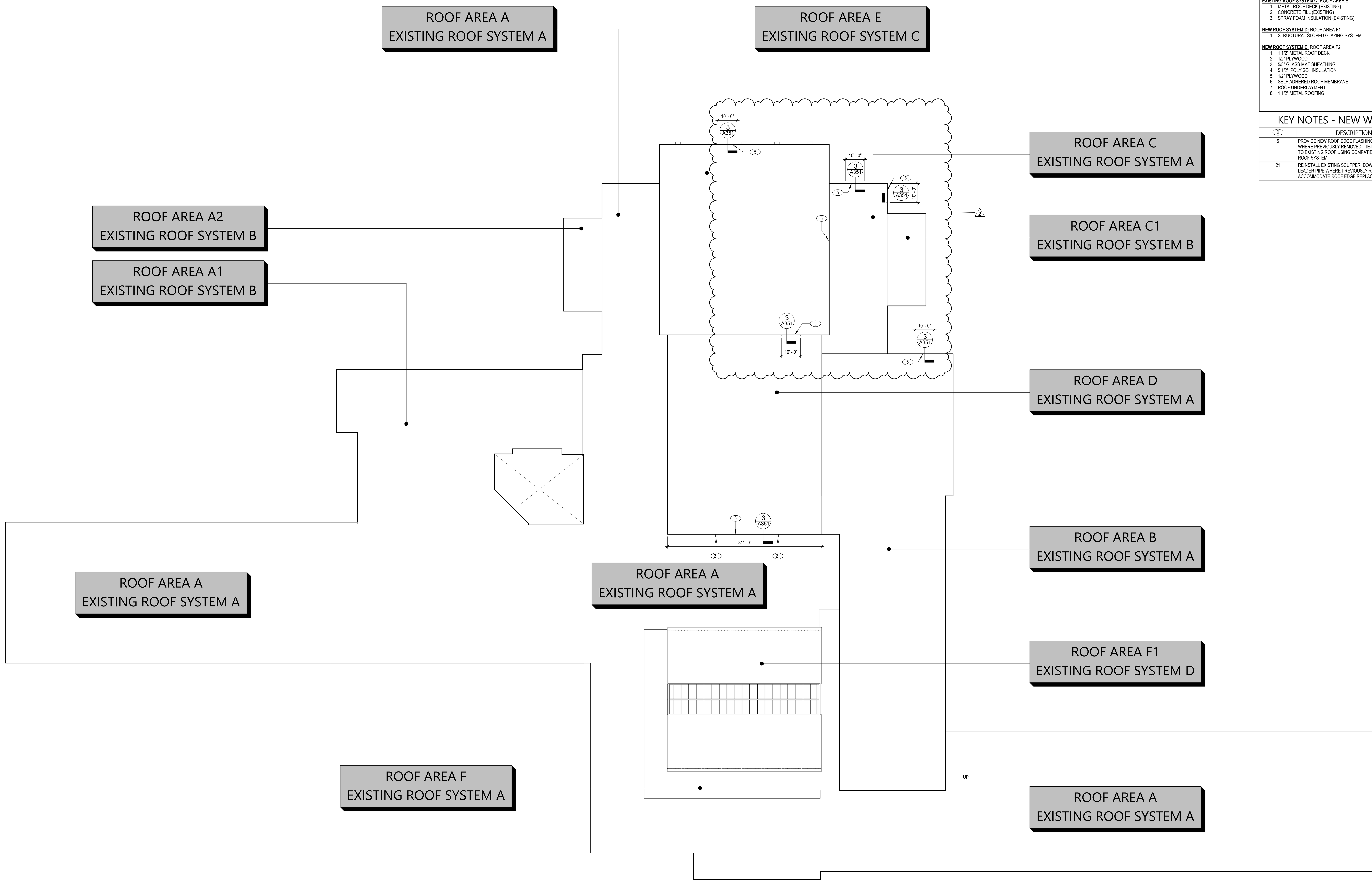

1 OVERALL ROOF NEW WORK PLAN
A400 1" = 20'-0"

ROOF DESCRIPTIONS

EXISTING ROOF SYSTEM A: ROOF AREAS A, B, C, D, & F
1. TECTUM ROOF DECK (EXISTING)
2. SPRAY FOAM INSULATION (EXISTING)

EXISTING ROOF SYSTEM B: ROOF AREAS A1, A2, & C1
1. METAL ROOF DECK (EXISTING)
2. GYPSUM SHEATHING (EXISTING)
3. SPRAY FOAM INSULATION (EXISTING)

EXISTING ROOF SYSTEM C: ROOF AREA E
1. METAL ROOF DECK (EXISTING)
2. CONCRETE FILL (EXISTING)
3. SPRAY FOAM INSULATION (EXISTING)

NEW ROOF SYSTEM D: ROOF AREA F1
1. STRUCTURAL SLOPED GLAZING SYSTEM

NEW ROOF SYSTEM E: ROOF AREA F2
1. 1 1/2" METAL ROOF DECK
2. 1/2" PLYWOOD
3. 5/8" GLASS MAT SHEATHING
4. 5 1/2" 'POLYISO' INSULATION
5. 1/2" PLYWOOD
6. SELF ADHERED ROOF MEMBRANE
7. ROOF UNDERLAYMENT
8. 1 1/2" METAL ROOFING

KEY NOTES - NEW WORK

X	DESCRIPTION
5	PROVIDE NEW ROOF EDGE FLASHINGS AND FASCIAS WHERE PREVIOUSLY REMOVED. TIE-IN NEW FLASHINGS TO EXISTING ROOF USING COMPATIBLE SPRAY FOAM ROOF SYSTEM.
21	REINSTALL EXISTING SCUPPER, DOWNSPOUT, AND LEADER PIPE WHERE PREVIOUSLY REMOVED TO ACCOMMODATE ROOF EDGE REPLACEMENT WORK.

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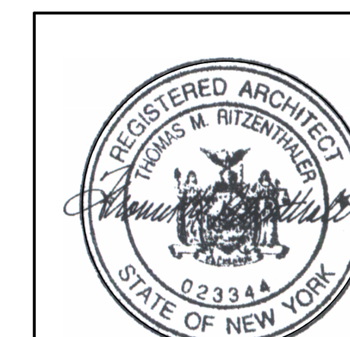
HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND HIGH SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1



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Sheet Title

OVERALL ROOF NEW WORK PLAN

Sheet No.

HHS A400

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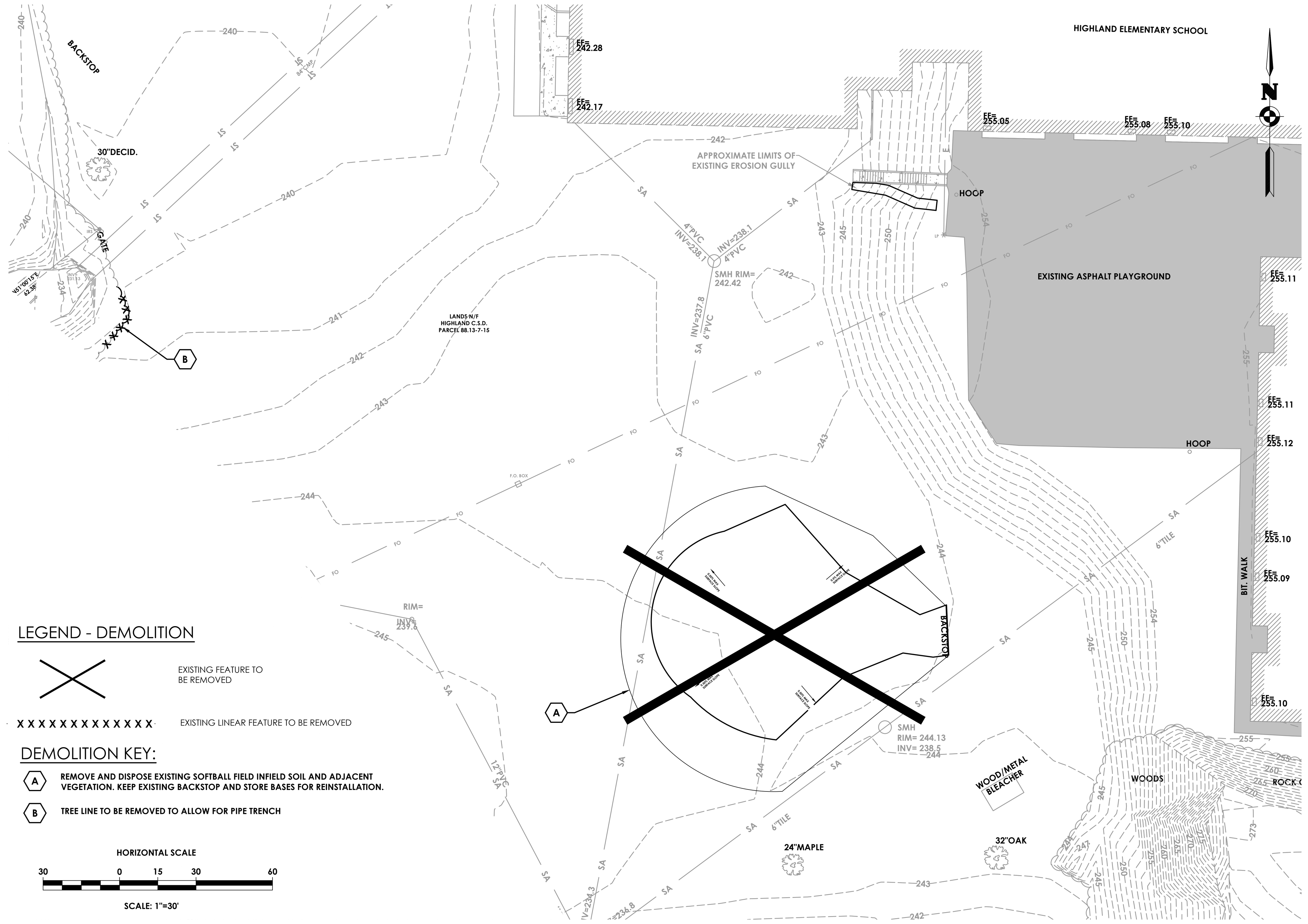
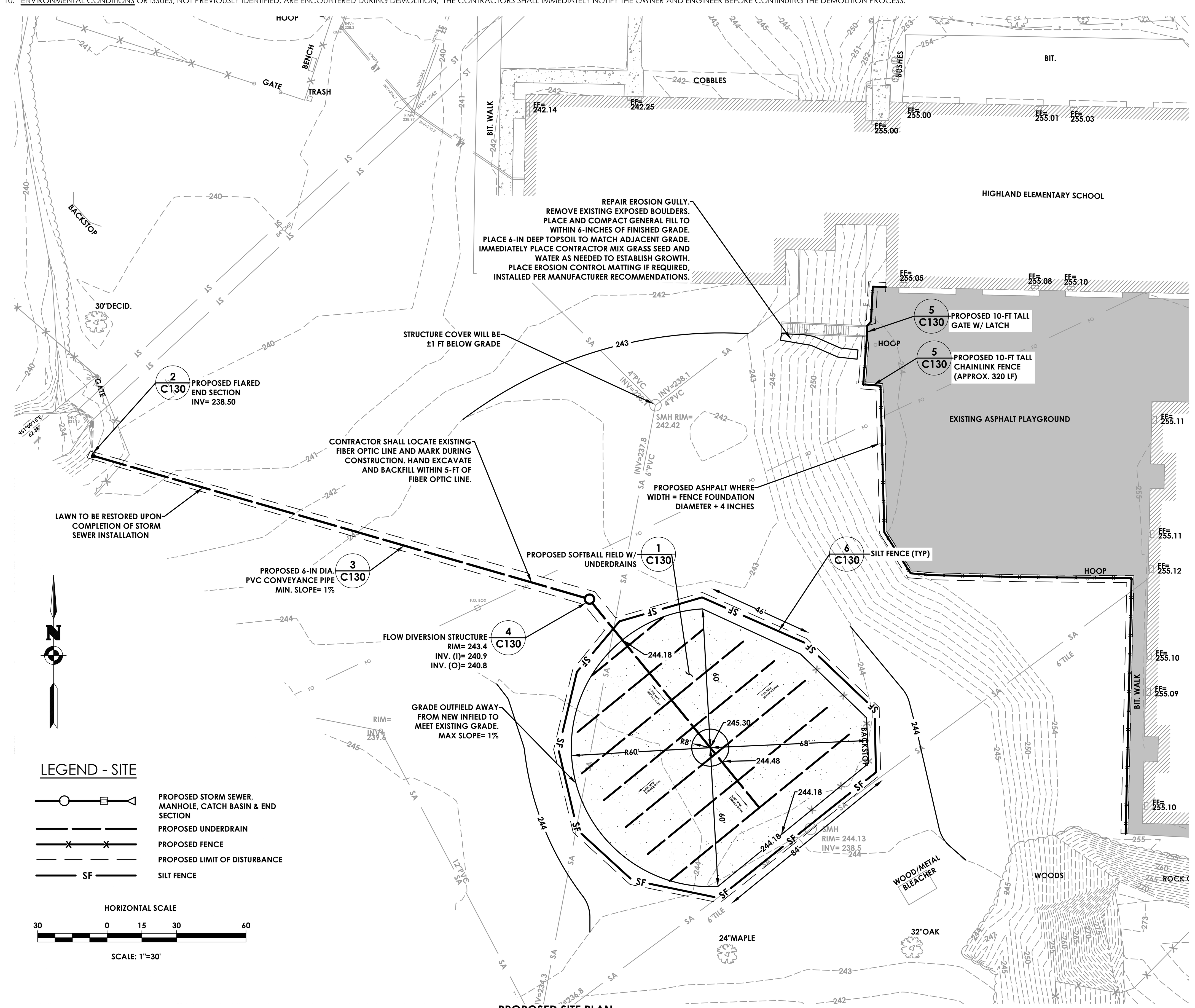


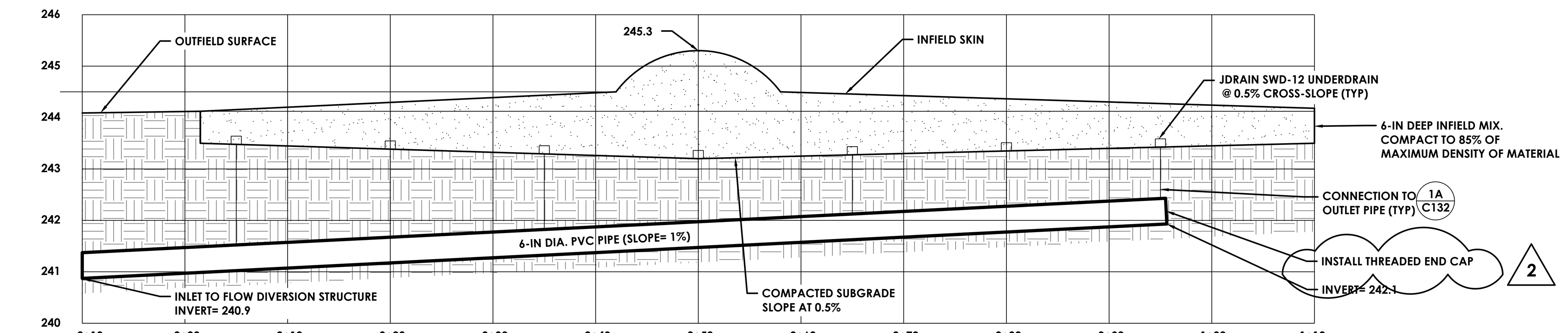
EXISTING CONDITIONS AND DEMOLITION PLAN

DEMOLITION NOTES:

1. DIMENSIONS SHOWN ARE APPROXIMATE AND MARY VARY BASED ON FIELD CONDITIONS.
2. SECURITY PROVIDE, INSTALL AND MAINTAIN TEMPORARY BARRIERS AND SECURITY DEVICES.
3. DIG SAFE CONTRACTOR IS RESPONSIBLE TO CALL DIG SAFE PRIOR TO BEGINNING DEMOLITION.
4. APPLICABILITY THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK SHOWN INCLUDING ALL REMOVALS AS NECESSARY FOR THE CONSTRUCTION OF THE WORK EVEN IF NOT SPECIFICALLY NOTED ON THE CONTRACT DOCUMENTS.
5. COORDINATION CONTRACTOR SHALL COORDINATE THE REMOVAL OF DEMOLISHED MATERIAL WITH THE OWNERS REPRESENTATIVE SITE FURNISHINGS AND MATERIAL DETERMINED TO TO BE REMOVED SHALL BE REMOVED AND EXPORTED OFFSITE IN A LEGAL MANNER AND IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
6. PROTECT ALL EXISTING FEATURES TO REMAIN. DAMAGE TO EXISTING ASPHALT, LAWN AND OTHER FEATURES TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
7. EXISTING UTILITIES THAT ARE PROPOSED TO BE REMOVED, UNLESS OTHERWISE INDICATED, SHALL BE EXCAVATED, UTILITY MATERIAL REMOVED, AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE SPECIFICATIONS. ALL TRENCHES SHALL BE BACKFILLED WITH GRANULAR FILL, COMPACTED IN 12" LIFTS TO 95% MODIFIED PROCTOR TEST. ALL DISTURBED AREAS SHALL BE RESTORED IN KIND IN ACCORDANCE WITH THE DETAILS IN THESE PLANS AND AT A MINIMUM TO THEIR ORIGINAL STATE.
8. SAWCUT AREAS OF ASPHALT AND CONCRETE REMOVAL SHALL BE SAWCUT WITH A NEAT STRAIGHT LINE AT ALL REMOVAL LIMITS.
9. PERMITS CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL PERMITS REQUIRED FOR DEMOLITION AND CONSTRUCTION, INCLUDING ALL FEES ASSOCIATED WITH THOSE PERMITS, IN THE BID.
10. ENVIRONMENTAL CONDITIONS OR ISSUES, NOT PREVIOUSLY IDENTIFIED, ARE ENCOUNTERED DURING DEMOLITION, THE CONTRACTORS SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER BEFORE CONTINUING THE DEMOLITION PROCESS.

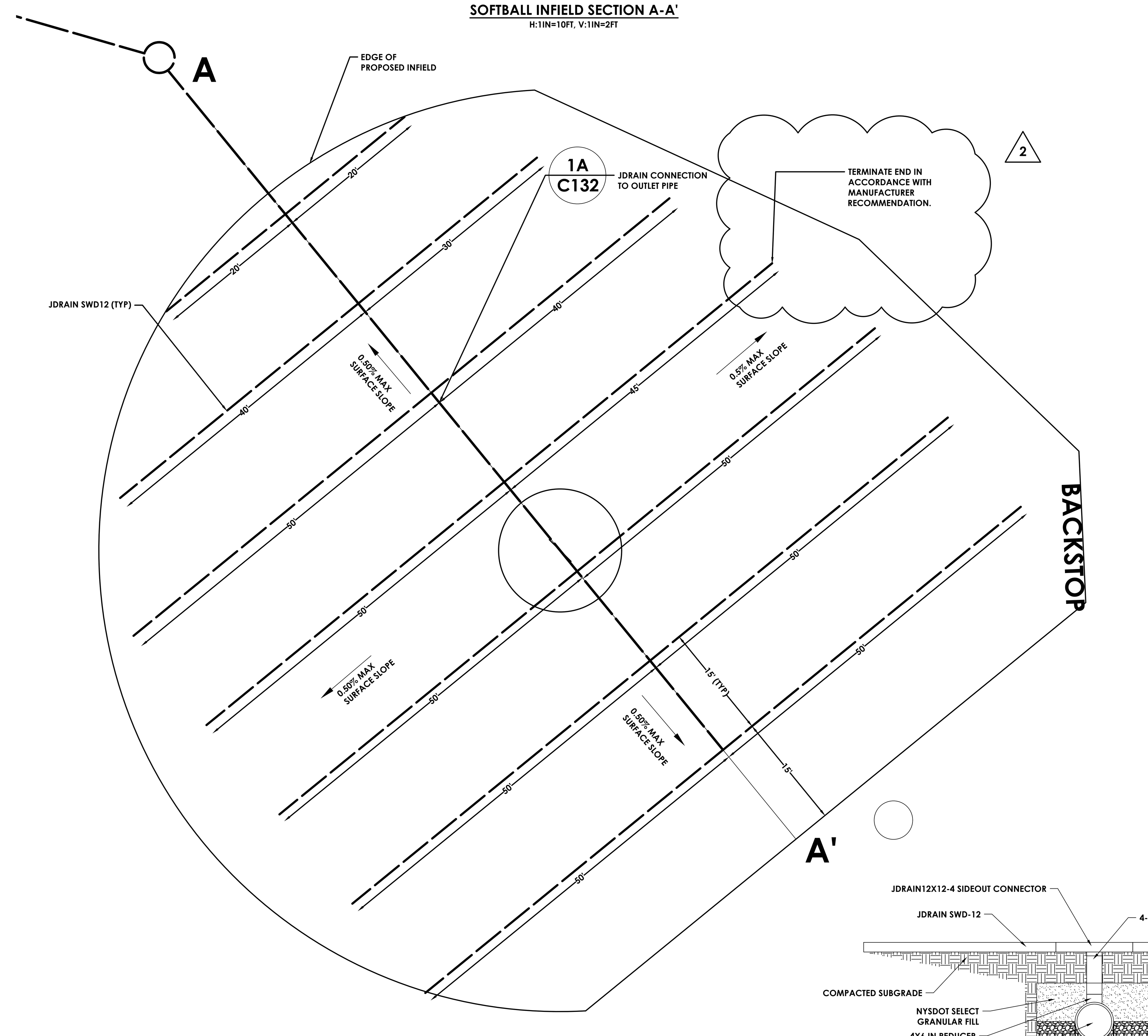


PROPOSED SITE PLAN



SOFTBALL INFIELD SECTION A-A'

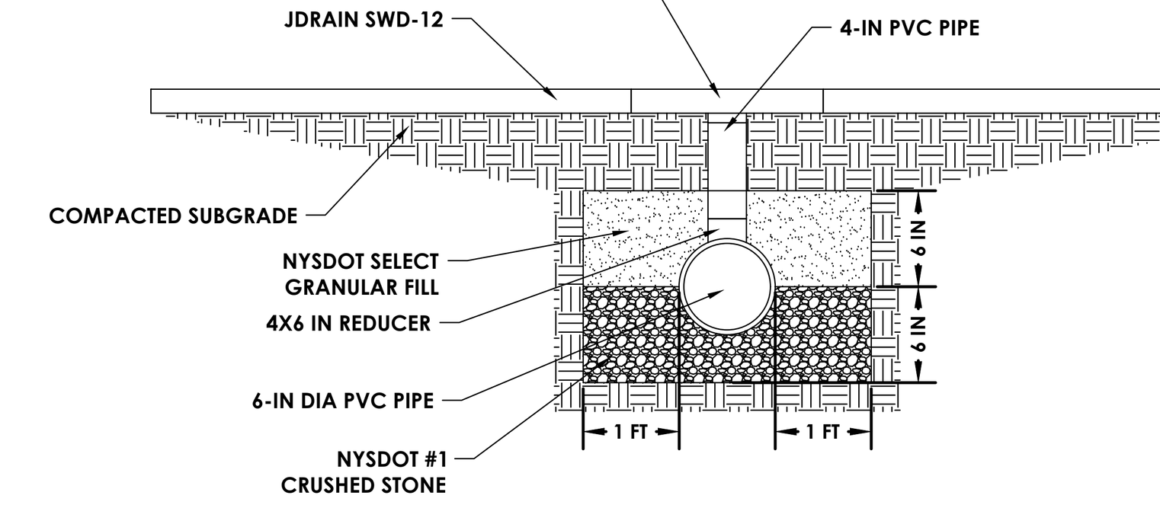
H:1IN=10FT, V:1IN=2FT



1 **SOFTBALL INFIELD UNDERDRAIN PLAN AND SECTION**

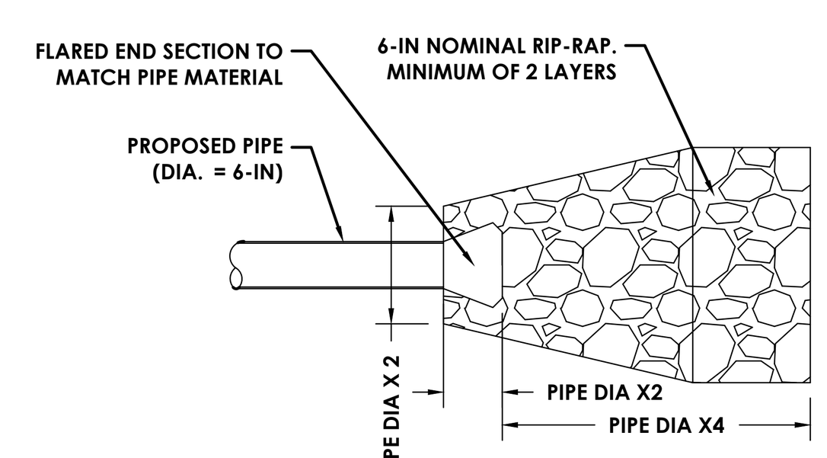
HORIZONTAL SCALE

SCALE: 1"=10'



1A **J-DRAIN CONNECTION AND PIPE BEDDING DETAIL**

NTS

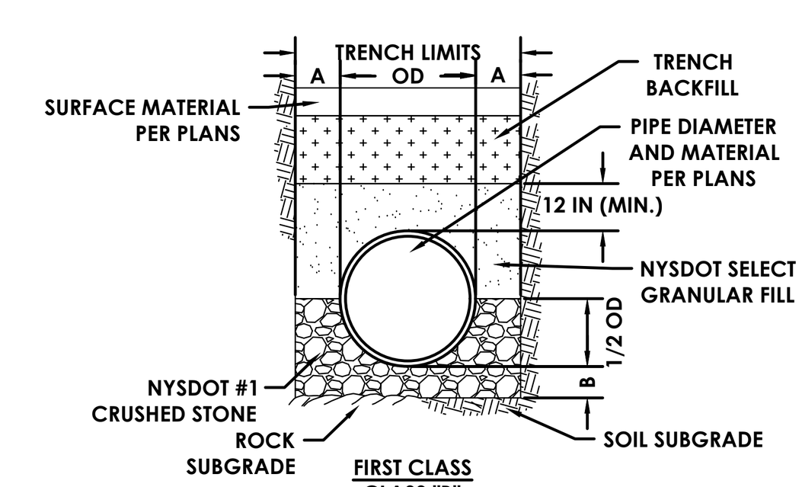


2 **FLARED END SECTION AND STONE RIP-RAP DETAIL**

N.T.S.

NOTES

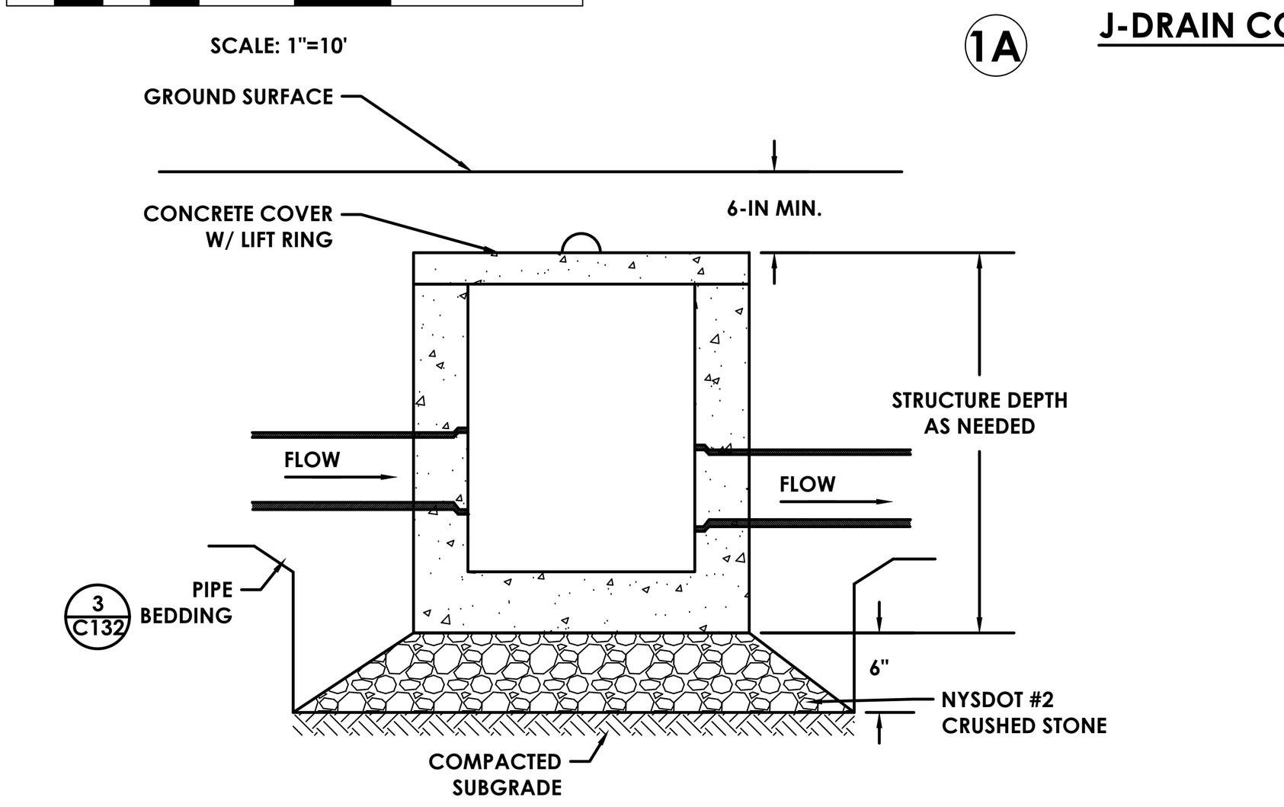
1. RIP RAP SHALL BE PLACED ON 6" THICK BEDDING MATERIAL MEETING NYSDOT STANDARD SPECIFICATION SECTION 620 - COARSE AGGREGATE FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIAL AND THIN OR ELONGATED PARTICLES (703-02).
2. FLARED END SECTION SHALL BE CONNECTED TO PIPE PER MANUFACTURER'S RECOMMENDATIONS.



3 **CONVEYANCE PIPE BEDDING DETAIL**

NOTES

1. TRENCH BACKFILL SHALL NYSDOT SELECT GRANULAR FILL, OR SUITABLE NATIVE SOIL APPROVED BY THE ENGINEER AND SHALL BE COMPACTED TO 95% MODIFIED PROCTOR.
2. SUBGRADE ON TRENCH BOTTOM SHALL BE COMPACTED TO A FIRM, UNYIELDING STATE PRIOR TO PLACEMENT OF ANY MATERIALS ABOVE IT.

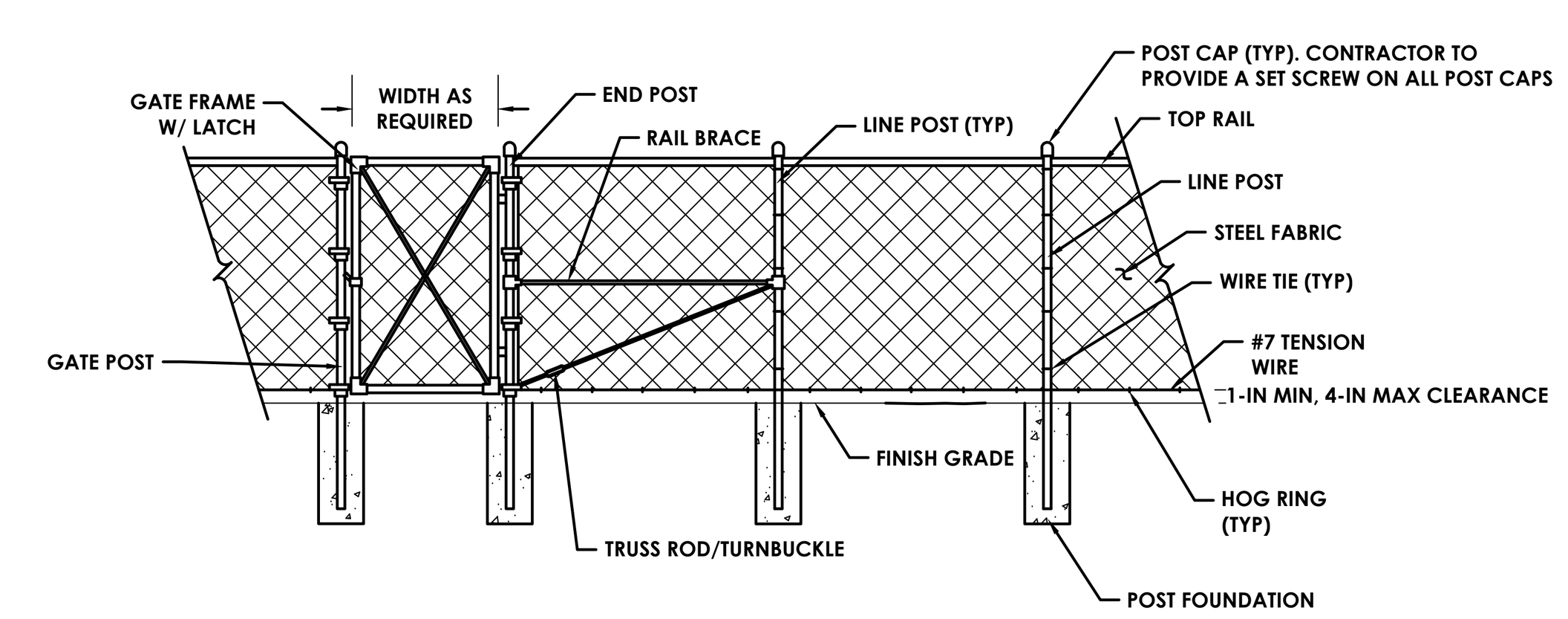


4 **FLOW DIVERSION STRUCTURE DETAIL**

N.T.S.

NOTES:

1. SUBGRADE SHALL BE COMPACTED TO A FIRM, UNYIELDING STATE PRIOR TO PLACEMENT OF ANY MATERIALS ABOVE IT. A WATER-PERMEABLE SEPARATION FABRIC SHALL BE INSTALLED BETWEEN THE SUBGRADE AND STONE MATERIALS.
2. PLACE TOPSOIL AND GRASS SEED ABOVE STRUCTURE TO MATCH ADJACENT ELEVATION, SLOPE, AND VEGETATION.

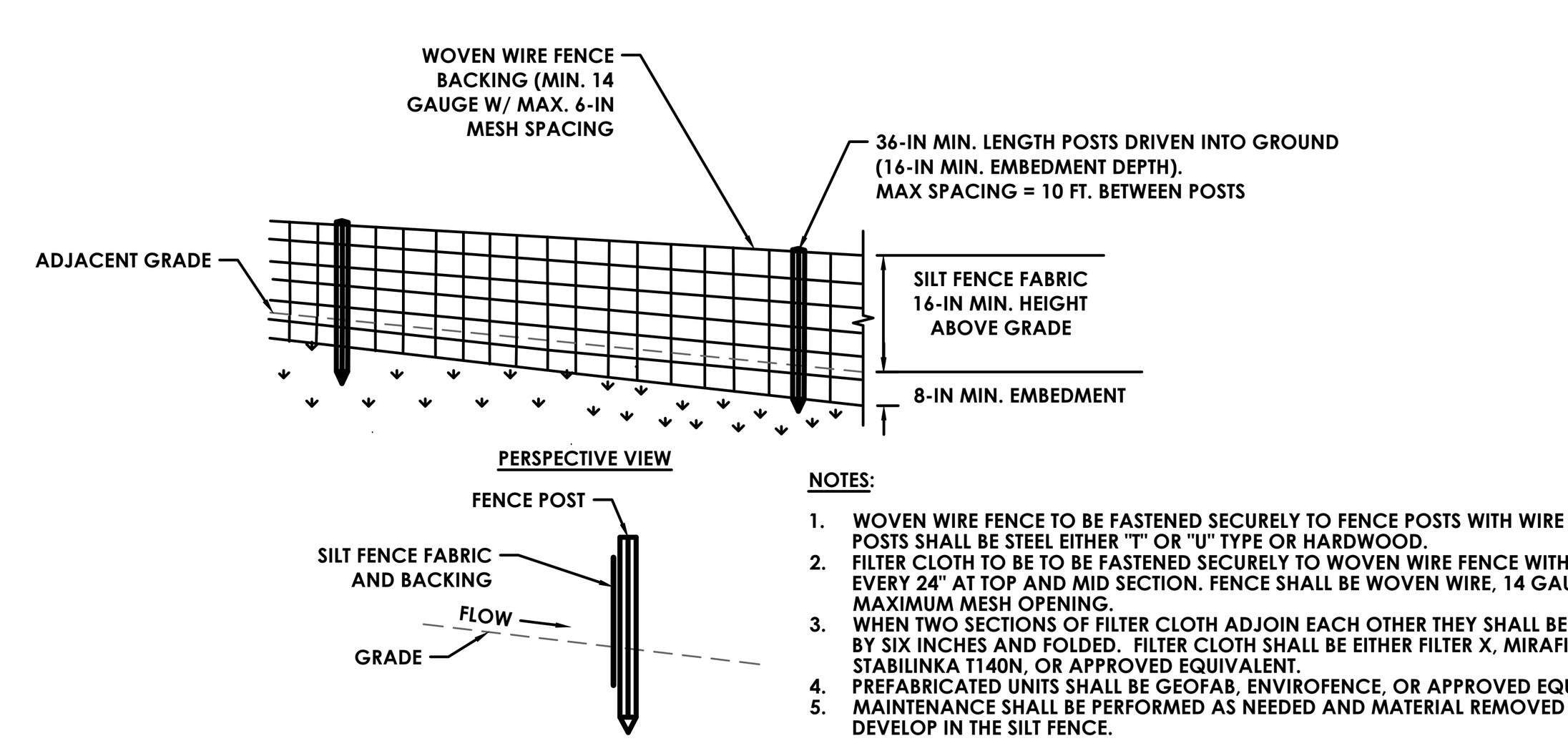


5 **10 FOOT HIGH CHAIN-LINK PERIMETER-SECURITY FENCE**

N.T.S.

NOTES

1. A GROUNDING ROD AND CONNECTION SHALL BE PLACED EVERY 500 FT.



NOTES:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 14 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER- LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

6 SILT FENCE DETAIL

N.T.S.

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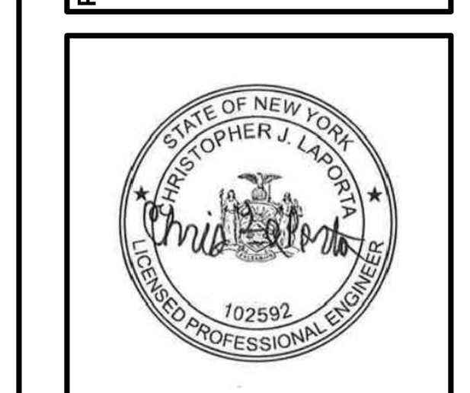
Project Title

HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND ELEMENTARY SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1



#	DATE	DESCRIPTION
2	09/08/23	BID ADDENDUM #2

Drawn By:	RV
Checked By:	CJL
Proj. #:	62-08-03-04-0-010-014
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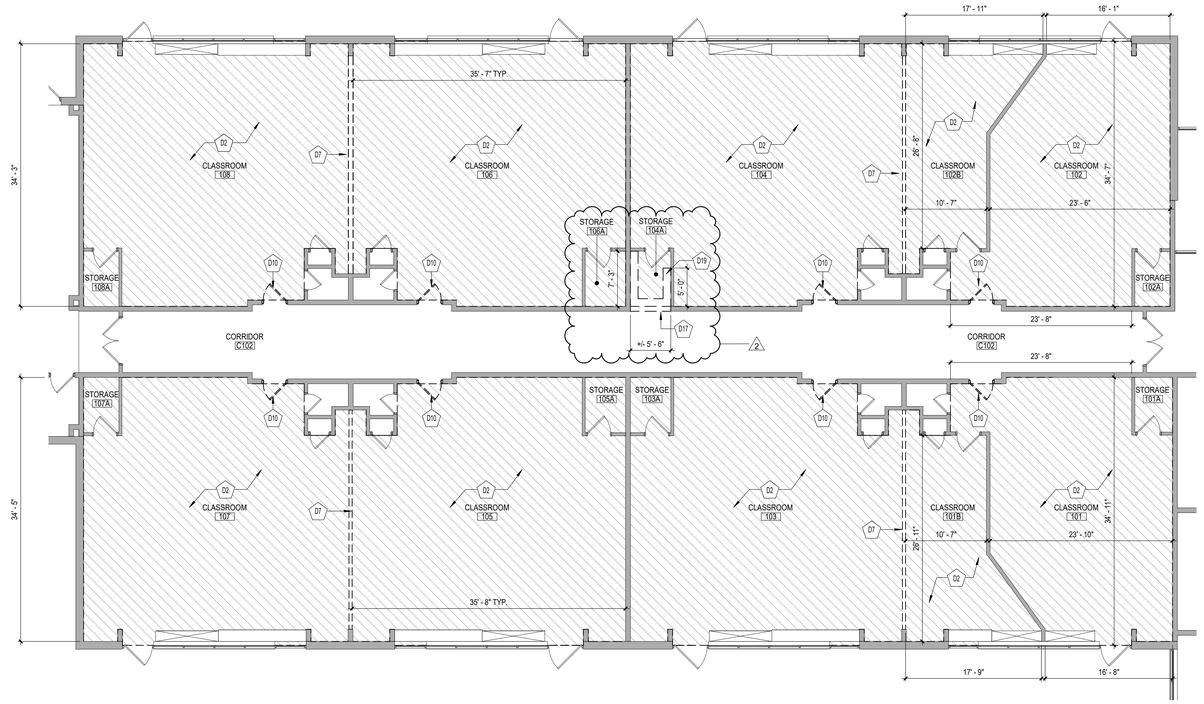
Sheet Title

DEMOLITION PLAN, SITE PLAN, AND DETAILS

Sheet No.

HES C130

CONSTRUCTION DOCUMENTS



1 FIRST FLOOR DEMOLITION PLAN - AREA 'B'
AD112 1/8" = 1'-0"

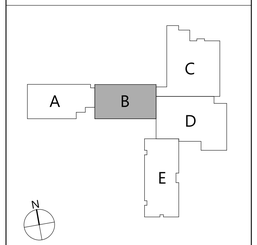
GENERAL NOTES

1. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION.
2. PATCH AND REPLACE EXISTING AND NEWLY CREATED HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION.
3. SALVAGED ITEMS SHALL BE TURNED OVER TO OWNER, UNO
4. ALL KEYED REMOVALS SHALL INCLUDE REMOVAL OF ANY AND ALL ANCHORING SYSTEMS INCLUDING OBJECTS EMBEDDED INTO EXISTING WALLS.
5. REFER TO ASBESTOS AND MEP DRAWINGS FOR ADDITIONAL REMOVAL INFORMATION.
6. PROVIDE TEMPORARY SHORING AS NECESSARY AT ALL AREAS OF WALL REMOVAL AND NEW WALL PENETRATIONS.
7. DRILL CORNERS OF ALL NEW SAWCUT OPENING PRIOR TO SAWCUTTING, TO PREVENT CUTTING INTO SCHEDULED CONSTRUCTION TO REMAIN.

KEY NOTES - DEMOLITION

X	DESCRIPTION
D2	REMOVE EXISTING RESILIENT TILE FLOORING, WALL BASE, AND MASTIC IN IT'S ENTIRETY. COORDINATE WITH HAZARDOUS MATERIALS DRAWINGS.
D7	REMOVE EXISTING MOVABLE DIVIDING PARTITION IN ITS ENTIRETY INCLUDING TRACKS, PANELS, AND HARDWARE.
D10	REMOVE EXISTING DOOR AND HARDWARE IN ITS ENTIRETY.
D17	REMOVE PORTION OF EXISTING MASONRY WALL TO ACCOMMODATE NEW ELECTRICAL WORK. COORDINATE WITH ELECTRICAL DRAWINGS.
D19	REMOVE EXISTING WOOD SHELVING SYSTEM IN ITS ENTIRETY TO ACCOMMODATE ELECTRICAL WORK. OWNER TO REMOVE ALL STORED MATERIALS PRIOR TO DEMOLITION.

KEYPLAN



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HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND ELEMENTARY SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

Project Title

REGISTERED ARCHITECT JOHN M. RITZENTHALER 023345 STATE OF NEW YORK

Expiration Date: 02/28/2025

2	9/8/23	BID ADDENDUM #2
1	8/18/23	BID ADDENDUM #1
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Sheet Title
FIRST FLOOR DEMOLITION PLAN - AREA 'B'

Sheet No.
HES
AD112

CONSTRUCTION DOCUMENTS

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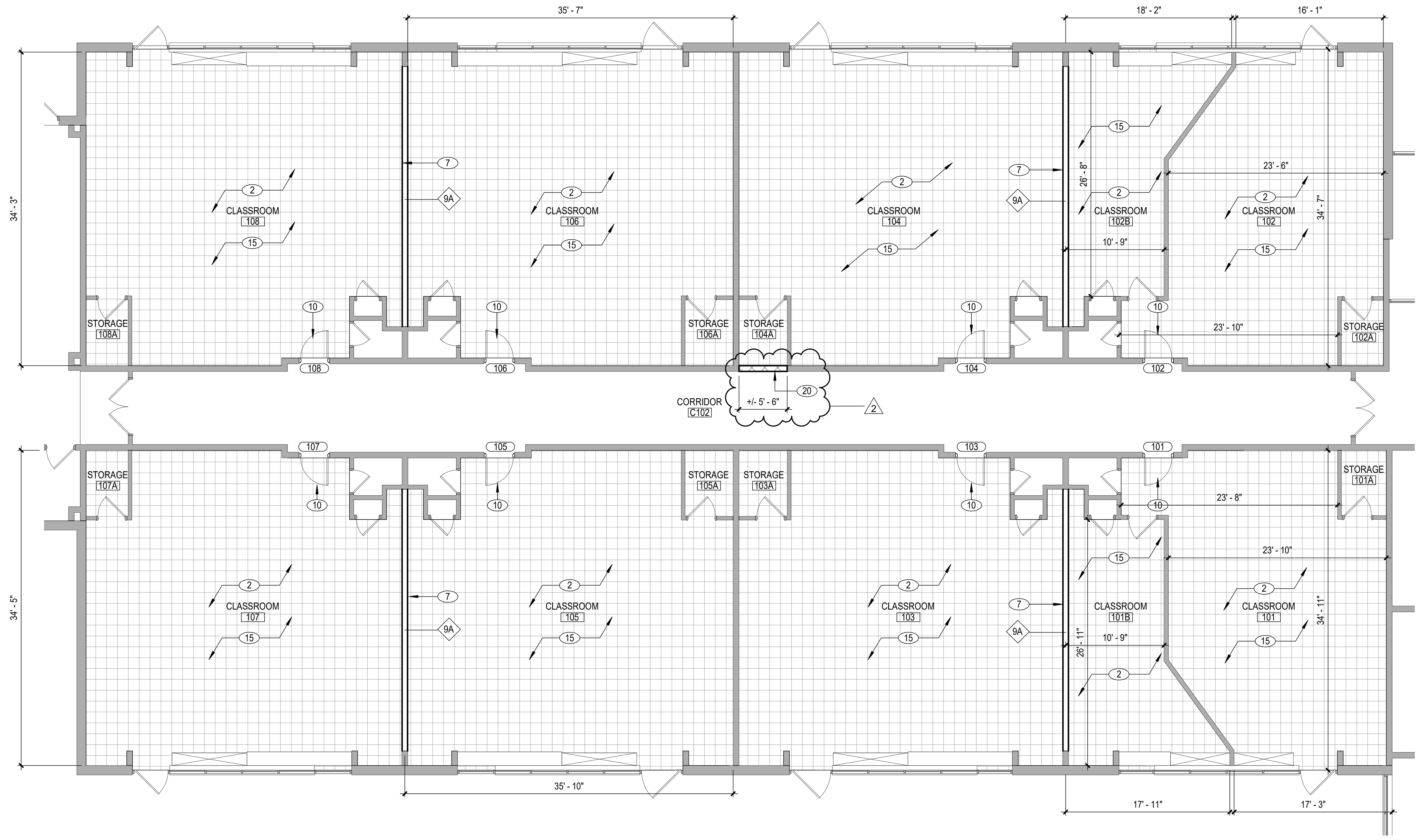


1 FIRST FLOOR NEW WORK PLAN - AREA 'B'
A112 1/8" = 1'-0"

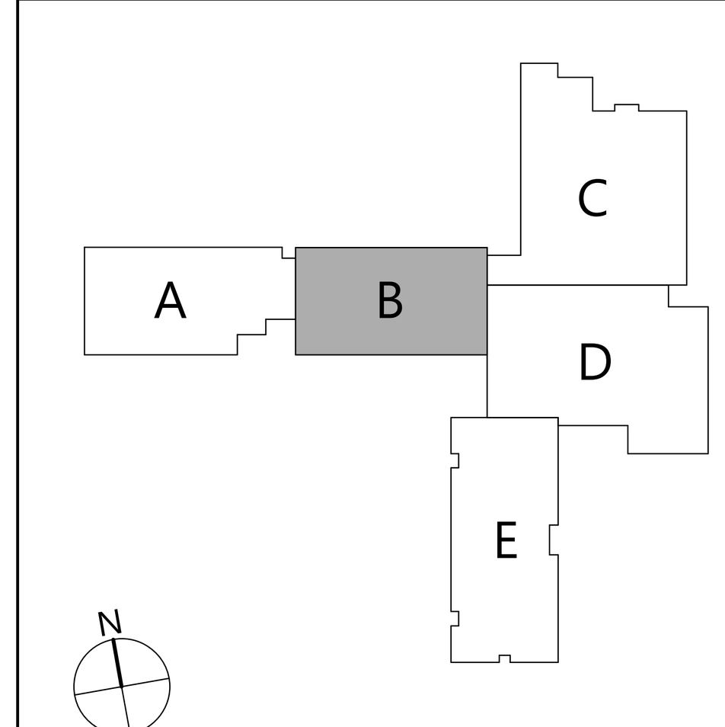
GENERAL NOTES

1. REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
2. REFER TO AD800 SERIES AND A800 SERIES DRAWINGS FOR CEILINGS, LIGHTING, DEVICES, AND NOTES.
3. REFER TO A900 SERIES DRAWINGS FOR DOOR, STOREFRONT, CURTAINWALL, WINDOW AND LOUVER SCHEDULES, DETAILS AND NOTES.

KEY NOTES - NEW WORK

X	DESCRIPTION
2	PROVIDE NEW 12"x12" VCT FLOORING WITH MOISTURE MITIGATION SYSTEM AND RUBBER WALL BASE OVER EXISTING SUBSTRATE.
7	PROVIDE PERMANENT PARTITION BETWEEN CLASSROOMS. REFER TO SECTION DETAILS. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL DRAWINGS.
10	PROVIDE NEW DOOR AND HARDWARE. REFER TO DOOR SCHEDULE.
15	PAINT ALL WALLS IN CLASSROOM FROM WALL BASE TO CEILING. PROTECT EXISTING EQUIPMENT AS REQUIRED. PAINT COLOR TO BE SELECTED BY OWNER.
20	PROVIDE NEW CMU INFILL AROUND NEW ELECTRICAL EQUIPMENT. PAINT CMU TO MATCH ADJACENT WALLS. COORDINATE WITH ELECTRICAL DRAWINGS.

KEYPLAN



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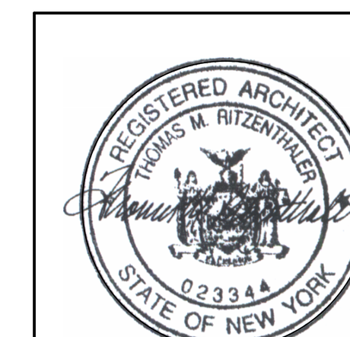
Project Title

HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND ELEMENTARY SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1



Expiration Date: 02/28/2025

#	DATE	DESCRIPTION
2	9/8/23	BID ADDENDUM #2

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Proj. #:	62-08-03-04-0-010-014
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Issued for Bid:	08/18/23

Sheet Title
FIRST FLOOR NEW WORK PLAN - AREA 'B'

Sheet No.
HES A112

CONSTRUCTION DOCUMENTS

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GENERAL NOTES

1. REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
2. REFER TO AD800 SERIES AND A800 SERIES DRAWINGS FOR CEILINGS, LIGHTING, DEVICES, AND NOTES.
3. REFER TO A900 SERIES DRAWINGS FOR DOOR, STOREFRONT, CURTAINWALL, WINDOW AND LOUVER SCHEDULES, DETAILS AND NOTES.

KEY NOTES - NEW WORK

X	DESCRIPTION
2	PROVIDE NEW 12"x12" VCT FLOORING WITH MOISTURE MITIGATION SYSTEM AND RUBBER WALL BASE OVER EXISTING SUBSTRATE.
7	PROVIDE PERMANENT PARTITION BETWEEN CLASSROOMS. REFER TO SECTION DETAILS. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL DRAWINGS.
10	PROVIDE NEW DOOR AND HARDWARE. REFER TO DOOR SCHEDULE.
15	PAINT ALL WALLS IN CLASSROOM FROM WALL BASE TO CEILING. PROTECT EXISTING EQUIPMENT AS REQUIRED. PAINT COLOR TO BE SELECTED BY OWNER.

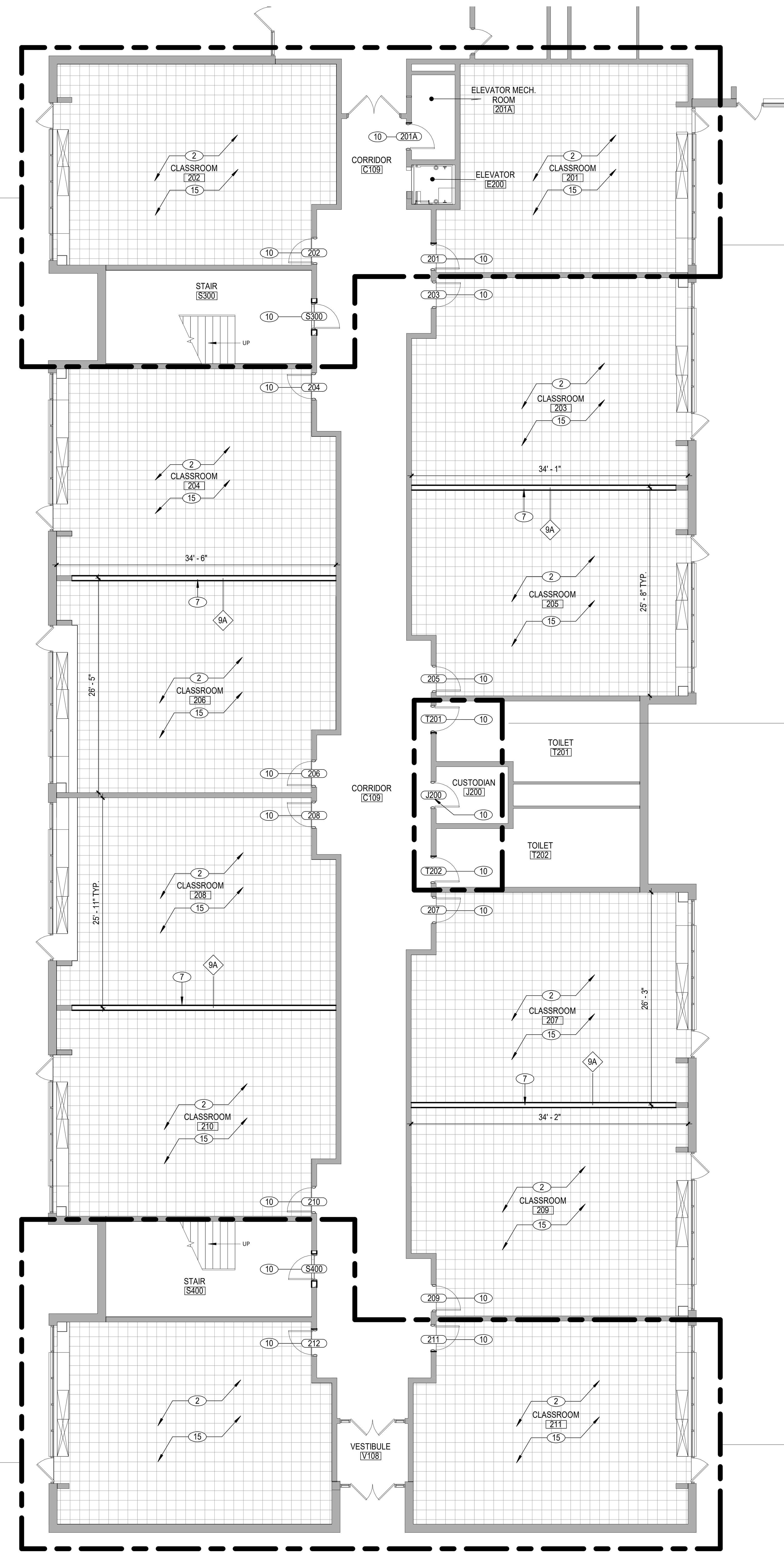
ADD Alternate No. GC-02-001-ES

ADD Alternate No. GC-02-001-ES

ADD Alternate No. GC-02-001-ES

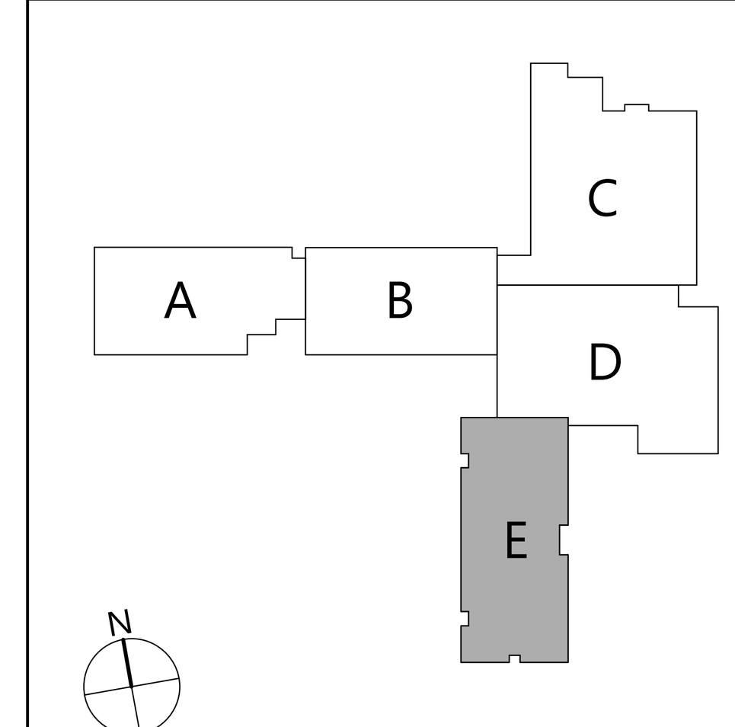
ADD Alternate No. GC-02-001-ES

ADD Alternate No. GC-02-001-ES



1 FIRST FLOOR NEW WORK PLAN - AREA 'E'
A115 1/8" = 1'-0"

KEYPLAN



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Project Title

HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND ELEMENTARY SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

REGISTERED ARCHITECT THOMAS M. RITZENTHALER 023344 STATE OF NEW YORK
Expiration Date: 02/28/2025

#	DATE	DESCRIPTION
2	9/8/23	BID ADDENDUM #2

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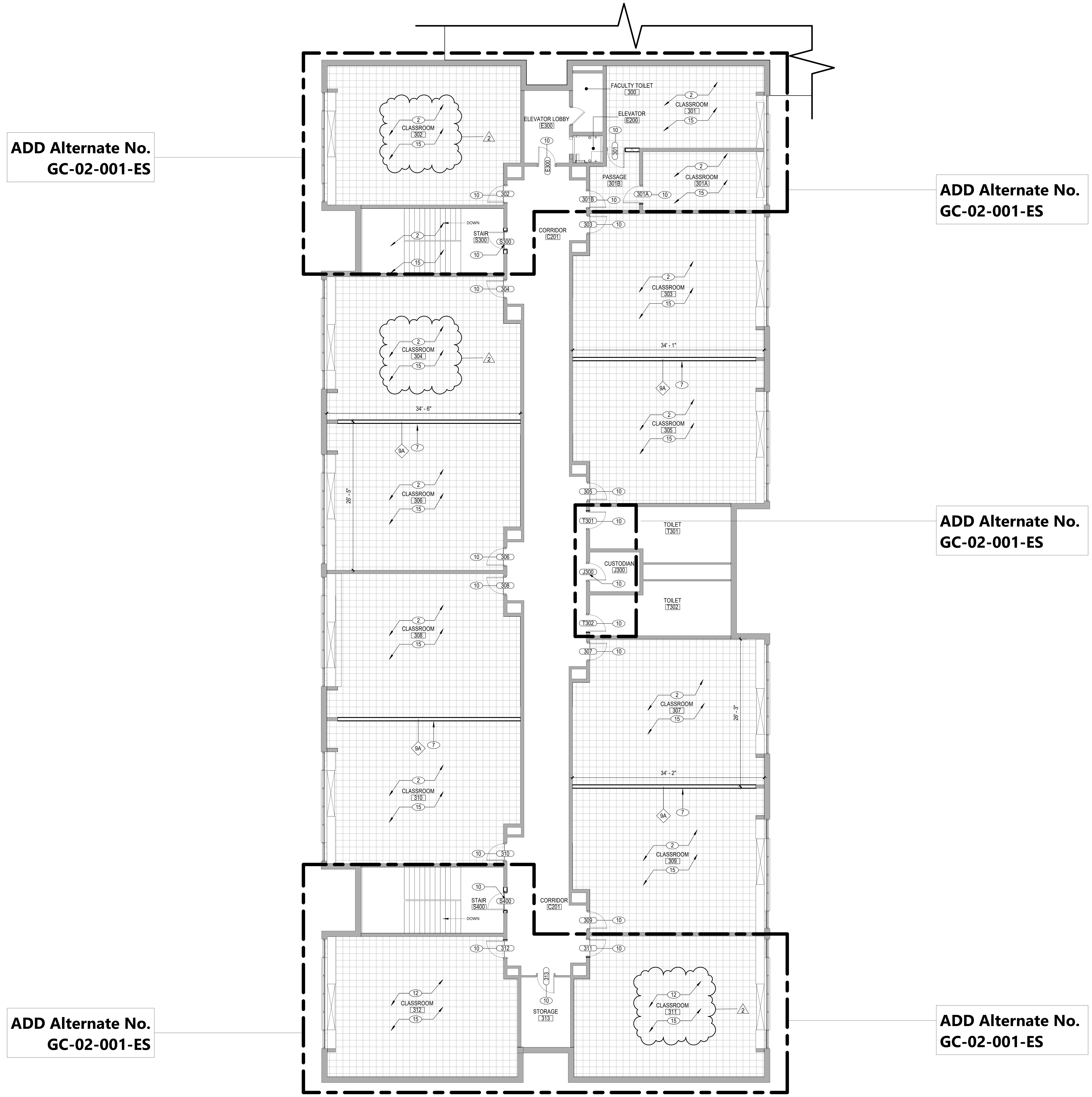
Checked By:	CSA
Proj. #:	62-08-03-04-0-010-014
CSArch Proj. #:	197-2201.01
Issued for Bid:	08/18/23

Sheet Title
FIRST FLOOR NEW WORK PLAN - AREA 'E'

Sheet No.
HES A115

CONSTRUCTION DOCUMENTS



1 SECOND FLOOR NEW WORK PLAN - AREA 'E'

A125 1/8" = 1'-0"

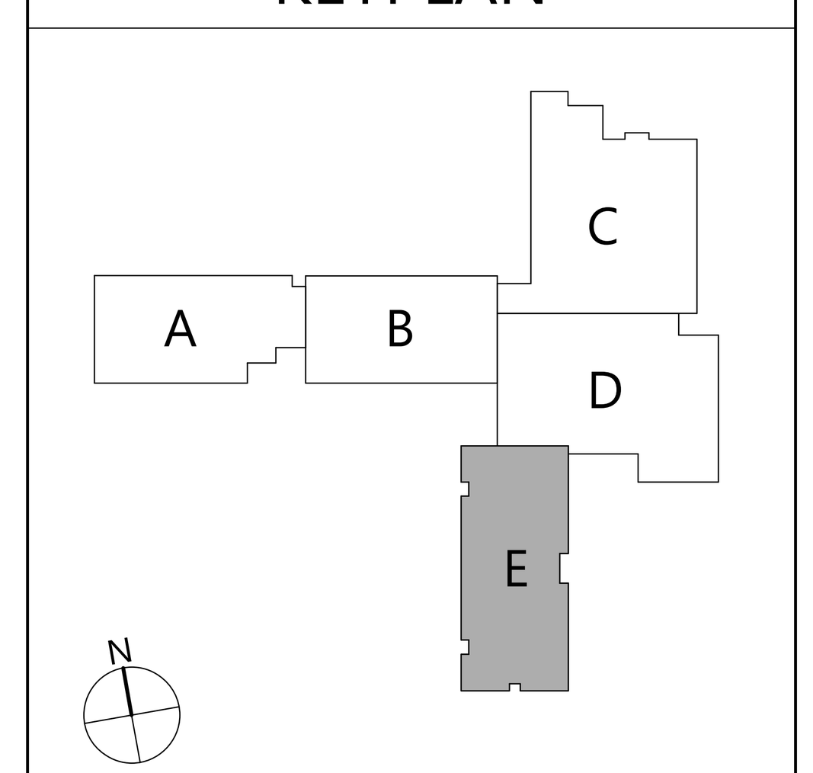
GENERAL NOTES

1. REFER TO SHEET G001 FOR ADDITIONAL GENERAL NOTES.
2. REFER TO AD800 SERIES AND A800 SERIES DRAWINGS FOR CEILINGS, LIGHTING, DEVICES, AND NOTES.
3. REFER TO A900 SERIES DRAWINGS FOR DOOR, STOREFRONT, CURTAINWALL, WINDOW AND LOUVER SCHEDULES, DETAILS AND NOTES.

KEY NOTES - NEW WORK

X	DESCRIPTION
2	PROVIDE NEW 12"x12" VCT FLOORING WITH MOISTURE MITIGATION SYSTEM AND RUBBER WALL BASE OVER EXISTING SUBSTRATE.
7	PROVIDE PERMANENT PARTITION BETWEEN CLASSROOMS. REFER TO SECTION DETAILS. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL DRAWINGS.
10	PROVIDE NEW DOOR AND HARDWARE. REFER TO DOOR SCHEDULE.
12	PROVIDE NEW CONCRETE SLAB TO EXTENTS INDICATED. COORDINATE WITH STRUCTURAL DRAWINGS.
15	PAINT ALL WALLS IN CLASSROOM FROM WALL BASE TO CEILING. PROTECT EXISTING EQUIPMENT AS REQUIRED. PAINT COLOR TO BE SELECTED BY OWNER.

KEYPLAN



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HIGHLAND CENTRAL SCHOOL DISTRICT
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2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

REGISTERED ARCHITECT THOMAS M. RITZENTHALER 023344 STATE OF NEW YORK

Expiration Date: 02/28/2025

#	DATE	DESCRIPTION
2	9/8/23	BID ADDENDUM #2

Drawn By:	CSA
Checked By:	CSA
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Sheet Title

SECOND FLOOR NEW WORK PLAN - AREA 'E'

Sheet No.

HES A125

CONSTRUCTION DOCUMENTS

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GLAZING TYPES

CCL	LOW-E COATED, INSULATED GLASS
CI	CLEAR INSULATED GLASS
FR	FIRE RATED GLASS
FT	FULLY TEMPERED GLASS
LM	LAMINATED GLASS
SP	SPANDREL GLASS

DOOR SCHEDULE

DOOR NUMBER	QUANTITY	FROM		TO		DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	LABEL (MIN)	GLAZING	HARDWARE	MAG HOLD-OPEN	ACCESS CONTROL	REMARKS	DOOR NUMBER
101	1	101	CLASSROOM	C102	CORRIDOR	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				101
102	1	C102	CORRIDOR	102	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				102
103	1	103	CLASSROOM	C102	CORRIDOR	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				103
104	1	C102	CORRIDOR	104	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				104
105	1	105	CLASSROOM	C102	CORRIDOR	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				105
106	1	C102	CORRIDOR	106	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				106
107	1	107	CLASSROOM	C102	CORRIDOR	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				107
108	1	C102	CORRIDOR	108	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				108
201	1	C109	CORRIDOR	201	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1			ADD ALTERNATE NO. GC-02-001-ES	201
201A	1	C109	CORRIDOR	201A	ELEVATOR MECH. ROOM	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	HM	ETR	4/A901	3/A901	2/A901	90	-	HW-2			ADD ALTERNATE NO. GC-02-001-ES	201A
202	1	C109	CORRIDOR	202	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1			ADD ALTERNATE NO. GC-02-001-ES	202
203	1	C109	CORRIDOR	203	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				203
204	1	C109	CORRIDOR	204	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				204
205	1	C109	CORRIDOR	205	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				205
206	1	C109	CORRIDOR	206	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				206
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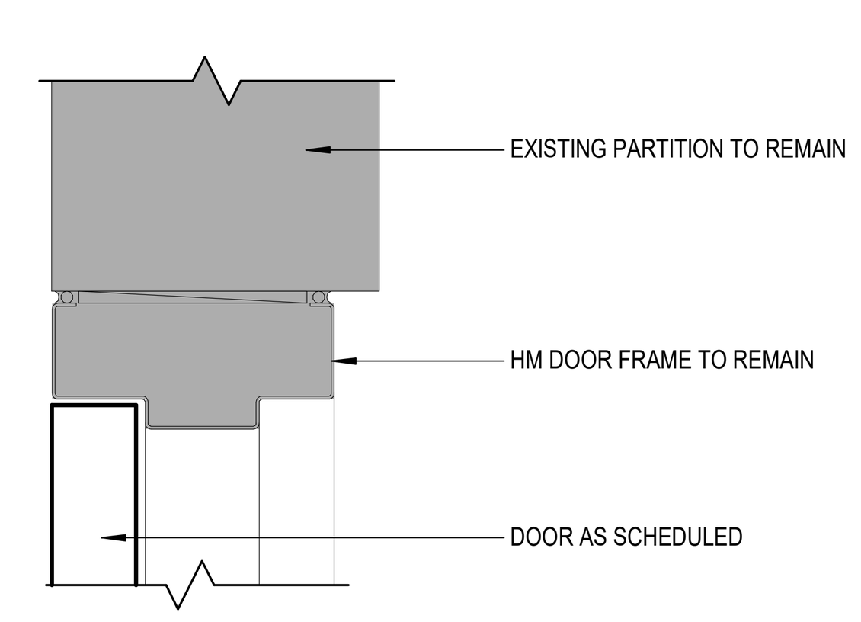
208	1	C109	CORRIDOR	208	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				208
209	1	C109	CORRIDOR	209	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				209
210	1	C109	CORRIDOR	210	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				210
211	1	C109	CORRIDOR	211	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1			ADD ALTERNATE NO. GC-02-001-ES	211
212	1	C109	CORRIDOR	212	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1			ADD ALTERNATE NO. GC-02-001-ES	212
301	1	301	CLASSROOM	301B	PASSAGE	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1			ADD ALTERNATE NO. GC-02-001-ES	301
301A	1	301A	CLASSROOM	301B	PASSAGE	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1			ADD ALTERNATE NO. GC-02-001-ES	301A
301B	1	C201	CORRIDOR	301B	PASSAGE	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1			ADD ALTERNATE NO. GC-02-001-ES	301B
302	1	C201	CORRIDOR	302	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1			ADD ALTERNATE NO. GC-02-001-ES	302
303	1	C201	CORRIDOR	303	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				303
304	1	C201	CORRIDOR	304	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				304
305	1	C201	CORRIDOR	305	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				305
306	1	C201	CORRIDOR	306	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				306
307	1	C201	CORRIDOR	307	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				307
308	1	C201	CORRIDOR	308	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				308
309	1	C201	CORRIDOR	309	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				309
310	1	C201	CORRIDOR	310	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1				310
311	1	C201	CORRIDOR	311	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1			ADD ALTERNATE NO. GC-02-001-ES	311
312	1	C201	CORRIDOR	312	CLASSROOM	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-1			ADD ALTERNATE NO. GC-02-001-ES	312
313	1	C201	CORRIDOR	313	STORAGE	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	FR	HW-2			ADD ALTERNATE NO. GC-02-001-ES	313
E300	1	C201	CORRIDOR	E300	ELEVATOR LOBBY	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	HM	ETR	4/A901	3/A901	2/A901	90	-	HW-2			ADD ALTERNATE NO. GC-02-001-ES	E300
J200	1	C109	CORRIDOR	J200	CUSTODIAN	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	-	HW-2			ADD ALTERNATE NO. GC-02-001-ES	J200
J300	1	C201	CORRIDOR	J300	CUSTODIAN	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	-	HW-2			ADD ALTERNATE NO. GC-02-001-ES	J300
S300A	1	S300	STAIR	C109	CORRIDOR	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	45	FR	HW-3	YES		ADD ALTERNATE NO. GC-02-001-ES	S300A
S300B	1	C201	CORRIDOR	S300	STAIR	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	45	FR	HW-3	YES		ADD ALTERNATE NO. GC-02-001-ES	S300B
S400A	1	C109	CORRIDOR	S400	STAIR	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	45	FR	HW-3	YES		ADD ALTERNATE NO. GC-02-001-ES	S400A
S400B	1	C201	CORRIDOR	S400	STAIR	3' - 0"	7' - 0"	1 3/4"	N	WD	FF	HM	ETR	4/A901	3/A901	2/A901	45	FR	HW-3	YES		ADD ALTERNATE NO. GC-02-001-ES	S400B
T201	1	C109	CORRIDOR	T201	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	-	HW-4			ADD ALTERNATE NO. GC-02-001-ES	T201
T202	1	C109	CORRIDOR	T202	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	-	HW-4			ADD ALTERNATE NO. GC-02-001-ES	T202
T301	1	C201	CORRIDOR	T301	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	-	HW-4			ADD ALTERNATE NO. GC-02-001-ES	T301
T302	1	C201	CORRIDOR	T302	TOILET	3' - 0"	7' - 0"	1 3/4"	F	WD	FF	HM	ETR	4/A901	3/A901	2/A901	20	-	HW-4			ADD ALTERNATE NO. GC-02-001-ES	T302

ADD Alternate No. GC-02-001-ES

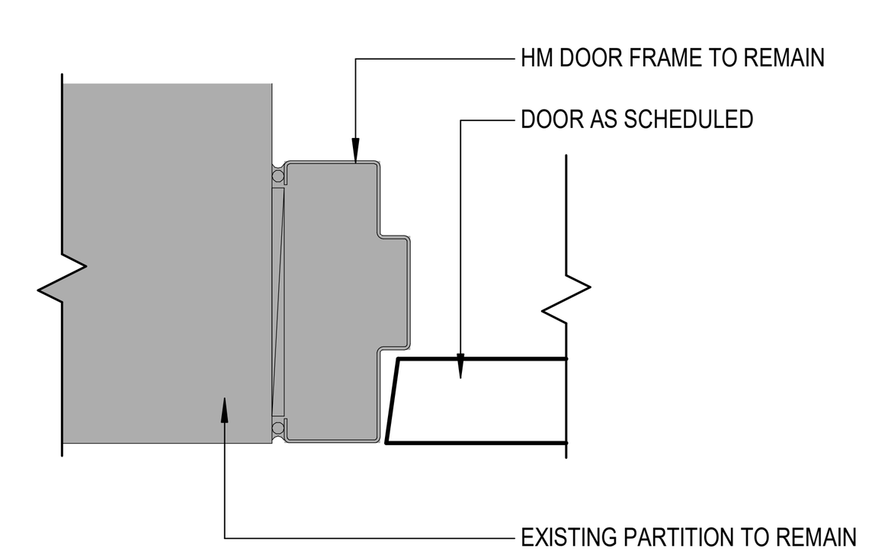
ADD Alternate No. GC-02-001-ES

ADD Alternate No. GC-02-001-ES

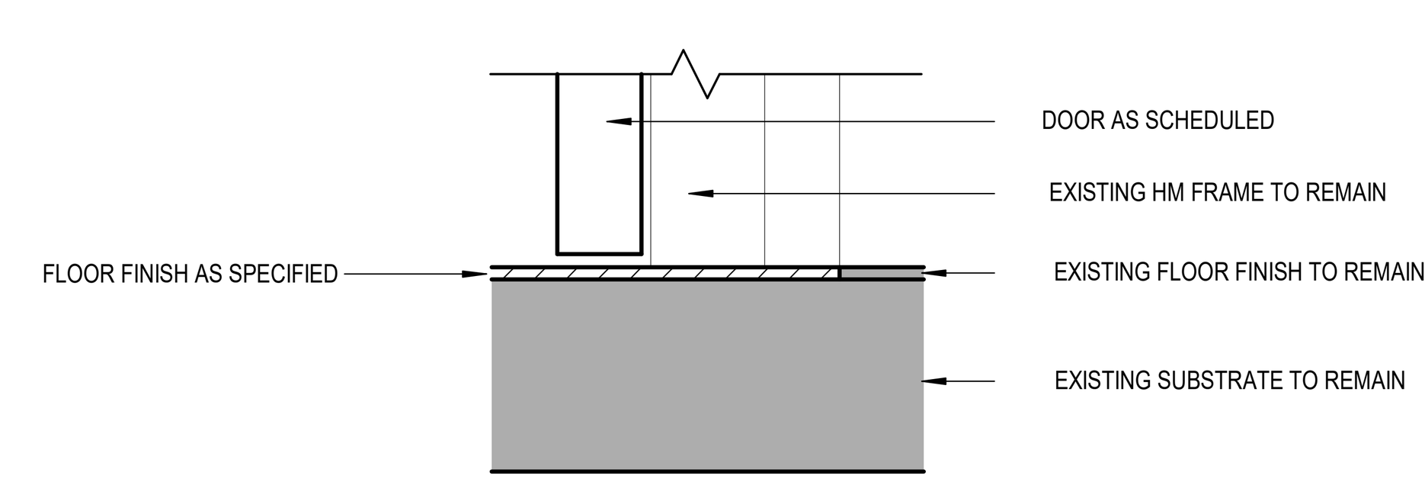
2



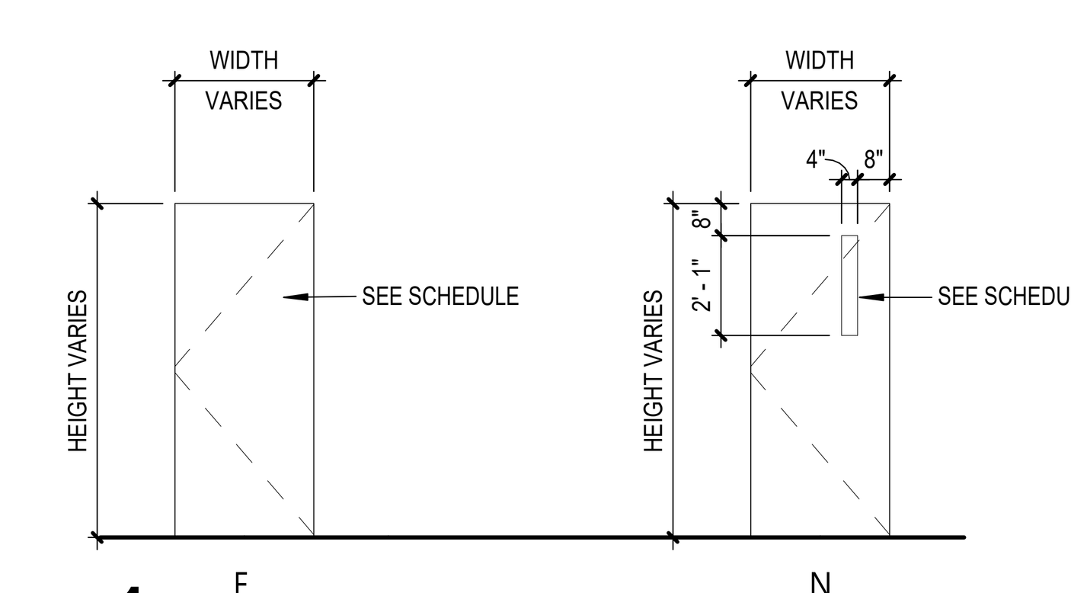
4 HEAD DETAIL A
A901 3" = 1'-0"



3 JAMB DETAIL A
A901 3" = 1'-0"



2 SILL DETAIL A
A901 3" = 1'-0"



1 DOOR ELEVATION
A901 1/4" = 1'-0"

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Consultant

Project Title
HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND ELEMENTARY SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

REGISTERED ARCHITECT THOMAS M. RITZENTHALER 023344 STATE OF NEW YORK
Expiration Date: 02/28/2025

#	DATE	DESCRIPTION
2	9/8/23	BID ADDENDUM #2

Drawn By:	Author
Checked By:	Checker
Proj. #:	62-08-03-04-0-010-014
CSArch Proj. #:	197-2201.01
Issued for Bid:	08/18/23

Sheet Title
DOOR SCHEDULE, ELEVATIONS, AND DETAILS

Sheet No.
HES A901

CONSTRUCTION DOCUMENTS

Panelboard HB (1 / E102) — Scale: None

277/480V 3Ø 4W+G, 22 kAIC — BUS RATING: 250A — MLO

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LIGHTING	EXISTING WIRING	20	1				2	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	3				4	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	5				6	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	7				8	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	9				10	20	-	EXISTING SPARE
EXISTING SPARE	-	20	11				12	20	-	EXISTING SPARE
			13				14			
EXISTING SPARE	-	15	15				16	50	(3) #6 CU & (1) #8 GND.	PANEL LB VIA XFMR TB
			17				18			
SPARE	-	20	19				20	20	-	SPARE
SPARE	-	20	21				22	20	-	SPARE
SPARE	-	20	23				24	20	-	SPARE
SPARE	-	20	25				26	20	-	SPARE
SPARE	-	20	27				28	20	-	SPARE
SPARE	-	20	29				30	20	-	SPARE
SQUARE D NF PANEL				-	-	-	- kVA TOTAL			

Panelboard HC (2 / E102) — Scale: None

277/480V 3Ø 4W+G, 22 kAIC — BUS RATING: 250A — MLO

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LIGHTING	EXISTING WIRING	20	1				2			
EXISTING LIGHTING	EXISTING WIRING	20	3				4	30	EXISTING WIRING	EXISTING AC-1
EXISTING LIGHTING	EXISTING WIRING	20	5				6			
EXISTING LIGHTING	EXISTING WIRING	20	7				8	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	9				10	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	11				12	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING SPARE	-	20	13				14	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	15				16	20	-	EXISTING SPARE
EXISTING LIGHTING	EXISTING WIRING	20	17				18	20	EXISTING WIRING	EXISTING LIGHTING
			19				20			
EXISTING GYM AHUS	EXISTING WIRING	20	21				22	50	(3) #6 CU & (1) #8 GND.	PANEL LC VIA XFMR TC
			23				24			
			25				26	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING ELEVATOR	EXISTING WIRING	20	27				28	20	EXISTING WIRING	EXISTING LIGHTING
			29				30	20	EXISTING WIRING	EXISTING LIGHTING
SQUARE D NF PANEL				-	-	-	- kVA TOTAL			

Panelboard HD (3 / E102) — Scale: None

277/480V 3Ø 4W+G, 22 kAIC — BUS RATING: 250A — MLO

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LIGHTING	EXISTING WIRING	20	1				2	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	3				4	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	5				6	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	7				8	20	-	EXISTING SPARE
EXISTING SPARE	-	20	9				10	20	EXISTING WIRING	EXISTING LIGHTING
			11				12			
PANEL HDA	(4) #1 & (1) #6 GND.	125	13				14	50	(3) #4 CU & (1) #8 GND.	PANEL LD VIA XFMR TD
			15				16			
SPARE	-	20	17				18	20	-	SPARE
SPARE	-	20	19				20	20	-	SPARE
SPARE	-	20	21				22	20	-	SPARE
SPARE	-	20	23				24	20	-	SPARE
SPARE	-	20	25				26	20	-	SPARE
SPARE	-	20	27				28	20	-	SPARE
SPARE	-	20	29				30	20	-	SPARE
SQUARE D NF PANEL				-	-	-	- kVA TOTAL			

Panelboard LB (4 / E102) — Scale: None

120/208V 3Ø 4W+G, 10 kAIC — BUS RATING: 100A — 100A MAIN CIRCUIT BREAKER

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LIGHTING	EXISTING WIRING	20	1				2	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING LIGHTING	EXISTING WIRING	20	3				4	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	5				6	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING UNIT VENTS	EXISTING WIRING	20	7				8	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING UNIT VENTS	EXISTING WIRING	20	9				10	20	EXISTING WIRING	EXISTING HEATER
EXISTING HEATER	EXISTING WIRING	20	11				12	20	EXISTING WIRING	EXISTING FAN
EXISTING RECEPTACLES	EXISTING WIRING	20	13				14	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING AC UNIT	EXISTING WIRING	20	15				16	20	EXISTING WIRING	EXISTING COPIER
			17				18			
RECEPTACLES	(2) #12 & (1) #12 GND.	20	19				20	20	(2) #12 & (1) #12 GND.	RECEPTACLES
RECEPTACLES	(2) #12 & (1) #12 GND.	20	21				22	20	(2) #12 & (1) #12 GND.	RECEPTACLES
SPARE	-	20	23				24	20	-	SPARE
SPARE	-	20	25				26	20	-	SPARE
SPARE	-	20	27				28	20	-	SPARE
SPARE	-	20	29				30	20	-	SPARE
SPARE	-	20	31				32	20	-	SPARE
SPARE	-	20	33				34	20	-	SPARE
SPARE	-	20	35				36	20	-	SPARE
SPARE	-	20	37				38	20	-	SPARE
SPARE	-	20	39				40	20	-	SPARE
SPARE	-	20	41				42	20	-	SPARE
SQUARE D NQ PANEL				-	-	-	- kVA TOTAL			

Panelboard LC (5 / E102) — Scale: None

120/208V 3Ø 4W+G, 10 kAIC — BUS RATING: 100A — 100A MAIN CIRCUIT BREAKER

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING RECEPTACLES	EXISTING WIRING	20	1				2	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	3				4	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	5				6	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	7				8	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	9				10	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING FAN	EXISTING WIRING	20	11				12	20	EXISTING WIRING	EXISTING HEATER
EXISTING FAN	EXISTING WIRING	20	13				14	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING FAN	EXISTING WIRING	20	15				16	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING TELEPHONE	EXISTING WIRING	20	17				18	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	19				20			
EXISTING SPARE	-	20	21				22	20	EXISTING WIRING	EXISTING GYM DOORS
			23				24			
SPARE	-	20	25				26	20	-	SPARE
SPARE	-	20	27				28	20	-	SPARE
SPARE	-	20	29				30	20	-	SPARE
SPARE	-	20	31				32	20	-	SPARE
SPARE	-	20	33				34	20	-	SPARE
SPARE	-	20	35				36	20	-	SPARE
SPARE	-	20	37				38	20	-	SPARE
SPARE	-	20	39				40	20	-	SPARE
SPARE	-	20	41				42	20	-	SPARE
SQUARE D NQ PANEL				-	-	-	- kVA TOTAL			

Panelboard LD (6 / E102) — Scale: None

120/208V 3Ø 4W+G, 10 kAIC — BUS RATING: 225A — 150A MAIN CIRCUIT BREAKER

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING RECEPTACLES	EXISTING WIRING	20	1				2	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	3				4	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	5				6	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	7				8	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	9				10	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	11				12	20	EXISTING WIRING	EXISTING RECEPTACLES
			13				14			
PANEL LDA	(4) #3 & (1) #8 GND.	100	15				16	100	(4) #3 & (1) #8 GND.	PANEL LD-1
			17				18			
SPARE	-	20	19				20	20	-	SPARE
SPARE	-	20	21				22	20	-	SPARE
SPARE	-	20	23				24	20	-	SPARE
SPARE	-	20	25				26	20	-	SPARE
SPARE	-	20	27				28	20	-	SPARE
SPARE	-	20	29				30	20	-	SPARE
SPARE	-	20	31				32	20	-	SPARE
SPARE	-	20	33				34	20	-	SPARE
SPARE	-	20	35				36	20	-	SPARE
SPARE	-	20	37				38	20	-	SPARE
SPARE	-	20	39				40	20	-	SPARE
SPARE	-	20	41				42	20	-	SPARE
SQUARE D NQ PANEL				-	-	-	- kVA TOTAL			

Panelboard HDA (7 / E102) — Scale: None

277/480V 3Ø 4W+G, 10 kAIC — BUS RATING: 125A — MLO

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LIGHTING	EXISTING WIRING	20	1				2	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	3				4	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	5				6	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	7				8	20	EXISTING WIRING	EXISTING LIGHTING
SPARE	-	20	9				10	20	-	SPARE
SPARE	-	20	11				12	20	-	SPARE
SPARE	-	20	13				14	20	-	SPARE
SPARE	-	20	15				16	20	-	SPARE
SPARE	-	20	17				18	20	-	SPARE
SPARE	-	20	19				20	20	-	SPARE
SPARE	-	20	21				22	20	-	SPARE
SPARE	-	20	23				24	20	-	SPARE
SPARE	-	20	25				26	20	-	SPARE
SPARE	-	20	27				28	20	-	SPARE
SPARE	-	20	29				30	20	-	SPARE
SQUARE D NF PANEL				-	-	-	- kVA TOTAL			

Panelboard LDA (8 / E102) — Scale: None

120/208V 3Ø 4W+G, 10 kAIC — BUS RATING: 100A — MLO

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING RECEPTACLES	EXISTING WIRING	20	1				2	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	3				4	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	5				6	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	7				8	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	9				10	20	EXISTING WIRING	EXISTING AC UNIT
EXISTING RECEPTACLES	EXISTING WIRING	20	11				12			
EXISTING RECEPTACLES	EXISTING WIRING	20	13				14	20	(2) #12 & (1) #12 GND.	RECEPTACLES
EXISTING COPIER	EXISTING WIRING	20	15				16	20	(2) #12 & (1) #12 GND.	RECEPTACLES
			17				18	20	(2) #12 & (1) #12 GND.	RECEPTACLES
RECEPTACLES	(2) #12 & (1) #12 GND.	20	19				20	20	-	SPARE
SPARE	-	20	21				22	20	-	SPARE
SPARE	-	20	23				24	20	-	SPARE
SPARE	-	20	25				26	20	-	SPARE
SPARE	-	20	27				28	20	-	SPARE
SPARE	-	20	29				30	20	-	SPARE
SPARE	-	20	31				32	20	-	SPARE
SPARE	-	20	33				34	20	-	SPARE
SPARE	-	20	35				36	20	-	SPARE
SPARE	-	20	37				38	20	-	SPARE
SPARE	-	20	39				40	20	-	SPARE
SPARE	-	20	41				42	20	-	SPARE
SQUARE D NQ PANEL				-	-	-	- kVA TOTAL			

Panelboard LD-1 (9 / E102) — Scale: None

120/208V 3Ø 4W+G, 10 kAIC — BUS RATING: 100A — MLO

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING UNIT VENTS	EXISTING WIRING	20	1				2	20	EXISTING WIRING	EXISTING UNIT VENTS
EXISTING UNIT VENTS	EXISTING WIRING	20	3				4	20	EXISTING WIRING	EXISTING UNIT VENTS
EXISTING EX FANS	EXISTING WIRING	20	5				6	20	EXISTING WIRING	EXISTING UNIT VENTS
EXISTING EX FANS	EXISTING WIRING	20	7				8	20	EXISTING WIRING	EXISTING UNIT VENTS
EXISTING UNIT VENTS	EXISTING WIRING	20	9				10	20	EXISTING WIRING	EXISTING AC UNIT
EXISTING UNIT VENTS	EXISTING WIRING	20	11				12			
EXISTING AC UNIT	EXISTING WIRING	20	13				14	20	EXISTING WIRING	EXISTING AC UNIT
			15				16			
SPARE	-	20	17				18	20	-	SPARE
SPARE	-	20	19				20	20	-	SPARE
SPARE	-	20	21				22	20	-	SPARE
SPARE	-	20	23				24	20	-	SPARE
SPARE	-	20	25				26	20	-	SPARE
SPARE	-	20	27				28	20	-	SPARE
SPARE	-	20	29				30	20	-	SPARE
SPARE	-	20	31				32	20	-	SPARE
SPARE	-	20	33				34	20	-	SPARE
SPARE	-	20	35				36	20	-	SPARE
SPARE	-	20	37				38	20	-	SPARE
SPARE	-	20	39				40	20	-	SPARE
SPARE	-	20	41				42	20	-	SPARE
SQUARE D NQ PANEL				-	-	-	- kVA TOTAL			

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Consultant: Blake Engineering PLLC

Project Title: HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND ELEMENTARY SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

Expiration Date: 05-31-2025

	DATE	DESCRIPTION
1	9/8/23	BID ADDENDUM #1

Drawn By: BJK
Checked By: BJK
Proj. #: 62-08-03-04-0-010-014
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Issued for Bid: 8/18/23

Sheet Title: ELECTRICAL PANEL SCHEDULES

Sheet No. HES E102

CONSTRUCTION DOCUMENTS

277/480V 3Ø 4W+G, 42kAIC — BUS RATING: 400A — MLO

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
			1	- / -			2			
EXISTING WATER HEATER	EXISTING WIRING	20	3		- / -		4	20	EXISTING WIRING	EXISTING BOILER #2
			5			- / -	6			
			7	- / -			8			
EXISTING BOILER #1	EXISTING WIRING	20	9		- / -		10	20	EXISTING WIRING	EXISTING PUMP
			11			- / -	12			
			13	- / -			14			
EXISTING PUMP	EXISTING WIRING	20	15		- / -		16	20	EXISTING WIRING	EXISTING AIR COMP 1 & 2
			17			- / -	18			
			19	- / -			20			
EXISTING REFRIG.	EXISTING WIRING	20	21		- / -		22	40	EXISTING WIRING	EXISTING PANEL ST-LTG
			23			- / -	24			
			25	- / -			26			
EXISTING PUMP	EXISTING WIRING	20	27		- / -		28	20	EXISTING WIRING	EXISTING PUMP
			29			- / -	30			
			31	- / -			32			
PANEL KH	(4) 4/0 & (1) #2 GND.	225	33		- / -		34	125	(3) #1 & (1) #6 GND.	PANEL LKA/LKB VIA XFMR
			35			- / -	36			
SPARE	-	20	37	- / -			38	20	-	SPARE
SPARE	-	20	39		- / -		40	20	-	SPARE
SPARE	-	20	41			- / -	42	20	-	SPARE
SQUARE D NF PANEL				-	-	-	- kVA TOTAL			

1 / E103 — Panelboard BRH

Scale: None

277/480V 3Ø 4W+G, 22 kAIC — BUS RATING: 250A — MLO

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LIGHTING	EXISTING WIRING	20	1	- / -			2	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING LIGHTING	EXISTING WIRING	20	3		- / -		4	20	EXISTING WIRING	EXISTING LIGHTING
EXISTING WATER HEATER	EXISTING WIRING	20	5			- / -	6	20	EXISTING WIRING	EXISTING LIGHTING
			7	- / -			8			
EXISTING SPARE	-	20	9		- / -		10	20	EXISTING WIRING	EXISTING WATER HEATER
			11			- / -	12			
			13	- / -			14			
EXISTING SPARE	-	20	15		- / -		16	20	EXISTING WIRING	EXISTING EX FAN
			17			- / -	18			
			19	- / -			20			
EXISTING RANGE	EXISTING WIRING	20	21		- / -		22	40	EXISTING WIRING	EXISTING STEAMER
			23			- / -	24			
			25	- / -			26			
EXISTING AHU	EXISTING WIRING	20	27		- / -		28	50	EXISTING WIRING	EXISTING STEAMER
			29			- / -	30			
			31	- / -			32			
EXISTING LOAD	EXISTING WIRING	20	33		- / -		34	50	EXISTING WIRING	EXISTING LOAD
			35			- / -	36			
SPARE	-	20	37	- / -			38	20	-	SPARE
SPARE	-	20	39		- / -		40	20	-	SPARE
SPARE	-	20	41			- / -	42	20	-	SPARE
SQUARE D NF PANEL				-	-	-	- kVA TOTAL			

2 / E103 — Panelboard KH

Scale: None

120/208V 3Ø 4W+G, 10 kAIC — BUS RATING: 100A — 100A MAIN CIRCUIT BREAKER

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING RECEPTACLES	EXISTING WIRING	20	1	- / -			2	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	3		- / -		4	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	5			- / -	6	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	7	- / -			8	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	9		- / -		10	20	EXISTING WIRING	EXISTING RECEPTACLES
SPARE	-	20	11			- / -	12	20	EXISTING WIRING	EXISTING AC UNIT
SPARE	-	20	13	- / -			14			
SPARE	-	20	15		- / -		16	20	-	SPARE
SPARE	-	20	17			- / -	18	20	-	SPARE
SPARE	-	20	19	- / -			20	20	-	SPARE
SPARE	-	20	21		- / -		22	20	-	SPARE
SPARE	-	20	23			- / -	24	20	-	SPARE
SPARE	-	20	25	- / -			26	20	-	SPARE
SPARE	-	20	27		- / -		28	20	-	SPARE
SPARE	-	20	29			- / -	30	20	-	SPARE
SPARE	-	20	31	- / -			32	20	-	SPARE
SPARE	-	20	33		- / -		34	20	-	SPARE
SPARE	-	20	35			- / -	36	20	-	SPARE
SPARE	-	20	37	- / -			38	20	-	SPARE
SPARE	-	20	39		- / -		40	20	-	SPARE
SPARE	-	20	41			- / -	42	20	-	SPARE
SQUARE D NQ PANEL				-	-	-	- kVA TOTAL			

3 / E103 — Panelboard LK-1

Scale: None

120/208V 3Ø 4W+G, 10 kAIC — BUS RATING: 100A — 100A MAIN CIRCUIT BREAKER

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LIGHTING	EXISTING WIRING	20	1	- / -			2	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING LIGHTING	EXISTING WIRING	20	3		- / -		4	20	EXISTING WIRING	EXISTING BOILER
EXISTING RECEPTACLES	EXISTING WIRING	20	5			- / -	6	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING PANEL TC	EXISTING WIRING	20	7	- / -			8	20	EXISTING WIRING	EXISTING DOM. PUMP
EXISTING CONTACTOR	EXISTING WIRING	20	9		- / -		10	20	EXISTING WIRING	EXISTING DOM. PUMP
EXISTING TIME CLOCK	EXISTING WIRING	20	11			- / -	12	20	EXISTING WIRING	EXISTING PUMP
EXISTING RECEPTACLES	EXISTING WIRING	20	13	- / -			14	20	EXISTING WIRING	EXISTING EX FAN
EXISTING OIL PUMP	EXISTING WIRING	20	15		- / -		16	20	EXISTING WIRING	EXISTING LIGHTING
			17			- / -	18	20	EXISTING WIRING	EXISTING RECEPTACLES
SPARE	-	20	19	- / -			20	20	-	SPARE
SPARE	-	20	21		- / -		22	20	-	SPARE
SPARE	-	20	23			- / -	24	20	-	SPARE
SPARE	-	20	25	- / -			26	20	-	SPARE
SPARE	-	20	27		- / -		28	20	-	SPARE
SPARE	-	20	29			- / -	30	20	-	SPARE
SPARE	-	20	31	- / -			32	20	-	SPARE
SPARE	-	20	33		- / -		34	20	-	SPARE
SPARE	-	20	35			- / -	36	20	-	SPARE
SPARE	-	20	37	- / -			38	20	-	SPARE
SPARE	-	20	39		- / -		40	20	-	SPARE
SPARE	-	20	41			- / -	42	20	-	SPARE
SQUARE D NQ PANEL				-	-	-	- kVA TOTAL			

4 / E103 — Panelboard BRL

Scale: None

120/208V 3Ø 4W+G, 10 kAIC — BUS RATING: 225A — MLO

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING EX FAN	EXISTING WIRING	20	1	- / -			2	20	EXISTING WIRING	EXISTING HOOD LIGHTS
EXISTING DISHWASHER	EXISTING WIRING	20	3		- / -		4	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING REFRIG.	EXISTING WIRING	20	5			- / -	6	20	EXISTING WIRING	EXISTING LIGHTS
EXISTING RECEPTACLES	EXISTING WIRING	20	7	- / -			8	20	EXISTING WIRING	EXISTING LIGHTS
EXISTING RECEPTACLES	EXISTING WIRING	20	9		- / -		10	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	11			- / -	12	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	13	- / -			14	20	EXISTING WIRING	EXISTING SUPPRESSION
EXISTING RECEPTACLES	EXISTING WIRING	20	15		- / -		16	20	EXISTING WIRING	EXISTING WARMING UNIT
EXISTING RECEPTACLES	EXISTING WIRING	20	17			- / -	18			
EXISTING RECEPTACLES	EXISTING WIRING	20	19	- / -			20	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	21		- / -		22	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	23			- / -	24	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	25	- / -			26	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING RECEPTACLES	EXISTING WIRING	20	27		- / -		28			
EXISTING EX FAN	EXISTING WIRING	20	29			- / -	30	20	EXISTING WIRING	EXISTING RECEPTACLES
SPARE	-	20	31	- / -			32	20	-	SPARE
SPARE	-	20	33		- / -		34	20	-	SPARE
SPARE	-	20	35			- / -	36	20	-	SPARE
SPARE	-	20	37	- / -			38	20	-	SPARE
SPARE	-	20	39		- / -		40	20	-	SPARE
SPARE	-	20	41			- / -	42	20	-	SPARE
SQUARE D NQ PANEL				-	-	-	- kVA TOTAL			

5 / E103 — Panelboard LKA

Scale: None

120/208V 3Ø 4W+G, 10 kAIC — BUS RATING: 225A — MLO

CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
			1	- / -			2	20	EXISTING WIRING	EXISTING COMP.
EXISTING PANEL LK-1	EXISTING WIRING	30	3		- / -		4	20	EXISTING WIRING	EXISTING WARMER
			5			- / -	6	20	EXISTING WIRING	EXISTING WARMING UNIT
			7	- / -			8			
EXISTING PANEL BRL	EXISTING WIRING	40	9		- / -		10	20	EXISTING WIRING	EXISTING WARMING UNIT
			11			- / -	12			
EXISTING WARMER	EXISTING WIRING	30	13	- / -			14	20	EXISTING WIRING	EXISTING MIXER
			15		- / -		16		EXISTING WIRING	EXISTING RECEPTACLES
			17			- / -	18	20	EXISTING WIRING	EXISTING CORD DROP
EXISTING PANEL SK	EXISTING WIRING	80	19	- / -			20			
			21		- / -		22	20	EXISTING WIRING	EXISTING RECEPTACLES
EXISTING WARMER	EXISTING WIRING	20	23			- / -	24	20	EXISTING WIRING	EXISTING RECEPTACLES
			25	- / -			26			
EXISTING DISHWASHER	EXISTING WIRING	60	27		- / -		28	20	EXISTING WIRING	EXISTING MAU
			29			- / -	30			
SPARE	-	20	31	- / -			32	20	-	SPARE
SPARE	-	20	33		- / -		34	20	-	SPARE
SPARE	-	20	35			- / -	36	20	-	SPARE
SPARE	-	20	37	- / -			38	20	-	SPARE
SPARE	-	20	39		- / -		40	20	-	SPARE
SPARE	-	20	41			- / -	42	20	-	SPARE
SQUARE D NQ PANEL				-	-	-	- kVA TOTAL			

6 / E103 — Panelboard LKB

Scale: None

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Consultant

BLAKE ENGINEERING PLLC

Project Title

HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND ELEMENTARY SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

Expiration Date: 05-31-2025

#	DATE	DESCRIPTION
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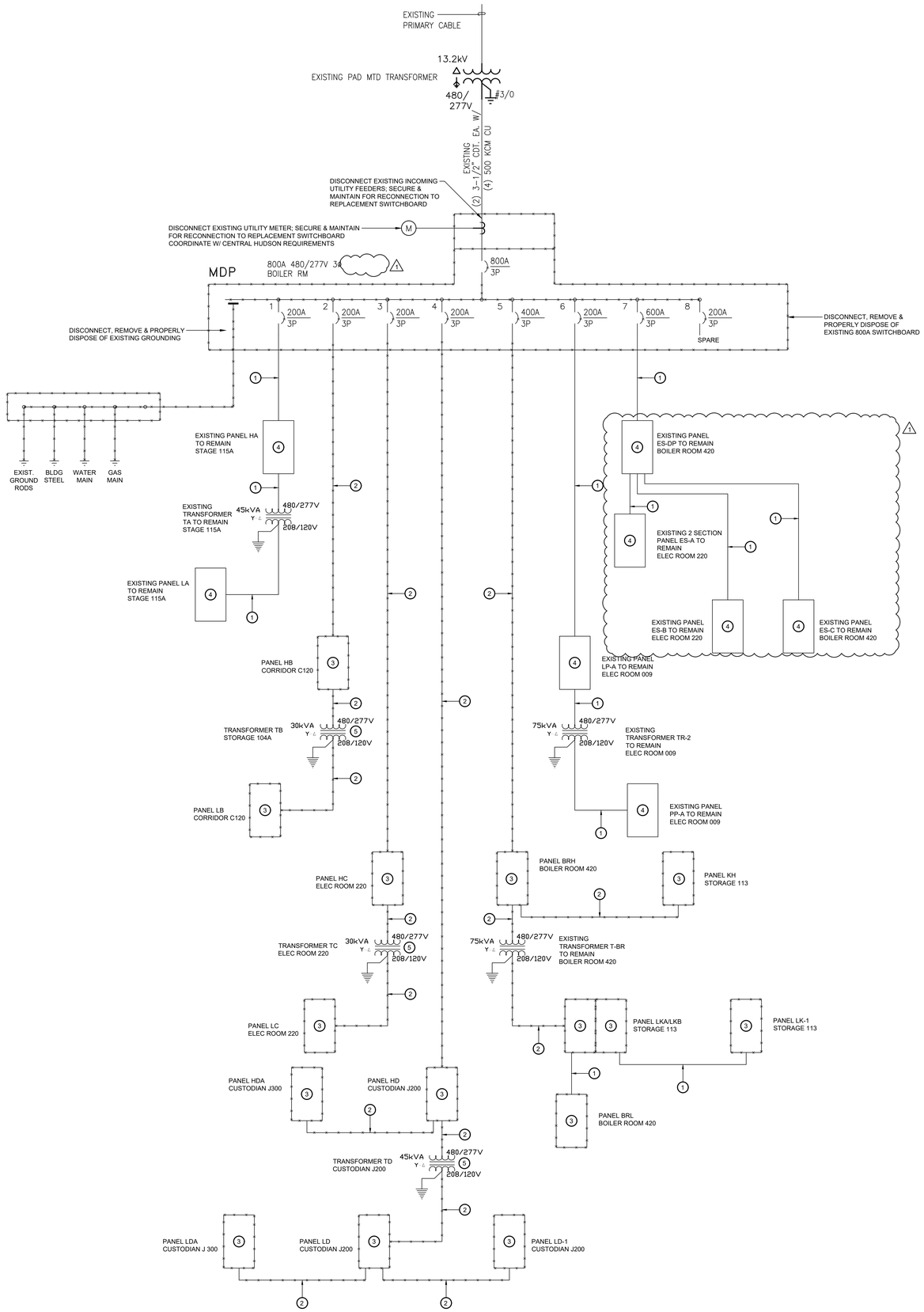
Sheet Title

ELECTRICAL PANEL SCHEDULES

Sheet No.

HES E103

CONSTRUCTION DOCUMENTS



1. EXISTING WIRING & CONDUIT TO REMAIN
2. EXISTING WIRING & CONDUIT TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF
3. EXISTING PANELBOARD TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF
4. EXISTING PANELBOARD TO REMAIN
5. EXISTING TRANSFORMER TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF

1 / E104 Electrical One-Line Demolition Diagram

Scale: None

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MEP/FP CONSULTING & ENGINEERING SERVICES

Project Title

HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND ELEMENTARY SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

MATTHEW GEORGE BLAKE 089039 LICENSED PROFESSIONAL ENGINEER STATE OF NEW YORK

Expiration Date: 05-31-2025

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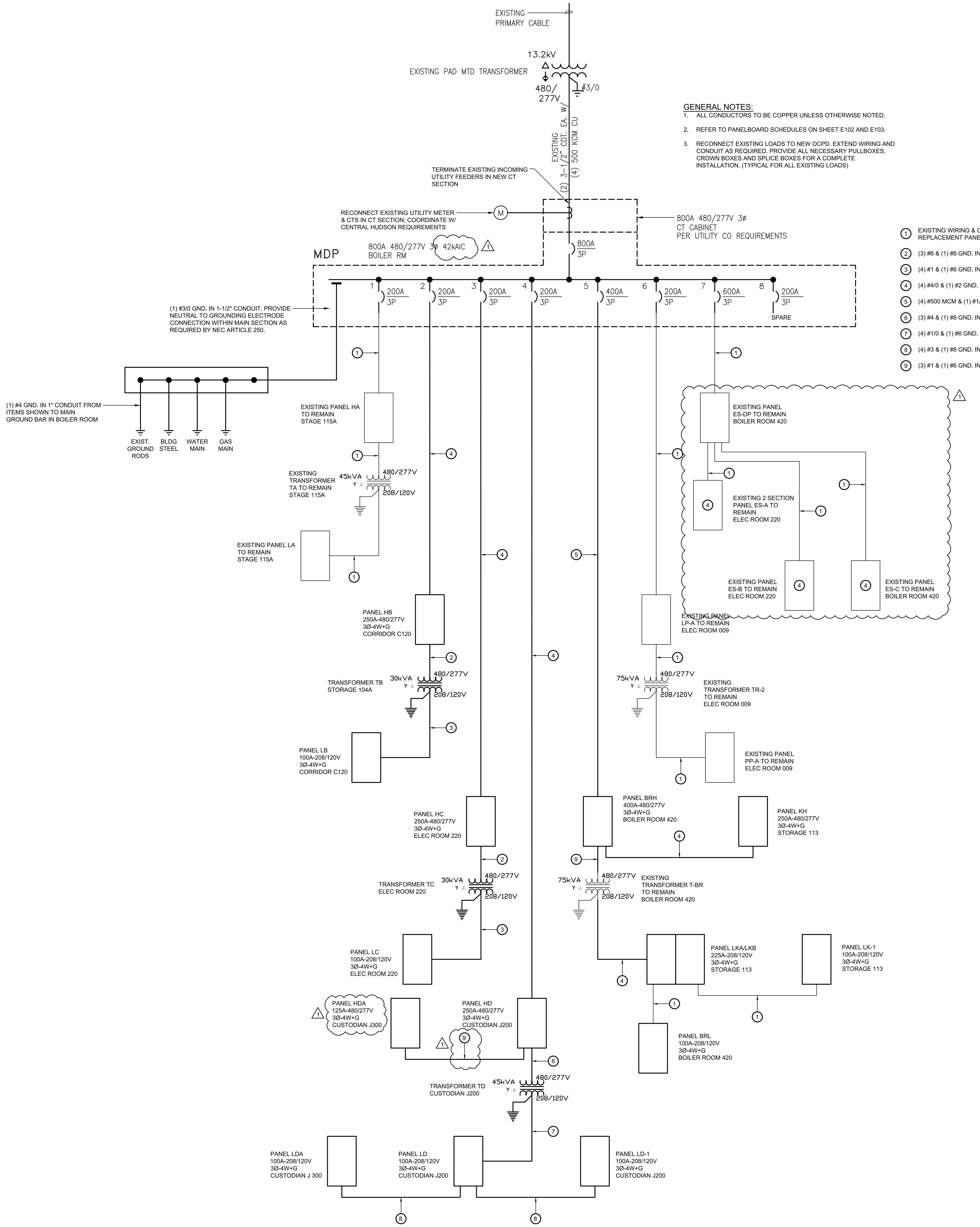
Sheet Title

ELECTRICAL ONE-LINE DEMOLITION DIAGRAM

Sheet No.

HES E104

CONSTRUCTION DOCUMENTS



GENERAL NOTES:

1. ALL CONDUCTORS TO BE COPPER UNLESS OTHERWISE NOTED.
2. REFER TO PANELBOARD SCHEDULES ON SHEET E102 AND E103.
3. RECONNECT EXISTING LOADS TO NEW OCPD. EXTEND WIRING AND CONDUIT AS REQUIRED. PROVIDE ALL NECESSARY PULLBOXES, CROWN BOXES AND SPLICE BOXES FOR A COMPLETE INSTALLATION. (TYPICAL FOR ALL EXISTING LOADS)

- (1) EXISTING WIRING & CONDUIT TO REMAIN; CONNECT TO REPLACEMENT PANEL
- (2) (3) #6 & (1) #8 GND. IN 1" CONDUIT
- (3) (4) #1 & (1) #6 GND. IN 1-1/4" CONDUIT
- (4) (4) #4/0 & (1) #2 GND. IN 2-1/2" CONDUIT
- (5) (4) #500 MCM & (1) #1/0 GND. IN 3-1/2" CONDUIT
- (6) (3) #4 & (1) #8 GND. IN 1" CONDUIT
- (7) (4) #1/0 & (1) #6 GND. IN 2" CONDUIT
- (8) (4) #3 & (1) #8 GND. IN 1-1/4" CONDUIT
- (9) (3) #1 & (1) #6 GND. IN 1-1/2" CONDUIT

1 / E105 **Electrical One-Line Diagram**
Scale: None

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HIGHLAND ELEMENTARY SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

STATE OF NEW YORK · MATTHEW GEORGE BLAKE · 089039 · LICENSED PROFESSIONAL ENGINEER

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Sheet Title

ELECTRICAL ONE-LINE DIAGRAM

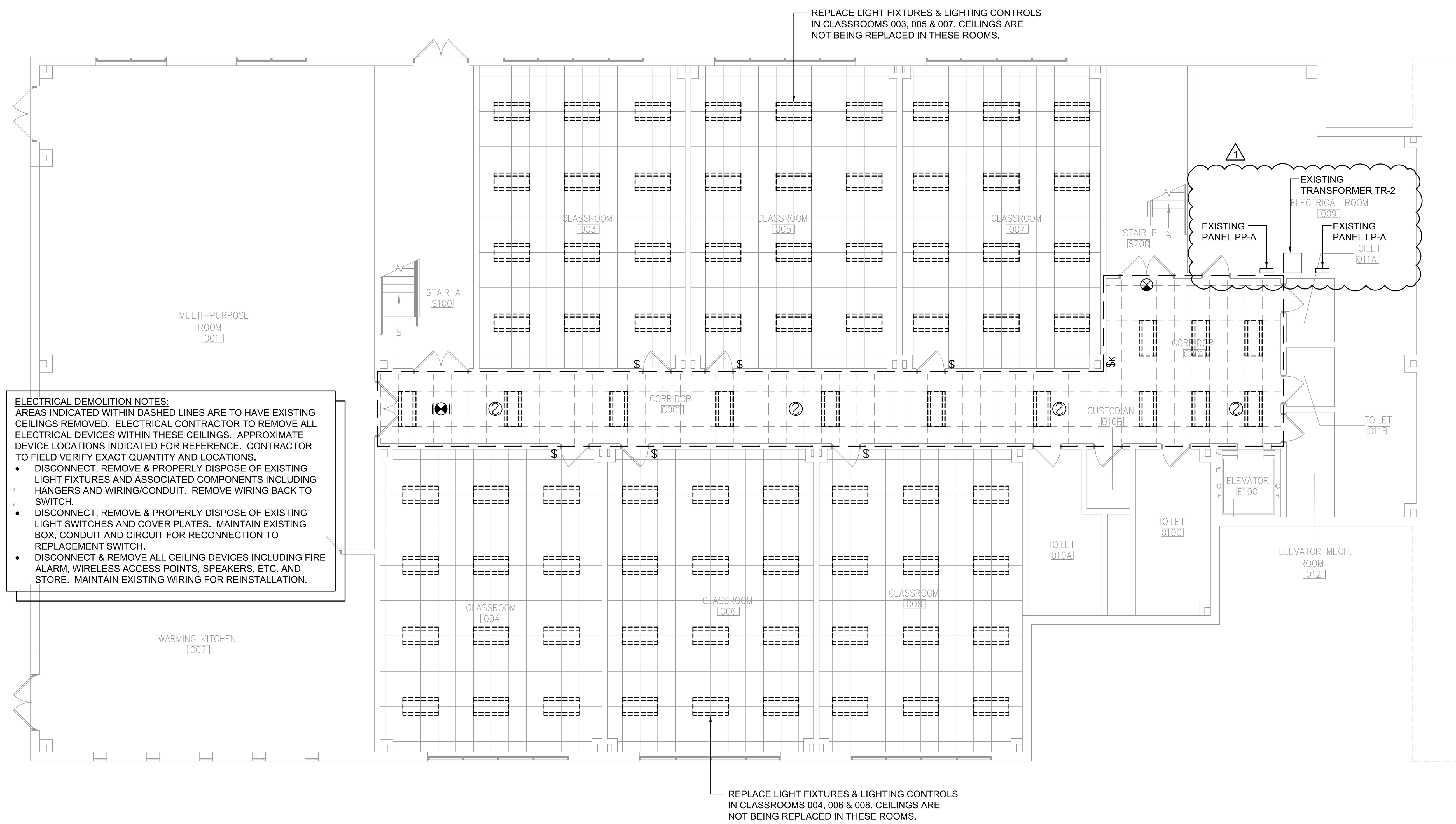
Sheet No.

HES E105

CONSTRUCTION DOCUMENTS

General Notes:

1. IN ALL AREAS WITH EXISTING CEILINGS TO REMAIN, ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REMOVE AND REINSTALL CEILING TILES AND GRID AS NECESSARY TO COMPLETE REMOVAL AND INSTALLATION OF LIGHTING, WIRING, CONDUIT, JUNCTION BOXES, ETC.
2. IN AREAS WHERE EXISTING CEILINGS ARE TO REMAIN AND LIGHTING IS TO BE REPLACED, PERFORM THE FOLLOWING SCOPE: DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING LIGHT FIXTURES AND ASSOCIATED COMPONENTS INCLUDING HANGERS AND WIRING/CONDUIT. REMOVE WIRING BACK TO SWITCH. DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING LIGHT SWITCHES AND COVER PLATES. MAINTAIN EXISTING BOX, CONDUIT AND CIRCUIT FOR RECONNECTION TO REPLACEMENT SWITCH.



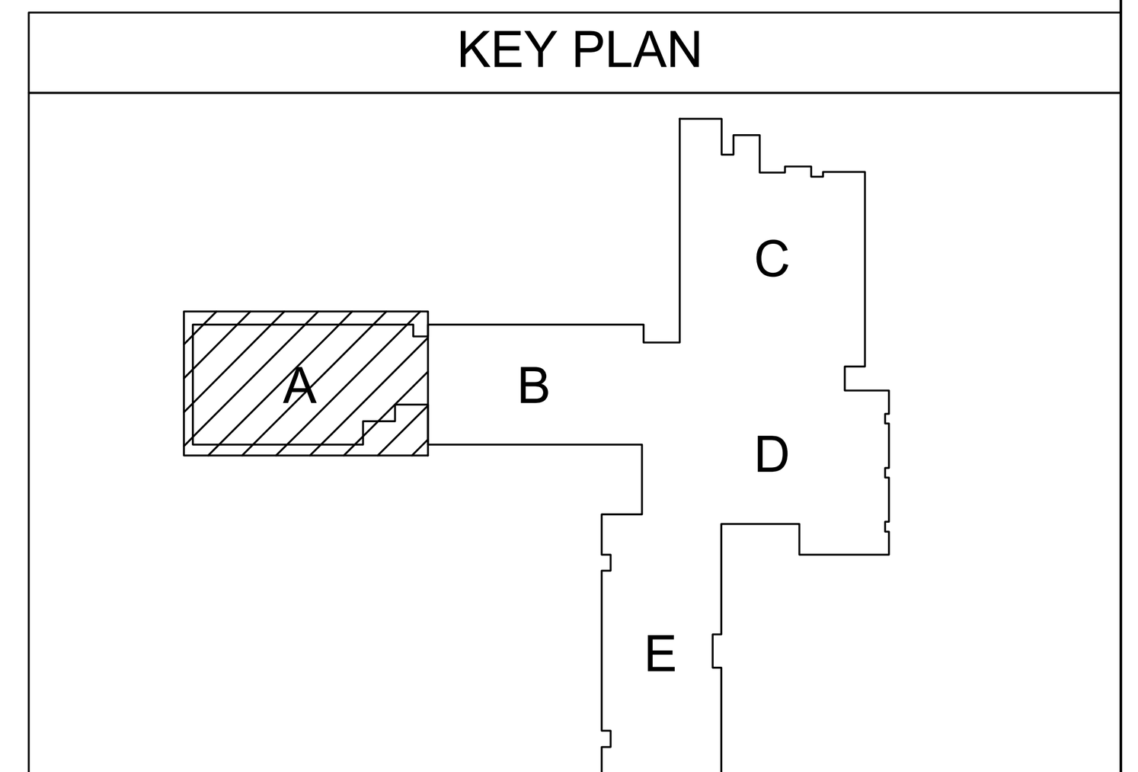
ELECTRICAL DEMOLITION NOTES:

AREAS INDICATED WITHIN DASHED LINES ARE TO HAVE EXISTING CEILINGS REMOVED. ELECTRICAL CONTRACTOR TO REMOVE ALL ELECTRICAL DEVICES WITHIN THESE CEILINGS. APPROXIMATE DEVICE LOCATIONS INDICATED FOR REFERENCE. CONTRACTOR TO FIELD VERIFY EXACT QUANTITY AND LOCATIONS.

- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING LIGHT FIXTURES AND ASSOCIATED COMPONENTS INCLUDING HANGERS AND WIRING/CONDUIT. REMOVE WIRING BACK TO SWITCH.
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING LIGHT SWITCHES AND COVER PLATES. MAINTAIN EXISTING BOX, CONDUIT AND CIRCUIT FOR RECONNECTION TO REPLACEMENT SWITCH.
- DISCONNECT & REMOVE ALL CEILING DEVICES INCLUDING FIRE ALARM, WIRELESS ACCESS POINTS, SPEAKERS, ETC. AND STORE. MAINTAIN EXISTING WIRING FOR REINSTALLATION.

1 ED201 **Area A Ground Floor Lighting Demolition Plan**
Scale: 1/8" = 1'-0"

KEY PLAN



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Consultant: Blake Engineering PLLC

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2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

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Sheet Title: AREA A GROUND FLOOR LIGHTING DEMOLITION PLAN

Sheet No. HES ED201

CONSTRUCTION DOCUMENTS

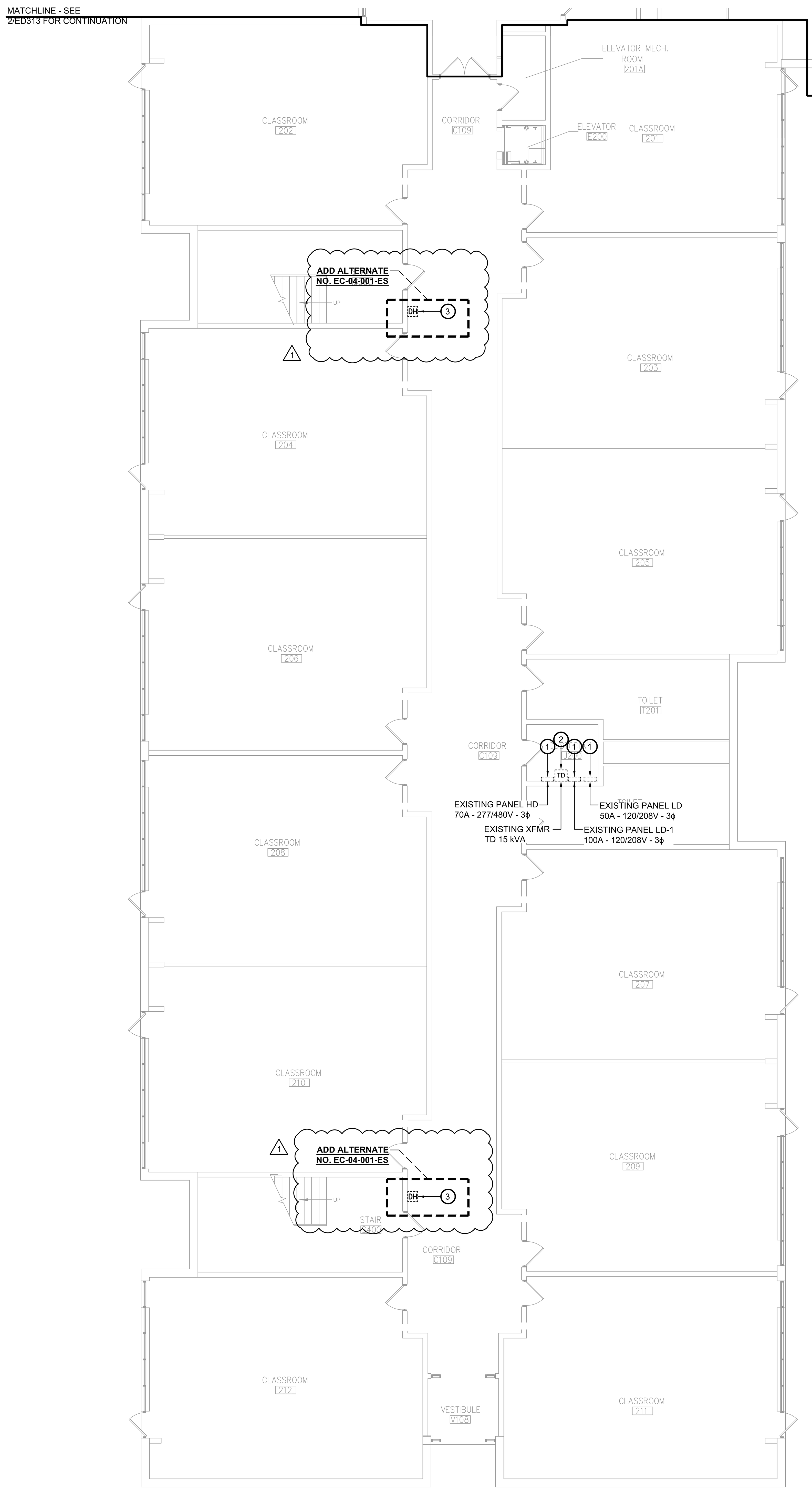
Key Notes:

1. DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING DISTRIBUTION PANEL. MAINTAIN EXISTING DISTRIBUTION WIRING FOR CONNECTION TO REPLACEMENT PANEL. REFER TO ONE-LINE DIAGRAM FOR INSTRUCTIONS FOR EXISTING CONDUITS AND FEEDERS
2. DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING TRANSFORMER. REFER TO ONE-LINE DIAGRAM FOR INSTRUCTIONS FOR EXISTING CONDUITS AND FEEDERS
3. DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING MAGNETIC DOOR HOLDER; MAINTAIN EXISTING POWER & FIRE ALARM CONNECTIONS FOR REPLACEMENT MAG HOLD

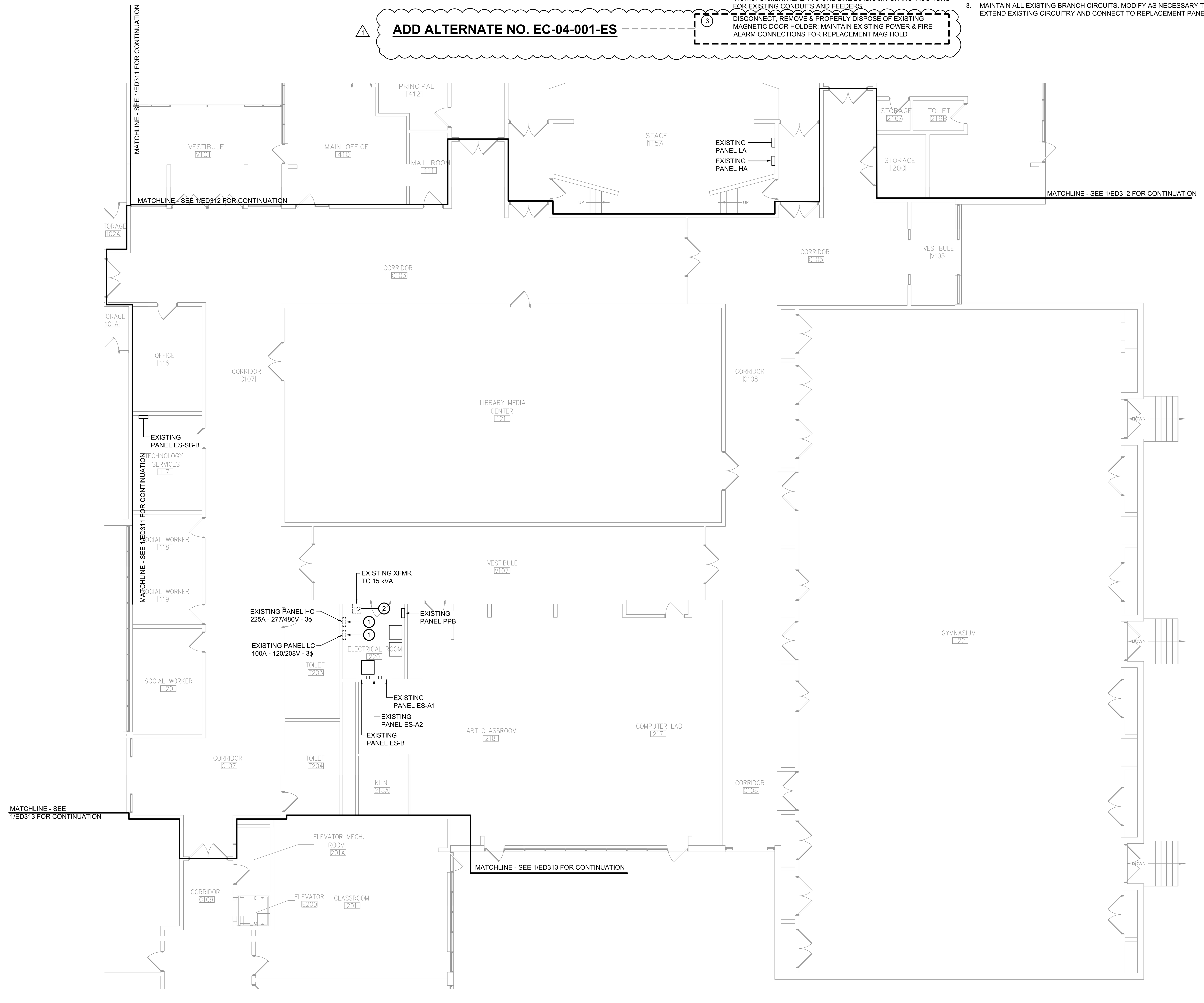
ADD ALTERNATE NO. EC-04-001-ES

General Notes:

1. IN ALL AREAS WITH EXISTING CEILINGS TO REMAIN, ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REMOVE AND REINSTALL CEILING TILES AND GRID AS NECESSARY TO COMPLETE REMOVAL AND INSTALLATION OF LIGHTING, WIRING, CONDUIT, JUNCTION BOXES, ETC.
2. PRIOR TO REPLACEMENT OF ELECTRICAL PANELS, PERFORM FIELD WORK TO DETERMINE QUANTITIES, SIZES AND RATINGS OF ALL EXISTING BRANCH CIRCUIT BREAKERS. PROVIDE REPLACEMENT PANELS WITH SAME BREAKER CONFIGURATION FOR THE EXISTING BRANCH CIRCUITS.
3. MAINTAIN ALL EXISTING BRANCH CIRCUITS. MODIFY AS NECESSARY TO EXTEND EXISTING CIRCUITRY AND CONNECT TO REPLACEMENT PANELS.

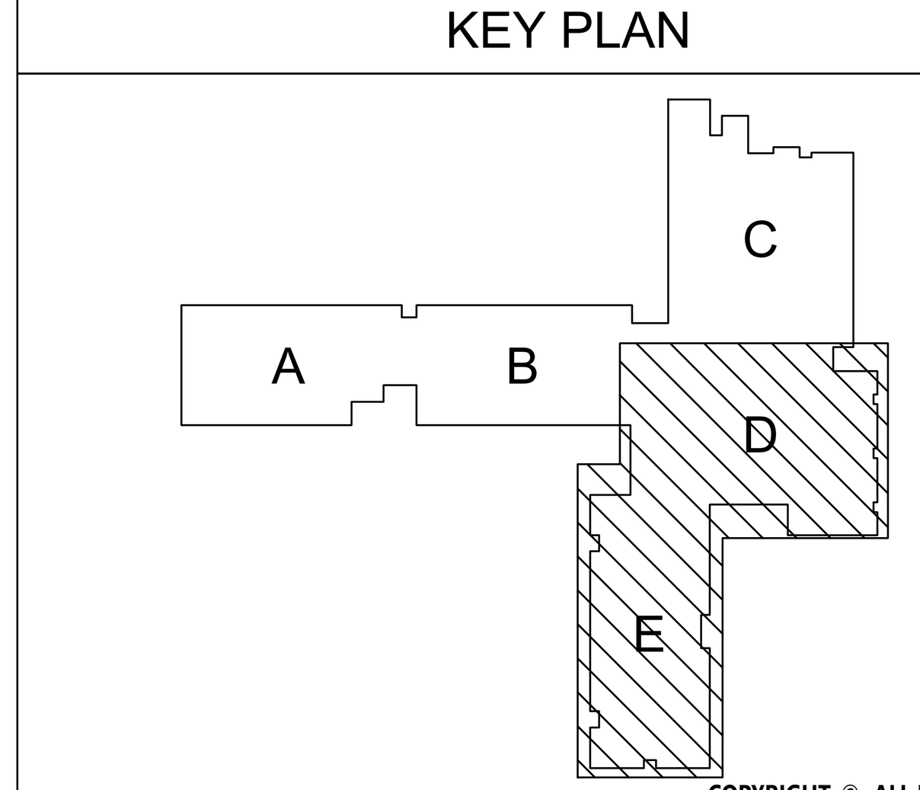


1 ED313 Area E First Floor Electrical Demolition Plan
Scale: 1/8" = 1'-0"



2 ED313 Area D First Floor Electrical Demolition Plan
Scale: 1/8" = 1'-0"

KEY PLAN



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2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

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Sheet Title: AREA D & E FIRST FLOOR ELECTRICAL DEMOLITION PLANS

Sheet No. HES ED313

CONSTRUCTION DOCUMENTS

General Notes:

1. IN ALL AREAS WITH EXISTING CEILINGS TO REMAIN, ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REMOVE AND REINSTALL CEILING TILES AND GRID AS NECESSARY TO COMPLETE REMOVAL AND INSTALLATION OF LIGHTING, WIRING, CONDUIT, JUNCTION BOXES, ETC.
2. PRIOR TO REPLACEMENT OF ELECTRICAL PANELS, PERFORM FIELD WORK TO DETERMINE QUANTITIES, SIZES AND RATINGS OF ALL EXISTING BRANCH CIRCUIT BREAKERS. PROVIDE REPLACEMENT PANELS WITH SAME BREAKER CONFIGURATION FOR THE EXISTING BRANCH CIRCUITS.
3. MAINTAIN ALL EXISTING BRANCH CIRCUITS. MODIFY AS NECESSARY TO EXTEND EXISTING CIRCUITRY AND CONNECT TO REPLACEMENT PANELS.

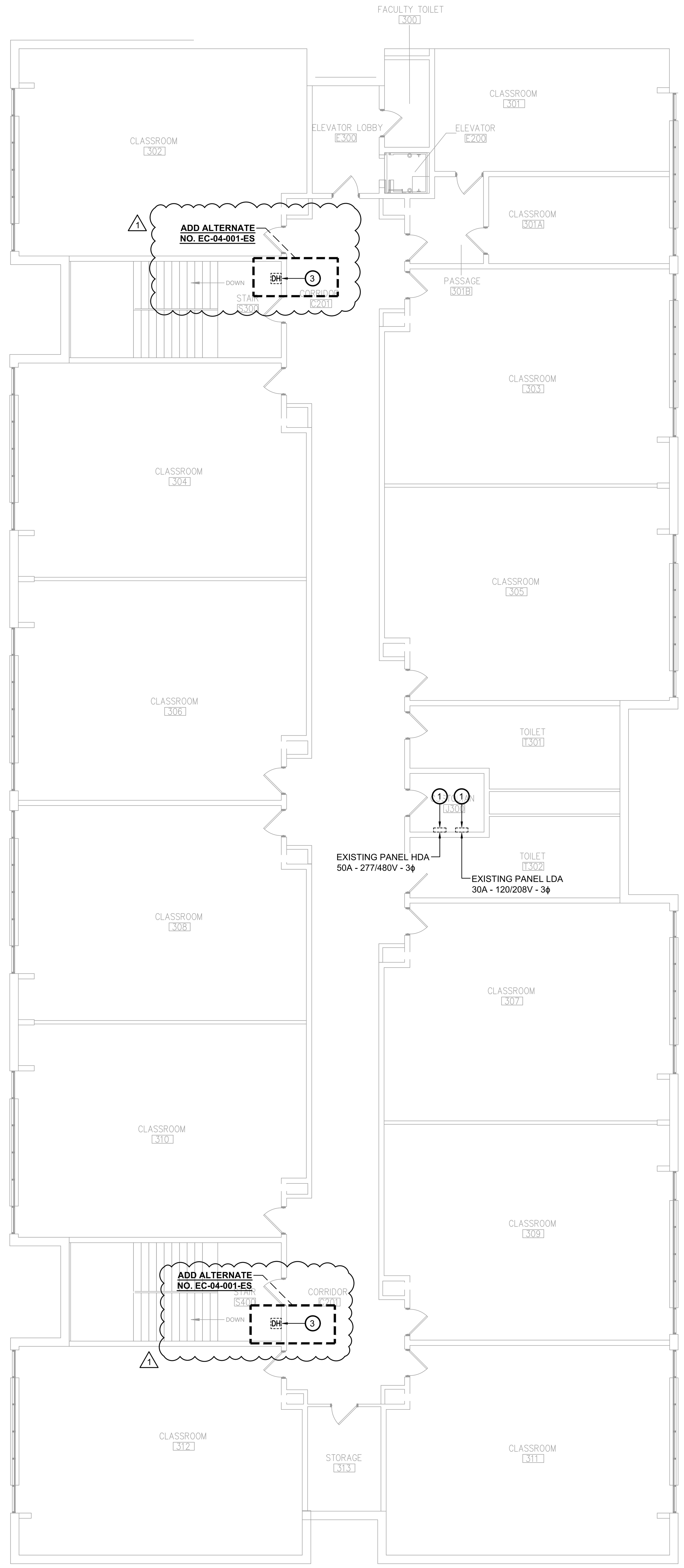
Key Notes:

(1) DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING DISTRIBUTION PANEL. MAINTAIN EXISTING DISTRIBUTION WIRING FOR CONNECTION TO REPLACEMENT PANEL. REFER TO ONE-LINE DIAGRAM FOR INSTRUCTIONS FOR EXISTING CONDUITS AND FEEDERS

(2) DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING TRANSFORMER. REFER TO ONE-LINE DIAGRAM FOR INSTRUCTIONS FOR EXISTING CONDUITS AND FEEDERS

ADD ALTERNATE NO. EC-04-001-ES

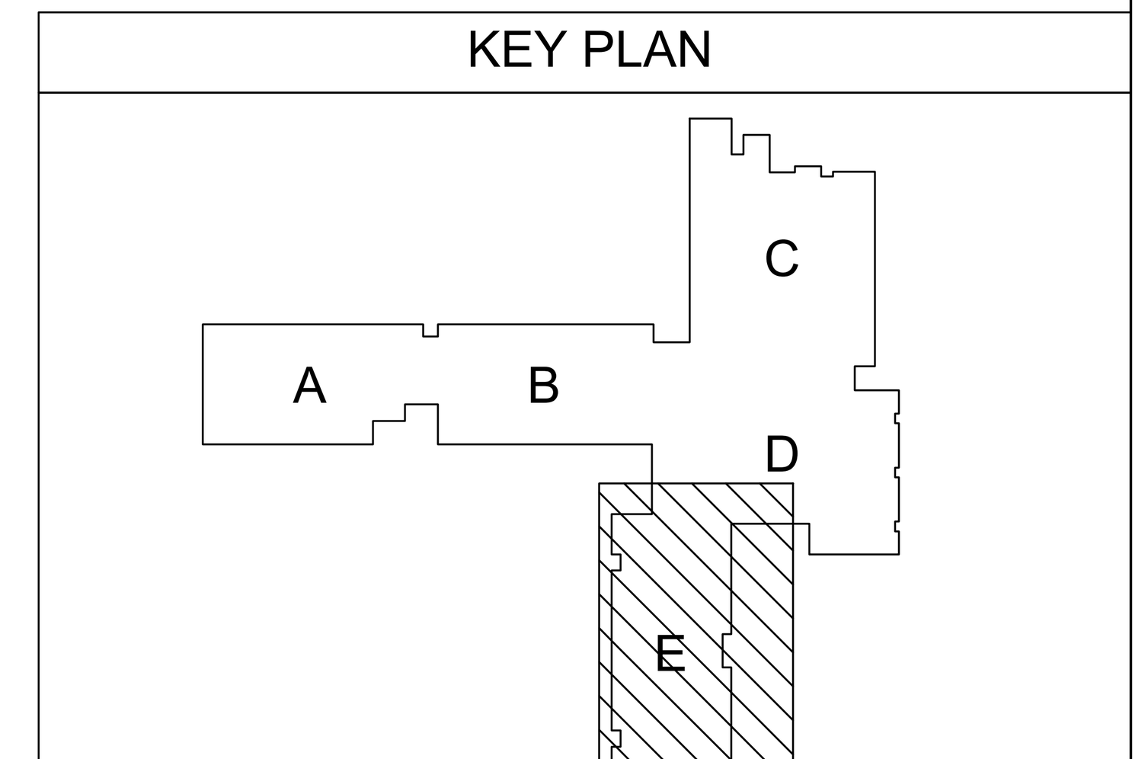
(3) DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING MAGNETIC DOOR HOLDER; MAINTAIN EXISTING POWER & FIRE ALARM CONNECTIONS FOR REPLACEMENT MAG HOLD



1 / ED323 — Area E Second Floor Electrical Demolition Plan

Scale: 1/8" = 1'-0"

KEY PLAN



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Consultant: BLAKE ENGINEERING PLLC

Project Title: HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND ELEMENTARY SCHOOL
2022 CAPITAL IMPROVEMENT PROJECT - PHASE 1

STATE OF NEW YORK · MATTHEW GEORGE BLAKE · 089039 · LICENSED PROFESSIONAL ENGINEER

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Sheet Title: AREA E SECOND FLOOR ELECTRICAL DEMOLITION PLAN

Sheet No. HES ED323

CONSTRUCTION DOCUMENTS

General Notes:

1. IN ALL AREAS WITH EXISTING CEILINGS TO REMAIN, ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REMOVE AND REINSTALL CEILING TILES AND GRID AS NECESSARY TO COMPLETE REMOVAL AND INSTALLATION OF LIGHTING, WIRING, CONDUIT, JUNCTION BOXES, ETC.
2. WALL MOUNTED EXIT LIGHTING IN CORRIDORS IS EXISTING TO REMAIN WHERE SHOWN ON THE PLANS. CONTRACTOR SHALL ADJUST PLACEMENT OF EXISTING FIXTURES IF NEEDED TO ACCOMMODATE CEILING REPLACEMENT.

ELECTRICAL NOTES:
AREAS INDICATED WITHIN DASHED LINES HAVE NEW CEILINGS.

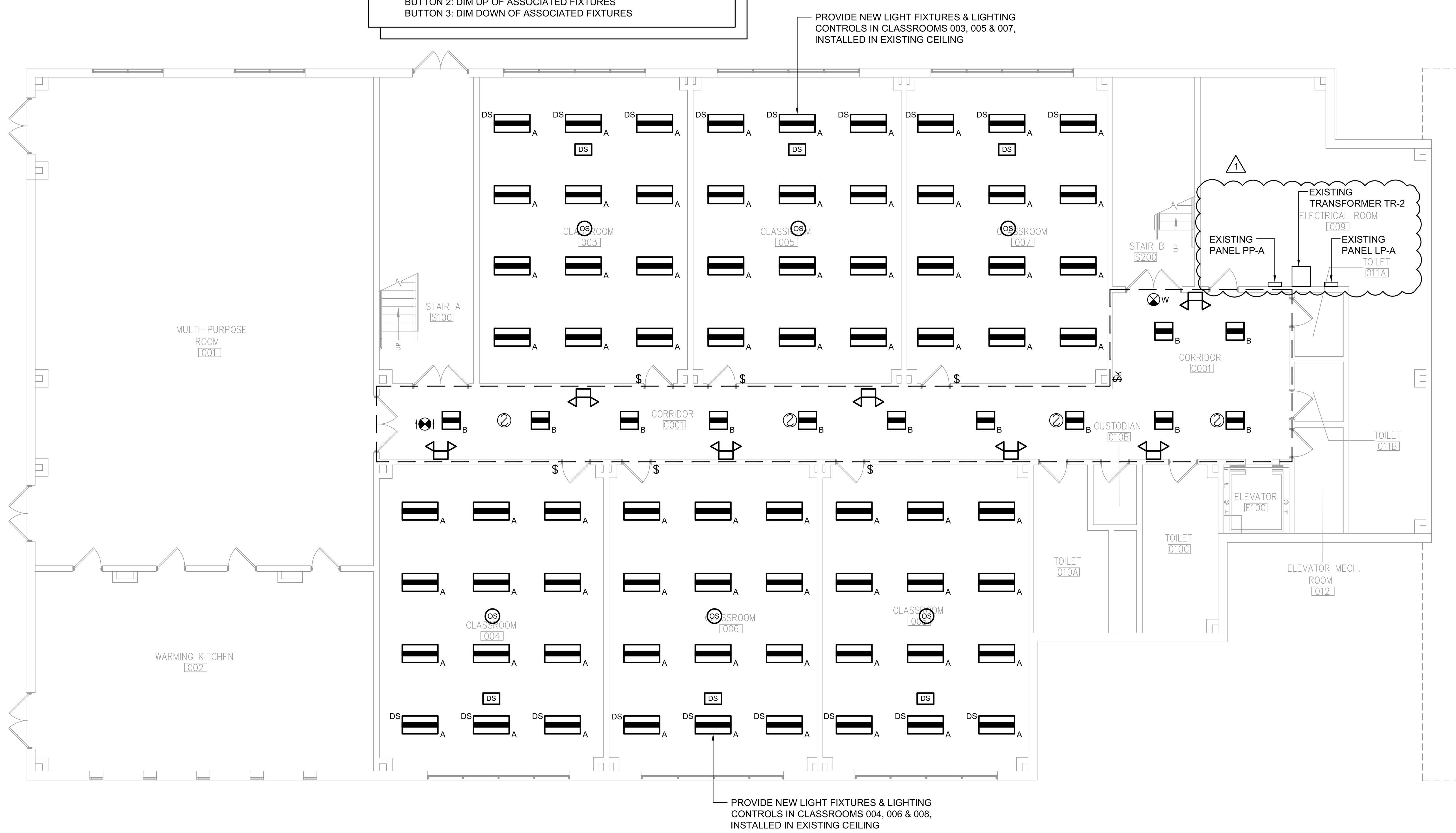
- REINSTALL ALL STORED CEILING DEVICES INCLUDING FIRE ALARM, WIRELESS ACCESS POINTS, SPEAKERS, PROJECTORS, ETC. CONNECT TO EXISTING WIRING, EXTEND AS NECESSARY TO COMPLETE INSTALLATION.
- PROVIDE NEW SWITCHES AND LIGHTING AS INDICATED. CONNECT TO EXISTING LIGHTING CIRCUITS IN EACH SPACE.

LIGHTING CONTROL SEQUENCE OF OPERATION - INSTRUCTIONAL SPACES

VACANCY SENSOR(S) TO BE USED FOR AUTO-OFF OF ALL FIXTURES AFTER 30 MIN. TIME DELAY.

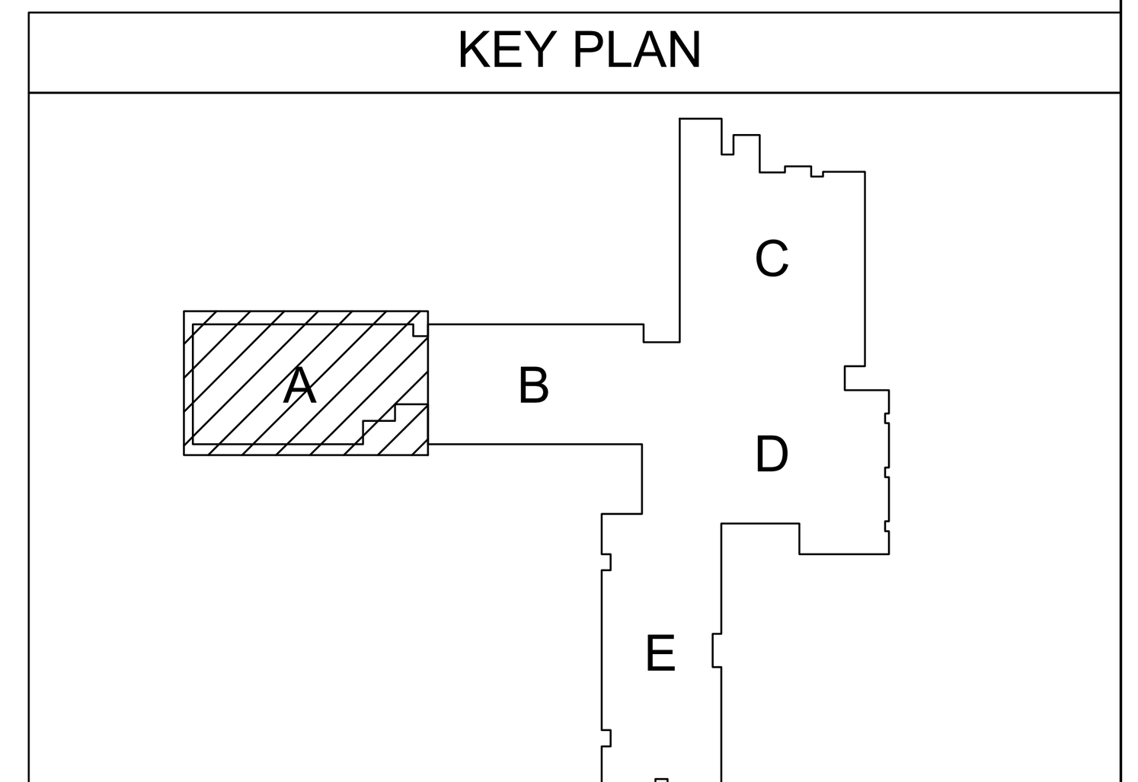
DAYLIGHT SENSOR(S) TO ACTUATE PRESET DIMMING LEVEL FOR LIGHT FIXTURES DESIGNATED "DS" ON PLANS BASED ON DAYLIGHT AVAILABLE IN SPACE, WITH DIM-TO-OFF FUNCTIONALITY.

3 BUTTON WALL STATION:
BUTTON 1: ON/OFF CONTROL OF ASSOCIATED FIXTURES
BUTTON 2: DIM UP OF ASSOCIATED FIXTURES
BUTTON 3: DIM DOWN OF ASSOCIATED FIXTURES



1 / E201 **Area A Ground Floor Lighting Plan**
Scale: 1/8" = 1'-0"

KEY PLAN



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Sheet Title
AREA A GROUND FLOOR LIGHTING PLAN

Sheet No.
HES E201

CONSTRUCTION DOCUMENTS

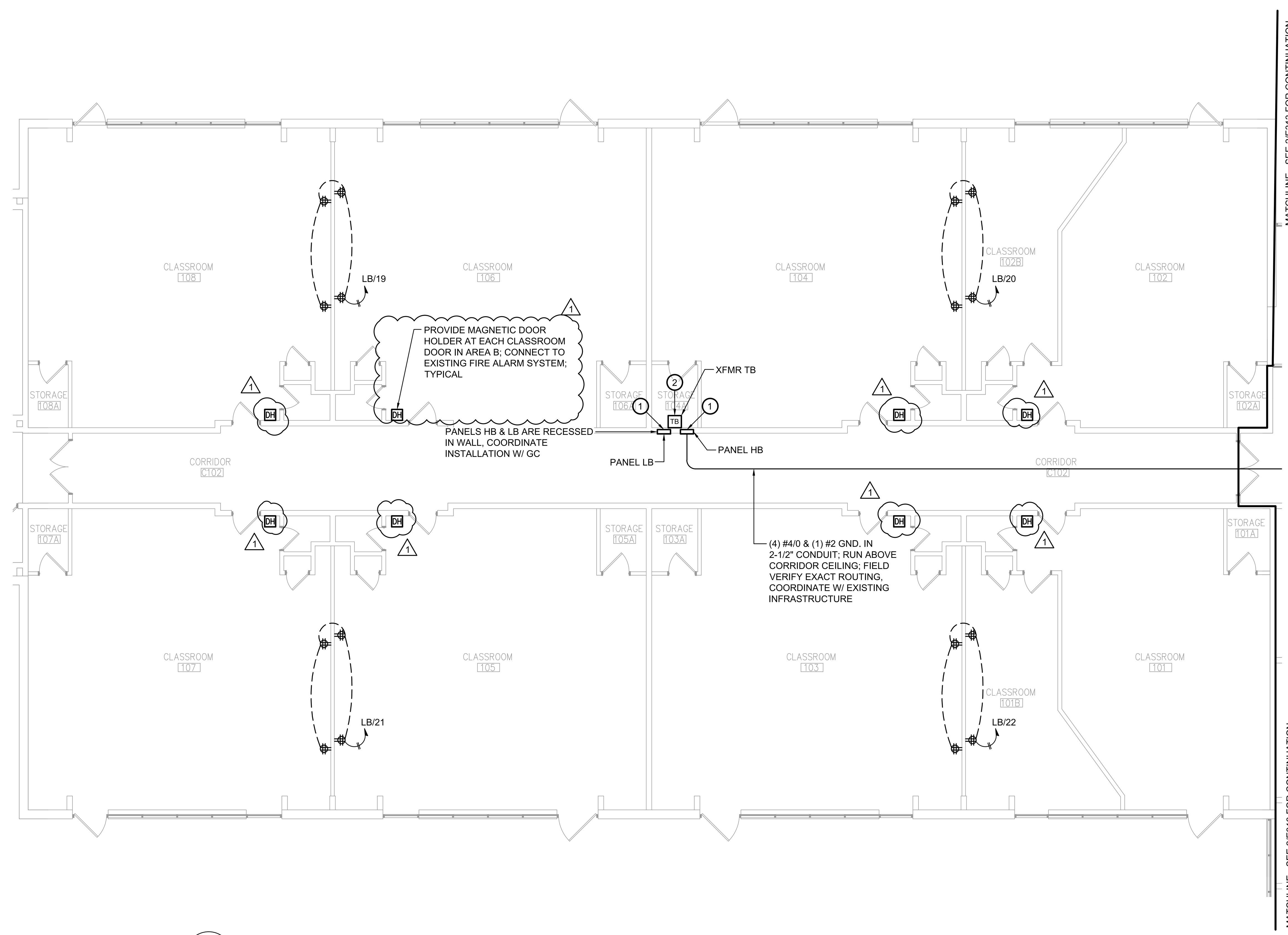
General Notes:

1. IN ALL AREAS WITH EXISTING CEILINGS TO REMAIN, ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REMOVE AND REINSTALL CEILING TILES AND GRID AS NECESSARY TO COMPLETE REMOVAL AND INSTALLATION OF LIGHTING, WIRING, CONDUIT, JUNCTION BOXES, ETC.
2. PRIOR TO REPLACEMENT OF ELECTRICAL PANELS, PERFORM FIELD WORK TO DETERMINE QUANTITIES, SIZES AND RATINGS OF ALL EXISTING BRANCH CIRCUIT BREAKERS. PROVIDE REPLACEMENT PANELS WITH SAME BREAKER CONFIGURATION FOR THE EXISTING BRANCH CIRCUITS.
3. MAINTAIN ALL EXISTING BRANCH CIRCUITS. MODIFY AS NECESSARY TO EXTEND EXISTING CIRCUITRY AND CONNECT TO REPLACEMENT PANELS.

Key Notes:

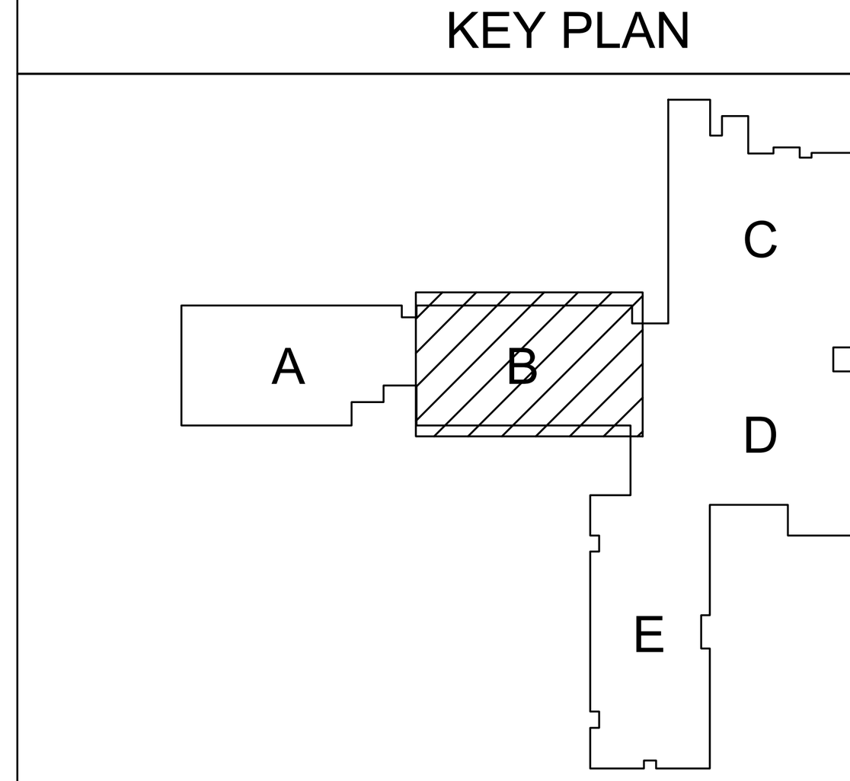
(1) PROVIDE NEW PANEL INSTALLED IN PLACE OF EXISTING. CONNECT TO EXISTING DISTRIBUTION WIRING, EXTEND EXISTING CONDUITS & WIRING AS NEEDED TO MAKE FINAL CONNECTIONS. PROVIDE NEW FEEDERS FROM PANEL TO SOURCE. REFER TO ONE-LINE DIAGRAM ON SHEET E105 FOR ADDITIONAL INFORMATION

(2) PROVIDE NEW TRANSFORMER. FIELD VERIFY MOUNTING CONDITIONS. PROVIDE SUPPORT FRAME CONSTRUCTED OF MODULAR STEEL CHANNEL AND SUPPORT TRANSFORMER FROM OVERHEAD STRUCTURE.



1 / E311 — Area B First Floor Electrical Demolition Plan
Scale: 1/8" = 1'-0"

KEY PLAN



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Sheet Title: AREA B FIRST FLOOR ELECTRICAL PLAN

Sheet No.: HES E311

CONSTRUCTION DOCUMENTS

General Notes:

1. IN ALL AREAS WITH EXISTING CEILINGS TO REMAIN, ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REMOVE AND REINSTALL CEILING TILES AND GRID AS NECESSARY TO COMPLETE REMOVAL AND INSTALLATION OF LIGHTING, WIRING, CONDUIT, JUNCTION BOXES, ETC.
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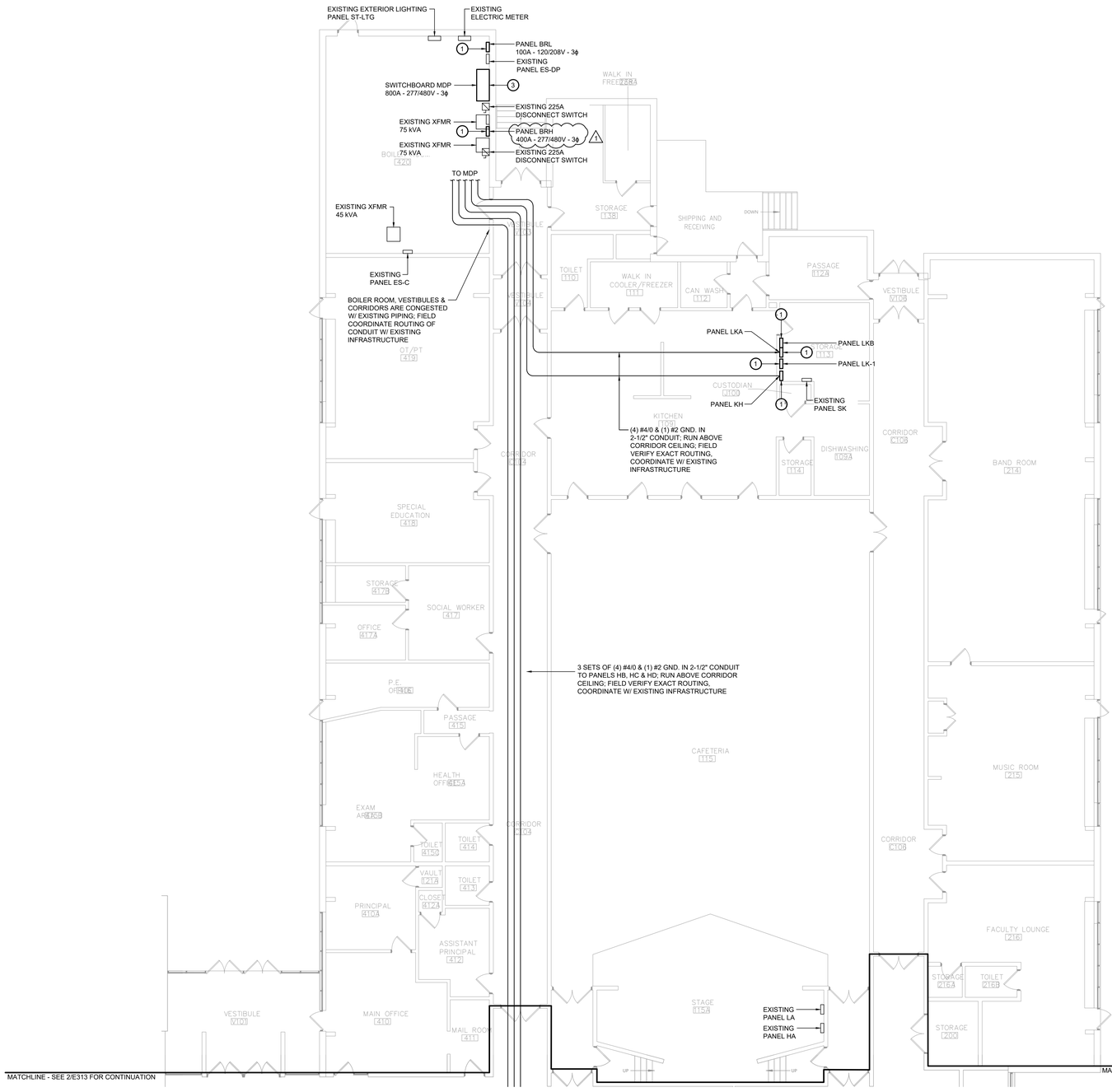
Key Notes:

(1) PROVIDE NEW PANEL INSTALLED IN PLACE OF EXISTING. CONNECT TO EXISTING DISTRIBUTION WIRING, EXTEND EXISTING CONDUITS & WIRING AS NEEDED TO MAKE FINAL CONNECTIONS. PROVIDE NEW FEEDERS FROM PANEL TO SOURCE. REFER TO ONE-LINE DIAGRAM ON SHEET E105 FOR ADDITIONAL INFORMATION

(2) PROVIDE NEW TRANSFORMER. FIELD VERIFY MOUNTING CONDITIONS. PROVIDE SUPPORT FRAME CONSTRUCTED OF MODULAR STEEL CHANNEL AND SUPPORT TRANSFORMER FROM OVERHEAD STRUCTURE.

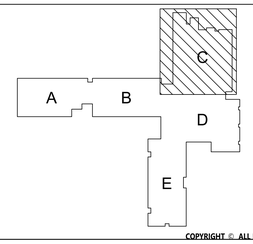
(3) PROVIDE NEW SERVICE SWITCHBOARD. CONNECT TO EXISTING SERVICE FEEDERS AND ALL NEW AND EXISTING BRANCH CIRCUITS. REFER TO ONE-LINE DIAGRAM ON SHEET E105 FOR ADDITIONAL INFORMATION.



1 / E312 Area C First Floor Electrical Plan

Scale: 1/8" = 1'-0"

KEY PLAN



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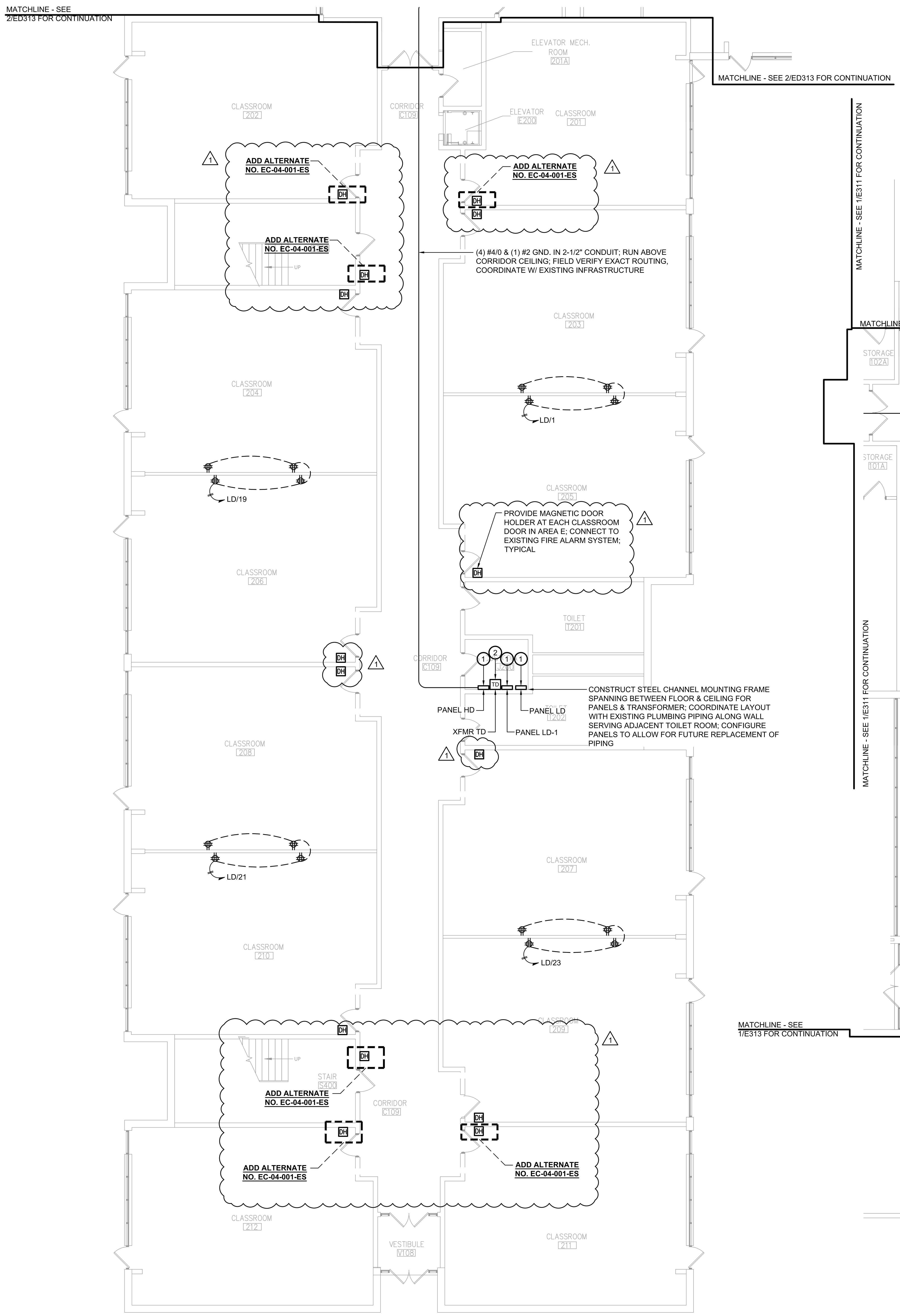
Sheet Title

AREA C FIRST FLOOR ELECTRICAL PLAN

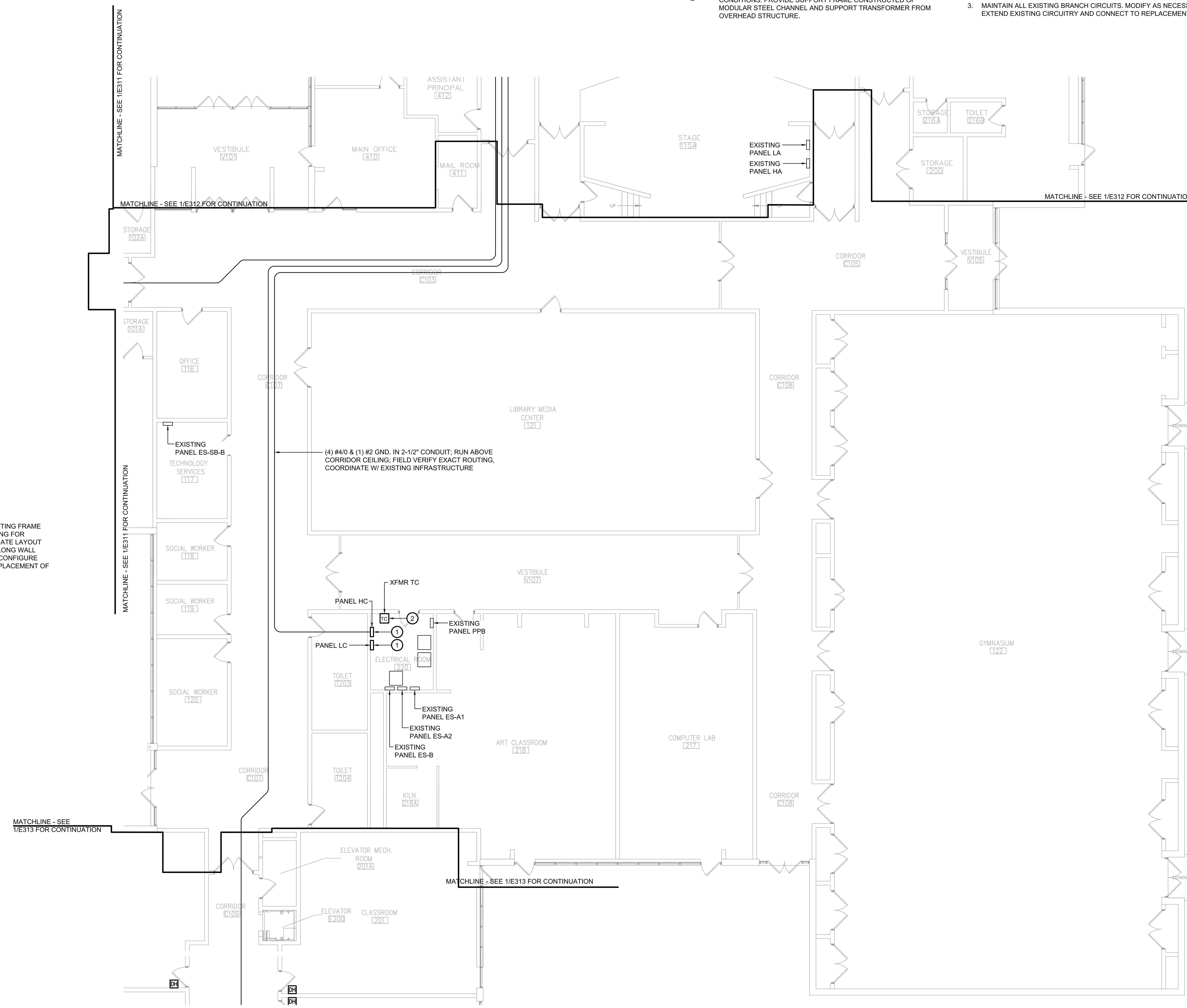
Sheet No.

HES
E312

CONSTRUCTION DOCUMENTS



1 E313 **Area E First Floor Electrical Plan**
Scale: 1/8" = 1'-0"



2 E313 **Area D First Floor Electrical Plan**
Scale: 1/8" = 1'-0"

Key Notes:

1. PROVIDE NEW PANEL INSTALLED IN PLACE OF EXISTING. CONNECT TO EXISTING DISTRIBUTION WIRING, EXTEND EXISTING CONDUITS & WIRING AS NEEDED TO MAKE FINAL CONNECTIONS. PROVIDE NEW FEEDERS FROM PANEL TO SOURCE. REFER TO ONE-LINE DIAGRAM ON SHEET E105 FOR ADDITIONAL INFORMATION
2. PROVIDE NEW TRANSFORMER. FIELD VERIFY MOUNTING CONDITIONS. PROVIDE SUPPORT FRAME CONSTRUCTED OF MODULAR STEEL CHANNEL AND SUPPORT TRANSFORMER FROM OVERHEAD STRUCTURE.

General Notes:

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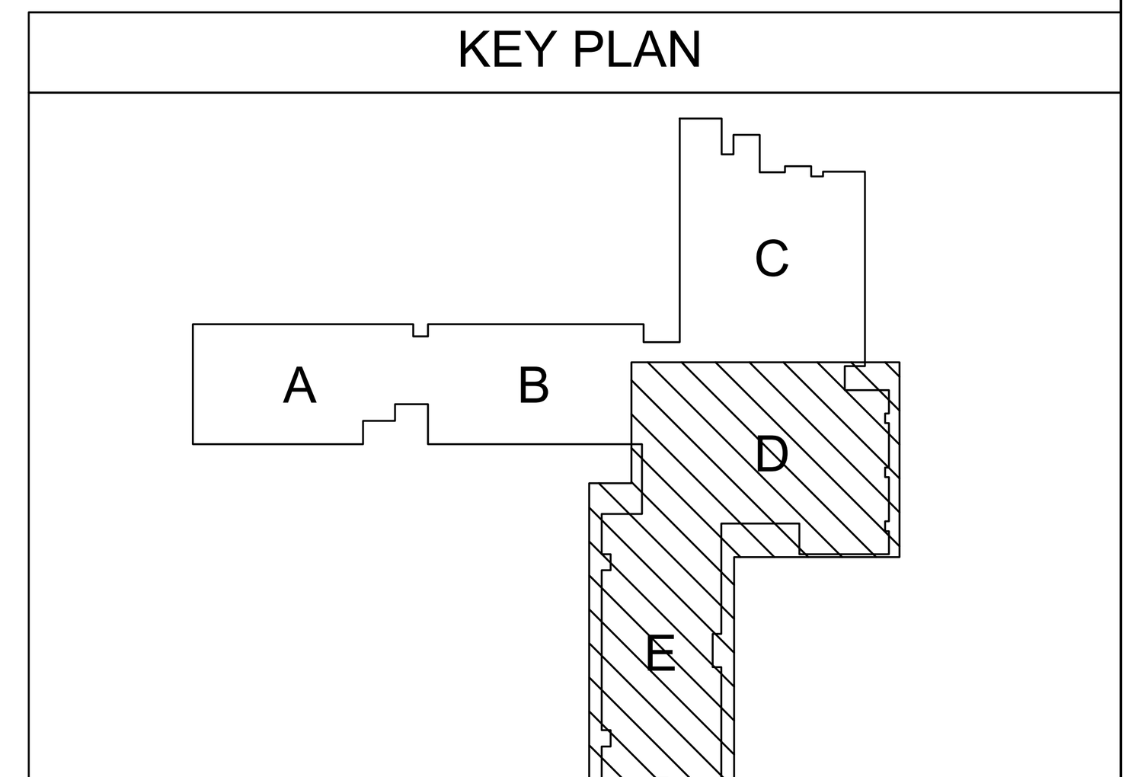
KEY PLAN



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Project Title

HIGHLAND CENTRAL SCHOOL DISTRICT
HIGHLAND ELEMENTARY SCHOOL
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Sheet Title
AREA D & E FIRST FLOOR ELECTRICAL PLANS

Sheet No.
HES E313

CONSTRUCTION DOCUMENTS

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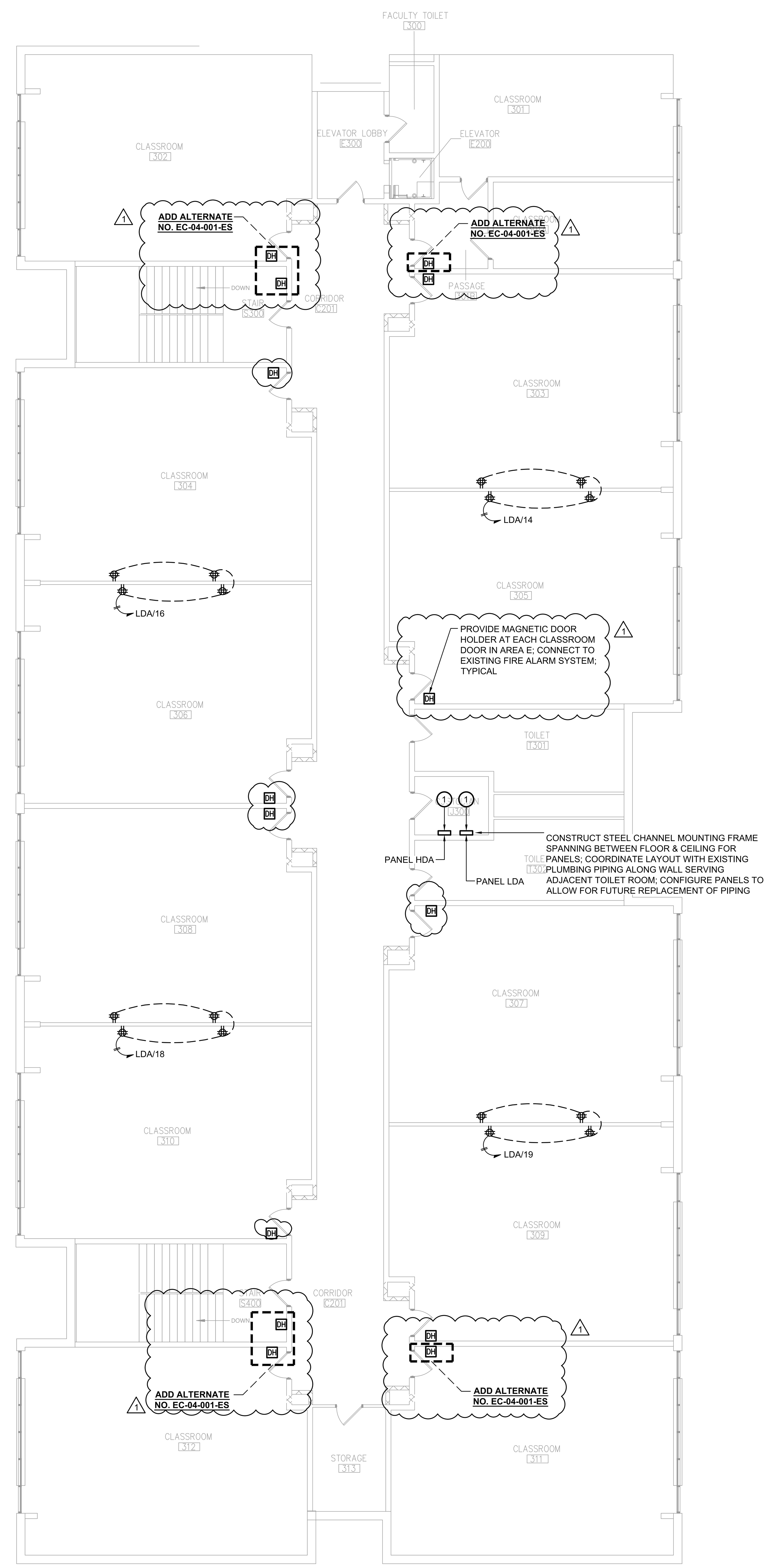
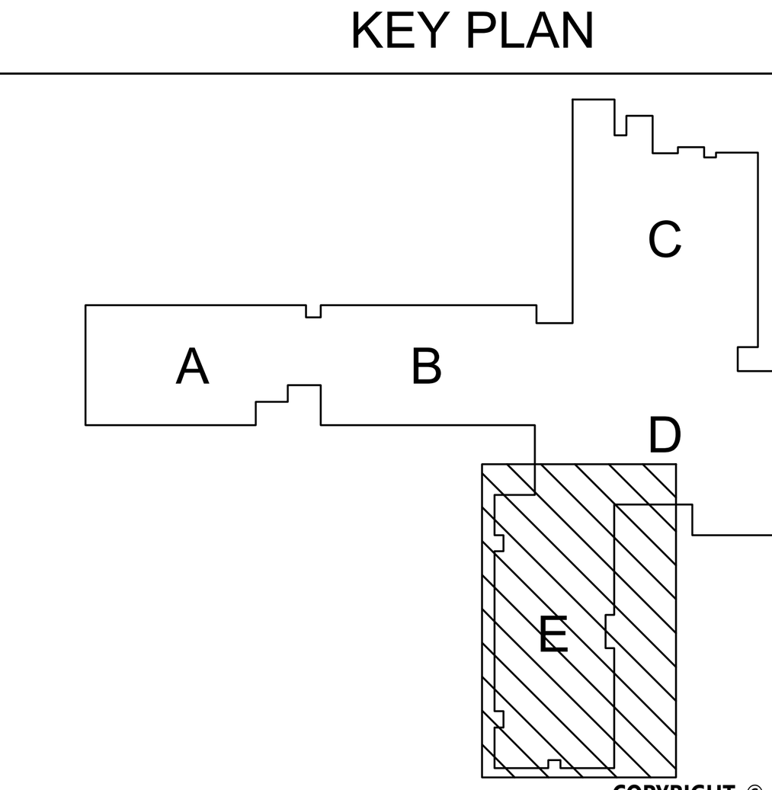


1 / E323 Area E Second Floor Electrical Plan
Scale: 1/8" = 1'-0"

KEY PLAN



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Sheet No. HES E323

CONSTRUCTION DOCUMENTS