ROCKFORD BOARD OF EDUCATION
INVITATION FOR BID ON SUPPLIES, MATERIALS, EQUIPMENT OR SERVICES FOR SCHOOL DISTRICT NO. 205 ROCKFORD, ILLINOIS

IFB No. IFB No. 22-24 HVAC Upgrades at Lathrop, Spring Creek and Bloom Schools

DATE: March 24, 2022

RE: ADDENDUM NO. 4

To All Bidders:

Included are modifications, clarifications and/or corrections for the Project Manual and are hereby made a part of the contract documents. Please attach this addendum to the Project Manual(s) in your possession. Please note the receipt of this addendum on the bid form. Bidders shall review changes to all portions of this work as changes to one portion may affect the work of another.

If you plan to hand deliver your IFB submission on the due date, please note you must check in on the 1st floor prior to coming to the bid opening. Please allow time for this as late submission will not be accepted.

Refer all questions relative to the business aspect, Instructions to Bidders, Special Conditions, and questions concerning the technical aspect of the documents to the Director of Purchasing by email at purchasingdeptstaff@rps205.com.

Bidder's failure to submit the completed list may result in disqualification of bid.

ROCKFORD BOARD OF EDUCATION

By: Dane Youngblood
Director of Purchasing

KEITH Engineering Design

ADDENDUM # : 004

DATE ISSUED : March 21, 2022

ADDENDUM

Subject : Addendum No. 004
To the Bid Documents For:
RPS IFB number 22-24
Spring Creek, Lathrop, & Bloom Elementary
HVAC Upgrades
Rockford, Illinois

Specifications

1. Section 230130.52 – Existing HVAC Air Distribution System Cleaning.
   a. Add the above specification section in its entirety to the project manual.

2. Section 230593 – Testing, Adjusting, and Balancing for HVAC
   a. Replace section 3.1.A with the following:
      1) All TAB specialists are acceptable provided they can meet the requirements of the specification.

3. Section 230713 – Duct Insulation
   a. Replace Sub-Section 3.10.B.1 with the following:
      1) Mineral-Fiber Board: 3 inches thick providing minimum insulation factor of R-12 after installation and 3.0-lb/cu. Ft. nominal density
   b. Replace Sub-Section 3.10.C.1 with the following:
      1) Mineral-Fiber Board: 3 inches thick providing minimum insulation factor of R-12 after installation and 3.0-lb/cu. Ft. nominal density

4. Section 230719 – HVAC Piping Insulation
   a. Replace Sub-Section 3.11.B with the following:
      1) Mineral-Fiber, Preformed Pipe, Type I: 1-1/2 inch thick.
   b. Add Sub-Section 3.11.F – Steam Piping
      1) 3.11.F.1 – Low Pressure Steam Supply and Condensate return, 250 Deg F and Below:
         (a) ALL sizes: Mineral-Fiber Preformed Pipe, Type I: 2 inches thick.

5. Section 230923.27 – Temperature Instruments
   a. Revise section 2.2.K.4 to read: “Provide discrete communicating sensor to combine temperature, humidity, and C02 sensing in blank-face enclosure.”
   b. Omit section 2.2.K.5.

6. Section 23 2113 – Hydronic Piping
   a. Delete Sub-Section 3.7.E in its entirety.

7. Section 23 2513 – Water Treatment for Closed Loop Hydronic Systems
   a. 2.1.A - Add to the list of acceptable manufactures:
      1) Crown Solutions Inc.
      2) Certified Laboratories
      3) H-O-H Water Technology, Inc.
      4) Watertech of America
      5) Butler Chemical Company
      6) Betz
      7) America's Best Water Treaters
   b. Delete Sub-Section 2.5 in its entirety.

8. Section 23 3113 – Non-Metal Ducts
   a. Add the following section 1.2.A.2.b:
      1) Thermaduct
   b. Add the following: Section 2.3 – Fibrous Glass Duct and Fittings
      1) Manufacturers: Subject to compliance with requirements:
         (a) Thermaduct
      2) Fibrous-Glass Duct Materials: Resin-bonded fiberglass, faced on the outside surface with fire-resistive FSK vapor retarder and with a smooth fiberglass mat finish on the air-side surface.
         (a) Duct Board: Factory molded into rectangular boards.
         (b) Round Duct: Factory molded into straight round duct and smooth fittings.
         (c) Temperature Limits: 185 deg F ambient temperature surrounding ducts.
         (d) Maximum Thermal Conductivity: 0.13 Btu x in./h x sq. ft. x deg at 75 deg F
         (e) Moisture Absorption: Not exceeding 5 percent by weight at 120 deg F (49 deg C) and 95 percent relative humidity for 96 hours when tested according to ASTM C 1104/C 1104M.
         (f) Permeability: 0.00 perms maximum when tested according to ASTM E 96/E 96M, Procedure A.
         (g) The density of the Kooltherm foam shall not be less than 3.5 pcf (56 Kg/m3) with a minimum compressive strength of 28 psi (.2 MPa).
         (h) The standard panel is (31 mm) thickness panel with R-8.1 (1.5 RSI) shall be utilized unless indicated otherwise on the print.
         (i) Antimicrobial Agent: Additive for antimicrobial shall not be used but instead, raw product must pass UL bacteria growth testing.
         (j) Noise-Reduction Coefficient: 0.05 minimum when tested according to ASTM C 423, Mounting A.
         (k) Required Markings: All interior duct liner shall bear UL label and other markings required by UL 181 on each full sheet of duct panel; UL ratings for internal closure materials.
         (l) R-value:
            (i) 1 3/16 inch (31 mm) Thick Panel: 8.1 R
            (ii) 1 ¾ (45 mm) Thick Panel: 12 R
            (iii) 2 1/16" Double wall (55 mm): 14.1 R
            (iv) 2 3/8" Double wall (62 mm) Thick Panel: 16.2 R

(v) 3” Double wall (76 mm) Thick Panel: 20.1 R
(vi) 3.5 Double wall (100 mm) Thick Panel 24 R

3) Closure Materials:
   (a) V-Groove Adhesive: Silicone (interior only).
   (b) UV stable 1000 micron high impact resistant titanium infused vinyl (exterior).
      (i) Factory manufactured seamless corners for zero perms.
      (ii) Cohesive bonded over-lap at corner seam covers for zero perms.
      (iii) Water resistant titanium infused welded vinyl seams.
      (iv) Mold and mildew resistant.
   (c) Polymetric Sealing System:
      (i) Structural Membrane: Aluminum scrim with woven glass fiber with UV stable vinyl clad applied
      (ii) Minimum Seam Cover Width: 2 7/8” inches (75 mm)
      (iii) Sealant: Low VOC.
      (iv) Color: White (colors, matched by architect optional).
      (v) Water resistant.
      (vi) Mold and mildew resistant.
   (d) Duct Connectors.
      (i) Factory manufactured cohesive bonded strips (low pressure only).
      (ii) Factory manufactured all aluminum grip flange.
         (1) Grip flange
         (2) F-flange
         (3) H-flange
         (4) U-flange
      (iii) Factory manufactured galvanized 4-bolt flange
4) Outdoor Cladding
   (a) Thermaduct outdoor Installations: Duct segments shall incorporate UV stable 1000 micron high impact resistant titanium infused vinyl which is introduced during the manufacturing process.
5) Reinforcement
   (a) Thermaduct shall provide designed and built with adequate reinforcement to both; withstand air pressure forces from within the duct from blower pressure and shall be built to handle expected snow load for the location where the Thermaduct is being installed. Thermaduct will employ Airtruss™ reinforcement system when both specified static pressure and duct sizes dictate the need. This is a factory installed system and no field installation of the reinforcement system is required.
6) Weight
   (a) Thermaduct shall provide low weight stresses on the building framing and support members. Assembled Thermaduct shall have a weight of 0.86 lbs. per square foot to maximum weight of 2.7 lbs. per square foot (depending on R-value and reinforcement requirement). Hangers and tie-downs are to be detailed on the manufacturer’s installing contractors detail drawings prior to installation but not exceeding 13’ for duct girth <84” and 8’ for duct girth >85” between hangers and designed to carry the weight and wind load of the ductwork.

c. Add the following: Section 3.3 – Thermoduct Shop Fabrication
   1) Certification:

(a) Ducts shall be detailed and fully factory manufactured by an authorized Thermaduct, LLC facility system. All fabrication labor will be certified “yellow label” building trade professionals, compliant to SMWIA and SMACNA labor guidelines (work preservation observed).

2) Fabrication:
   (a) Fabricated joints, seams, transitions, reinforcement, elbows, branch connections, access doors and panels, and damage repairs according to manufacturer’s written and detailed instructions.
   (b) Fabricated 90-degree mitered elbows to include turning vanes.
   (c) Fabricated duct segments in accordance with manufacturer’s written details.
   (d) Duct Fittings shall include 6 inches of connecting material, as measured, from last bend line to the end of the duct. Connections on machine manufactured duct may be 4 inches.
   (e) Fabricated duct segments utilizing v-groove method of fabrication. Factory welded or cohesively bonded seams will apply to fully manufactured ductwork and fittings. Internal seams will be supplied with an unbroken layer of low VOC silicone or bonding (for paint shop applications). Each duct segment will be factory supplied with either aluminum grip pro-file or pre-insulated duct connectors in accordance with manufacturer’s detailed submittal guide. Applied duct reinforcement to protect against side deformation from both positive and negative pressure per manufacturer’s design guide based on specified ductwork size and system pressure.
   (f) Designed and fabricated duct segments and fittings will be in accordance with “SMACNA Duct Construction Standards” latest edition.
   (g) Both positive and negative ductwork and fittings shall be constructed to incorporate a UL Listed as a Class 1 air duct to Standard for Safety UL 181 liner with an exterior clad for permanent protection against water intrusion.
   (h) Duct shall be constructed to exceed requirements for snow and wind loads.

d. Add the following: Section 3.4 Thermoduct Duct Installtion
   1) Duct segments shall be installed be competent HVAC installers.
   2) Install ducts and fittings to comply with manufacturer’s installation instructions as follows:
      (a) Install ducts with fewest possible joints.
      (b) Unless otherwise indicated, install ducts vertically and horizontally, and parallel and perpendicular to building lines.
      (c) Install ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building.
      (d) Protect duct interiors from the moisture, construction debris and dust, and other foreign materials. Comply with SMACNA's "Duct Cleanliness for New Construction Guidelines."
      (e) Use prescribed duct support spacing as described in this specification and manufacturer’s recommendations.
   3) Air Leakage: Duct air leakage rates to be in compliance with “SMACNA HVAC Duct Construction Standards” latest version per applicable leakage class based on pressure.
   4) Where ducts pass through fire-rated interior partitions and exterior walls, install fire dampers. Comply with requirements in Section 233300 "Air Duct Accessories" for fire and smoke dampers.

e. Add the following: Section 3.5 Thermoduct Hanger and Support installation
   1) Contractor to ensure that the ductwork system is properly and adequately supported.

(a) Ensure that the chosen method is compatible with the specific ductwork system requirements per Thermaduct installation detail drawings. Pre-installation should be provided prior to work commencement by installing contractor for approval. .
(b) Install upper attachments to structures. Select and size upper attachments with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.

2) Supports on straight runs of ductwork shall be positioned at centers not exceeding 13 feet (3.96 m) for duct sections when fabricated in 13 foot (3.96 m) lengths with duct girth less than 84". Larger duct sizes and short segments with duct girth greater than 84" are to be supported at 8 foot centers or less, in accordance with the Thermaduct installation details provided prior to work commencement.
3) Ductwork shall be supported at changes of direction, at branch duct connections, tee fittings, parallel under turning vanes and all duct accessories such as dampers, etc.
4) The load of such accessories to the ductwork shall be neutralized by the accessory support.

f. Add the following: Section 3.6 Field Quality Contro
1) Inspection: Arrange for manufacturer's representative to inspect completed installation and provide written report that installation complies with manufacturer's written instructions
(a) Remove and replace duct system where inspection indicates that it does not comply with specified requirements
2) Perform additional testing and inspecting, at the Contractor's expense, to determine compliance of replaced or additional work with specified requirements.

g. Add the following: Section 3.7 Thermoduct Duct Schedule
1) Outdoor Ducts and Fittings:
(a) Thermaduct Rectangular Ducts and Fittings:
(i) Minimum Panel Thickness: 45 mm
(ii) Cladding: minimum 0.038 inch

9. Section 235216 – Condensing Boilers
a. Delete this section in its entirety.

10. Section 235416.13 – Gas Fired Furnaces
a. Delete this section in its entirety.

11. Section 236200 – Packaged Compressor and Condensing Units
a. Add the following to the list of acceptable manufacturers for section 2.1.A (1 to 5 Ton):
1) Carrier
2) Trane
3) Aaon
b. Add the following to the list of acceptable manufacturers for section 2.2.A (6 to 120 Ton):
1) Carrier
2) Trane

12. Section 236123.13 – Air Cooled, Scroll Water Chillers
   a. Add the following to the list of acceptable manufacturers for section 2.2.A:
      1) Trane
      2) Carrier

13. Section 237313.16 – Indoor Semi-Custom Air-Handling Units
   a. Add the following to the list of acceptable manufacturers for section 2.2.A:
      1) Carrier
      2) Trane

14. Section 237333.16 – Indoor, Indirect, Gas Fired Heating and Ventilating Units
   a. Delete this section in its entirety

15. Section 237416.13 – Packaged, Large Capacity, Rooftop Air Conditioning Units
   a. Add the following to the list of acceptable manufacturers for section 2.2.A:
      1) Carrier
      2) Trane

16. Section 238216.11 – Hydronic Air Coils
   a. Add the following to the list of acceptable manufacturers for section 2.2.A:
      1) Carrier
      2) Trane

17. Section 238219 – Fan Coil Units
   a. Add the following to the list of acceptable manufacturers for section 2.2.A:
      1) Carrier
      2) Trane
   b. Add the following to the list of acceptable manufacturers for section 2.3.A:
      1) Aaon
      2) Carrier
      3) Trane

18. Section 238223 – Unit Ventilators
   a. Delete this section in its entirety
   b. Section 238223.49 shall remain.

19. Section 238239.13 – Cabinet Unit Heaters
   a. Add the following to the list of acceptable manufacturers for section 2.2.A:
      1) Carrier
      2) Trane

20. Section 238239.16 – Propeller Unit Heaters
   a. Add the following to the list of acceptable manufacturers for section 2.2.A:
      1) Carrier
      2) Trane

21. Section 238416.16 – Indoor Mechanical Dehumidification Units
   a. Delete this section in its entirety

22. Section 23 2213 – Steam and Condensate Heating Piping
   a. Add section 3.1.C LP Steam Piping, NPS 2 and larger to read: “Schedule 40, Type E, Grade B, steel pipe; Class 150 wrought-steel fittings, flanges, and flange fittings; and welded and flanged joints.

Drawings

SPRING CREEK ELEMENTARY SCHOOL

1. Clarification: PVC jacket (as specified In section 230719.16) is not required between ceiling space and top of VAC unit hot water coil connections. This is not considered “exposed to public view”.
2. Clarification: Base Bid vs. Alt Bid Ceiling work does not affect the amount of concealed/exposed piping throughout classroom spaces to VAC units. Refer to architectural and HVAC plans for coordination.
3. Clarification: All refrigerant piping insulation inside VAC cabinets is subject to manufacturer’s insulation requirements and is not required to be field insulated.

4. Drawing D1.01 – First Floor Demolition Plan - Area 1
   a. Replace entire sheet with “Drawing D1.01 – First Floor Demolition Plan - Area 1” dated 03/21/2022.

1. Drawing D1.02 – First Floor Demolition Plan - Area 2
   a. Replace entire sheet with “Drawing D1.02 – First Floor Demolition Plan – Area 2” dated 03/21/2022.
2. Drawing D1.11 – Second Floor Demolition Plan - Area 1
   a. Replace entire sheet with “Drawing D1.11 – Second Floor Demolition Plan - Area 1” dated 03/21/2022.
3. Drawing M111 – First Floor Plan – Mechanical New Work – Area 1
   a. Notes added for cabinet unit heater installation. See attached sheet M111.
4. Drawing M112 – First Floor Plan – Mechanical New Work – Area 2
   a. Notes added for cabinet unit heater installation. See attached sheet M112.
5. Drawing M500 – Mechanical Notes and Schedules
   a. Packaged Classroom Air Conditioning Unit Schedule
      i. Column added for 2-way and 3-way hot water valve requirements. See attached sheet M500.
   b. Rooftop Unit Schedule
      i. Revise RTU-1 to be RTU-4 to coordinate with naming on sheet M121.
      ii. Revise RTU-2 to be RTU-5 to coordinate with naming on sheet M121.
   c. Cabinet Unit Heater Schedule
      i. Add new note #5 to read: “Provide all cabinet unit heaters with 3-way valve

installation per detail 3/M400."

d. Suspended Unit Heater Schedule
    i. Add new note #4 to read: "Provide 3-way valve installation per detail 3/M400."

LATHROP ELEMENTARY SCHOOL

1. Drawing G100 – Cover Sheet
    a. Add sheet "A3.01 – Elevations and Sections" to list of architectural sheets.
2. Drawing D1.01 – First Floor Demolition Plan - Area 1
    a. Replace entire sheet with "Drawing D1.01 – First Floor Demolition Plan - Area 1" dated 03/21/2022.
3. Drawing D1.02 – First Floor Demolition Plan - Area 2
    a. Replace entire sheet with "Drawing D1.02 – First Floor Demolition Plan - Area 2" dated 03/21/2022.
4. Drawing D1.03 – First Floor Demolition Plan - Area 3
    a. Replace entire sheet with "Drawing D1.03 – First Floor Demolition Plan - Area 3" dated 03/21/2022.
5. Drawing A2.01 – First Floor Reflected Ceiling Plan - Area 1
    a. Replace entire sheet with "Drawing A2.01 – First Floor Reflected Ceiling Plan - Area 1" dated 03/21/2022.
6. Drawing A2.02 – First Floor Reflected Ceiling Plan - Area 2
    a. Replace entire sheet with "Drawing A2.02 – First Floor Reflected Ceiling Plan - Area 2" dated 03/21/2022.
7. Drawing A3.01 – Elevations and Sections
    a. Add entire sheet.
8. Drawing M111 – First Floor Plan – Mechanical – Area 1
    a. Furnish and install new heat pump units VRF-1 and VRF-2 in Lounge 6 and P.E. Storage 8 as shown on attached sheet M111.
9. Drawing M400 – Mechanical Details
    a. Add new detail 6 for Split System Unit Installation. See attached sheet M400.
10. Drawing M501 – Mechanical Schedules
    a. Add new Split-System Air-Conditioning Unit Schedule as shown on attached sheet M501.
11. Drawing E111L – First Floor Plan – Electrical New Lighting – Area 1
    a. Change fixture types to type 'D' fixtures in Kitchen and Lounge. Add power pack for lighting controls in classrooms.
12. Drawing E111PS – First Floor Plan – Electrical New Power & Systems – Area 1
    a. Add equipment connection for VRF-1 & VRF-2. Add combination motor starters for exhaust fans.
13. Drawing E112L – First Floor Plan – Electrical New Lighting – Area 2
    a. Add power pack for lighting controls in classrooms. Change switches is faculty and bathrooms to dimming switches.
14. Drawing E112PS – First Floor Plan – Electrical New Power & Systems – Area 2
    a. Add combination motor starter for EF-3
15. Drawing E113L – First Floor Plan – Electrical New Lighting – Area 3
    a. Add power pack for lighting controls in classrooms. Change switches to dimming in

bathroom.

16. Drawing E113PS – First Floor Plan – Electrical New Power & Systems – Area 3
    a. Add combination motor starter for EF-1 & E2-2.
17. Drawing E200 – Electrical Panel Schedules & One-Line Diagram
    a. Updated equipment connection schedule
18. Drawing E201 – Electrical Panel Schedules
    a. Updated Panel Schedule for PP3
19. Drawing E500 – Electrical Material Schedules & General Notes
    a. Updated material schedules.

BLOOM ELEMENTARY SCHOOL

20. Drawing D2.01 – First Floor Demolition Plan Area - 1
    a. Replace entire sheet with “Drawing D2.01 – First Floor Demolition Plan Area – 1” dated 03/21/2022.
21. Drawing D2.02 – First Floor Demolition Plan Area - 2
    a. Replace entire sheet with “Drawing D2.02 – First Floor Demolition Plan Area – 2” dated 03/21/2022.
22. Drawing D2.03 – First Floor Demolition Plan Area - 3
    a. Replace entire sheet with “Drawing D2.03 – First Floor Demolition Plan Area – 3” dated 03/21/2022.

Attachments

- Specifications:
  - 230130.52 – Existing HVAC Air Distribution System Cleaning
- Drawings:
  - Spring Creek Elementary – D1.01, D1.02, D1.11, M111, M112, M500.
  - Lathrop Elementary School – D1.01, D1.02, D1.03, A2.01, A2.02, A3.01, E111L, E111PS, E112L, E112PS, E113L, E113PS, E200, E201, E500.
  - Bloom Elementary School – D2.01, D2.02, D2.03

Signature

Adam Camp
Mechanical Engineer

Printed Name & Title

SECTION 23 0130.52

EXISTING HVAC AIR DISTRIBUTION SYSTEM CLEANING

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 cleaning existing HVAC air-distribution equipment, ducts, plenums, and system components.

1.3 DEFINITIONS

A. ACAC: American Council for Accredited Certification.

B. AIHA-LAP: American Industrial Hygiene Association Lab Accreditation Program

C. ASCS: Air systems cleaning specialist.

D. CESB: Council of Engineering and Scientific Specialty Boards.

E. CMI: Certified Microbial Investigator.

F. CMC: Certified Microbial Consultant.

G. CMR: Certified Microbial Remediator.

H. CMRS: Certified Microbial Remediation Supervisor.

I. EMLAP: Environmental Microbiology Laboratory Accreditation Program.

J. IEP: Indoor Environmental Professional.

K. IICRC: Institute of Inspection, Cleaning, and Restoration Certification.

L. NADCA: National Air Duct Cleaners Association.

1.4 ACTION SUBMITTALS

A. Product Data:

1. Cleaning agents

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data:

1. For an ASCS.
2. For an IEP.
3. For a CMR and a CMRS.

B. Field Quality-Control Reports:

1. Project's existing conditions.
2. Evaluations and recommendations, including cleanliness verification.
3. Strategies and procedures plan.

1.6 CLOSEOUT SUBMITTALS

A. Post-Project report.

1.7 QUALITY ASSURANCE

A. IEP Qualifications: CMI who is certified by ACAC and accredited by CESB.

B. CMR Qualifications: Certified by ACAC and accredited by CESB.

C. UL Compliance: Comply with UL 181 and UL 181A for fibrous-glass ducts.

D. Cleaning Conference: Conduct conference at Project site.

1. Review methods and procedures related to HVAC air-distribution system cleaning, including, but not limited to, review of the cleaning strategies and procedures plan.

PART 2 - PRODUCTS

2.1 HVAC CLEANING AGENTS

A. Description:

1. Formulated for each specific soiled coil condition that needs remedy.
2. Will not corrode or tarnish aluminum, copper, or other metals.

PART 3 - EXECUTION

3.1 CLEANING

A. Comply with NADCA ACR, including items identified as "recommended," "advised," and "suggested."

B. Perform electrical lockout and tagout according to Owner's standards or authorities having jurisdiction.

C. Remove non-adhered substances and deposits from within the HVAC system.

D. Complete cleaning in accordance with Owner-Contractor agreed-upon scope of work.

E. Systems and Components to Be Cleaned:

1. Ductwork (All existing ductwork to be re-used with new HVAC systems):

a. Supply-air ducts, including turning vanes to the air-handling unit.
b. Return-air ducts to the air-handling unit.
c. Exhaust-air ducts.
d. Transfer ducts.

F. Collect debris removed during cleaning. Ensure that debris is not dispersed outside the HVAC system during the cleaning process.

G. Particulate Collection:

1. For particulate collection equipment, include adequate filtration to contain debris removed. Locate equipment downwind and away from all air intakes and other points of entry into the building.
2. HEPA filtration with 99.97 percent collection efficiency for particles sized 0.3 micrometer or larger shall be used where the particulate collection equipment is exhausting inside the building,

H. Control odors and mist vapors during the cleaning and restoration process.

I. Mark the position of manual volume dampers and air-directional mechanical devices inside the system prior to cleaning. Restore them to their marked position on completion of cleaning.

J. System components shall be cleaned so that all HVAC system components are visibly clean. On completion, all components must be returned to those settings recorded just prior to cleaning operations.

K. Clean all air-distribution devices, registers, grilles, and diffusers.

L. Clean non-adhered substance deposits according to NADCA ACR and the following:

1. Clean air-handling units, airstream surfaces, components, condensate collectors, and drains.
2. Ensure that a suitable operative drainage system is in place prior to beginning wash-down procedures.
3. Clean evaporator coils, reheat coils, and other airstream components.

M. Air-Distribution Systems:

1. Create service openings in the HVAC system as necessary to accommodate cleaning.
2. Mechanically clean air-distribution systems specified to remove all visible contaminants, so that the systems are capable of passing the HVAC System Cleanliness Tests (see NADCA ACR).

N. Debris removed from the HVAC system shall be disposed of according to applicable Federal, state, and local requirements.

O. Mechanical Cleaning Methodology:

1. Source-Removal Cleaning Methods: The HVAC system shall be cleaned using source-removal mechanical cleaning methods designed to extract contaminants from within the HVAC system and to safely remove these contaminants from the facility. No cleaning method, or combination of methods, shall be used that could potentially damage components of the HVAC system or negatively alter the integrity of the system.

    a. Use continuously operating vacuum-collection devices to keep each section being cleaned under negative pressure.
    b. Cleaning methods that require mechanical agitation devices to dislodge debris that is adhered to interior surfaces of HVAC system components shall be equipped to safely remove these devices. Cleaning methods shall not damage the integrity of HVAC system components or damage porous surface materials, such as duct and plenum liners.

2. Cleaning Mineral-Fiber Insulation Components:

    a. Fibrous-glass thermal or acoustical insulation elements present in equipment or ductwork shall be thoroughly cleaned with HEPA vacuuming equipment while the HVAC system is under constant negative pressure and shall not be permitted to get wet according to NADCA ACR.
    b. Cleaning methods used shall not cause damage to fibrous-glass components and will render the system capable of passing the HVAC System Cleanliness Tests (see NADCA ACR).
    c. Fibrous materials that become wet shall be discarded and replaced.

3.2 RESTORATION

A. Restore and repair HVAC air-distribution equipment, ducts, plenums, and components according to NADCA ACR, "Restoration and Repair of Mechanical Systems" Section.

B. Restore service openings capable of future reopening. Comply with requirements in Section 233113 "Metal Ducts.

C. Replace fibrous-glass materials that cannot be restored by cleaning or resurfacing. Comply with requirements in Section 233113 "Metal Ducts"

D. Replace damaged insulation according to Section 230713 "Duct Insulation."

E. Ensure that closures do not hinder or alter airflow.

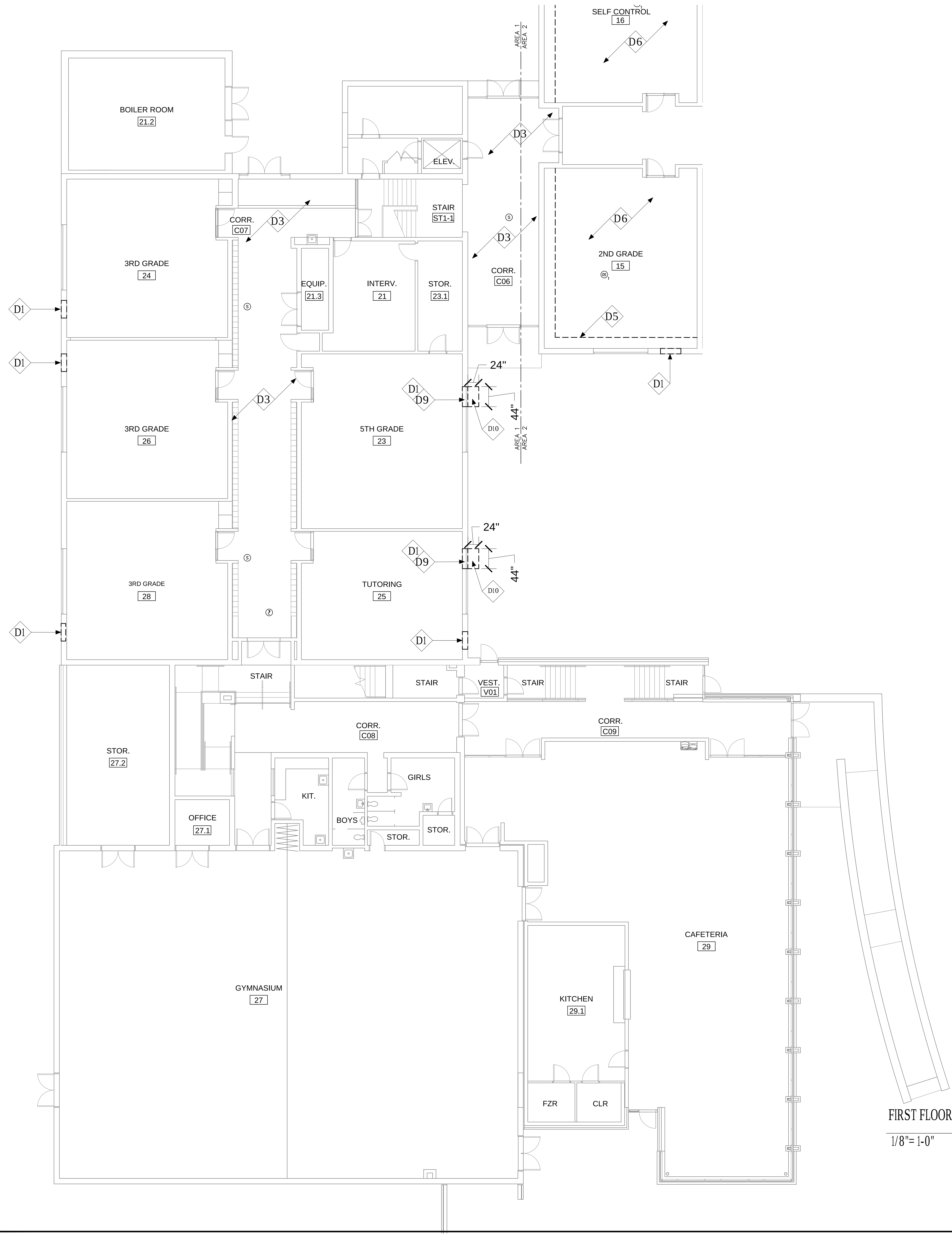
F. New closure materials, including insulation, shall match opened materials and shall have removable closure panels fitted with gaskets and fasteners.

G. Restore manual volume dampers and air-directional mechanical devices inside the system to their marked position on completion of cleaning.

H. Measure air flows through air-distribution system.

I. Measure static-pressure differential across each coil.

END OF SECTION 23 0130.52



FIRST FLOOR DEMOLITION PLAN - AREA -1

1/8"= 1'-0"

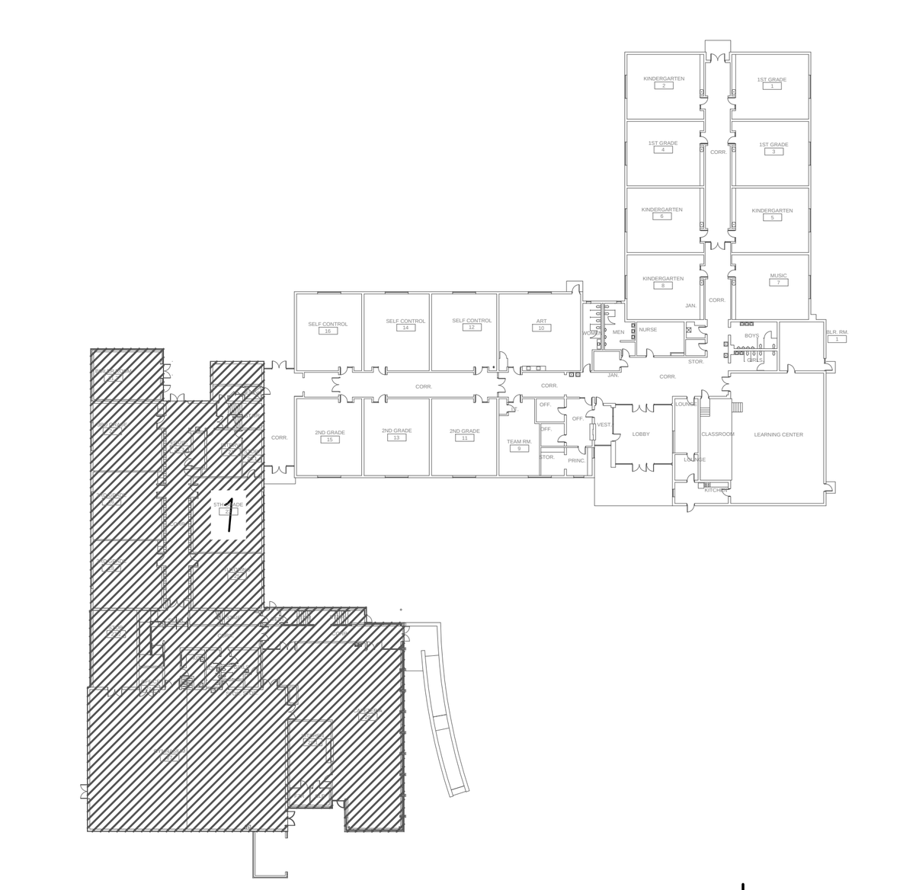
NORTH

DEMOLITION KEYNOTES

D1	CAREFULLY REMOVE PORTION OF EXISTING WALL TO ACCOMMODATE NEW LOUVER; TOOTH-IN SALVAGED MASONRY AT PERIMETER OF OPENING TO MATCH EXISTING COURSING -RETURN ADDITIONAL SALVAGED MASONRY TO OWNER. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D2	REMOVE PORTION OF EXISTING WALL TO ACCOMMODATE NEW DUCTWORK - REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D3	REMOVE EXISTING ACOUSTICAL CEILING TILE SYSTEM AND GRID IN ITS ENTIRETY TO ACCOMMODATE NEW WORK AND SALVAGE FOR REINSTALLATION.
D4	REMOVE EXISTING GYPSUM BOARD CEILING IN ITS ENTIRETY.
D5	REMOVE PORTION OF EXISTING GYPSUM BOARD/PLASTER TO ACCOMMODATE NEW WORK.
D6	ALTERNATE - REMOVE EXISTING GYPSUM BOARD/PLASTER CEILING IN ITS ENTIRETY TO ACCOMMODATE NEW WORK.
D7	REMOVE EXISTING WINDOW AIR CONDITIONING IN ITS ENTIRETY.
D8	REMOVE EXISTING DOOR AND FRAME IN ITS ENTIRETY
D9	REMOVE PORTION OF EXITING WINDOW TO ACCOMMODATE NEW LOUVER
D10	EXCAVATE GRADE TO PROVIDE WELL FOR NEW LOUVER

LEGEND

(dashed)	DEMOLITION
(hatched)	NEW WORK



KEY PLAN

NO SCALE

NORTH

STATE OF ILLINOIS
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LICENSED ARCHITECT

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ROCKFORD, ILLINOIS 61103

No.	Date	Revisions
1	03/08/2022	Addendum # 2
2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

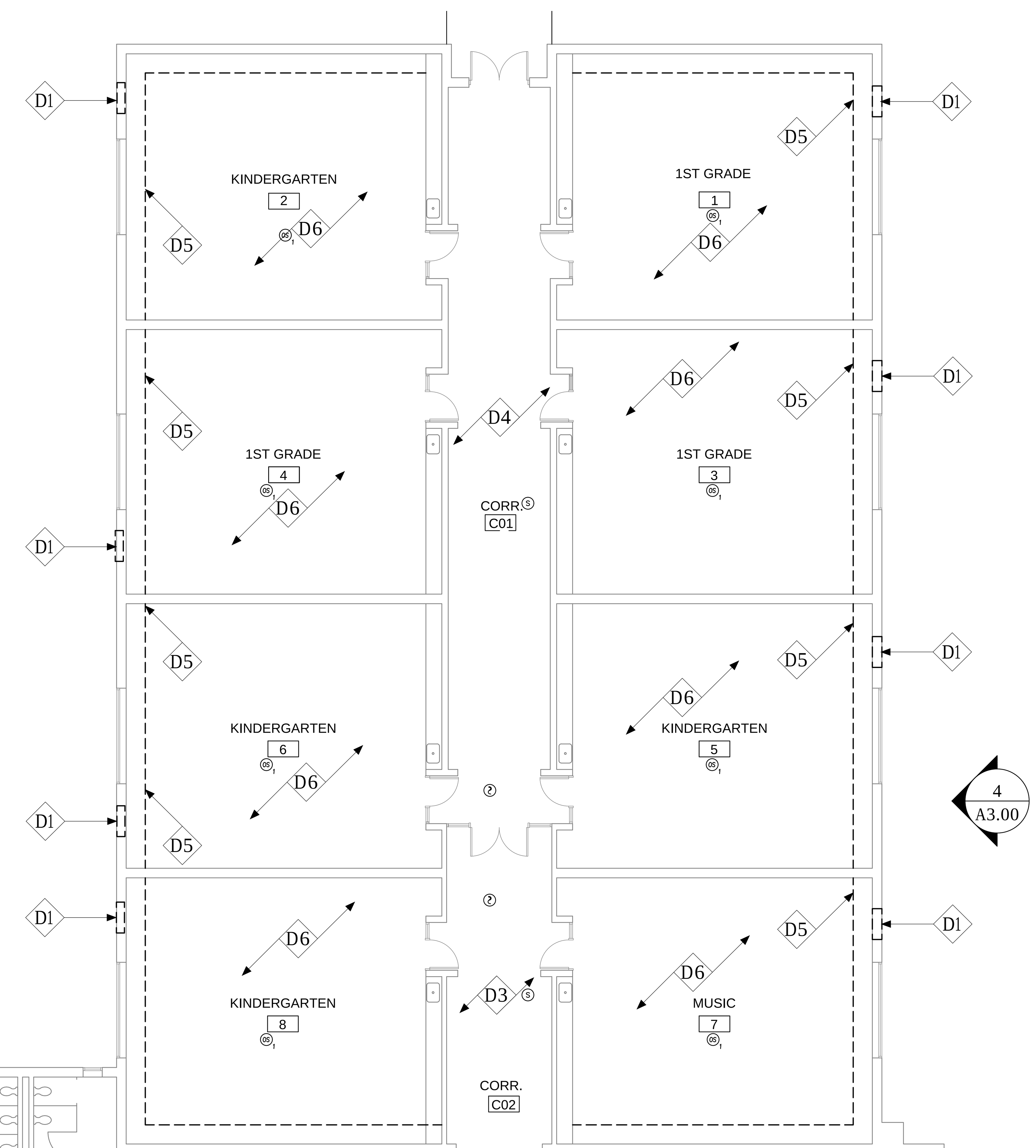
SPRING CREEK ELEMENTARY SCHOOL
HVAC UPGRADE
ROCKFORD, ILLINOIS

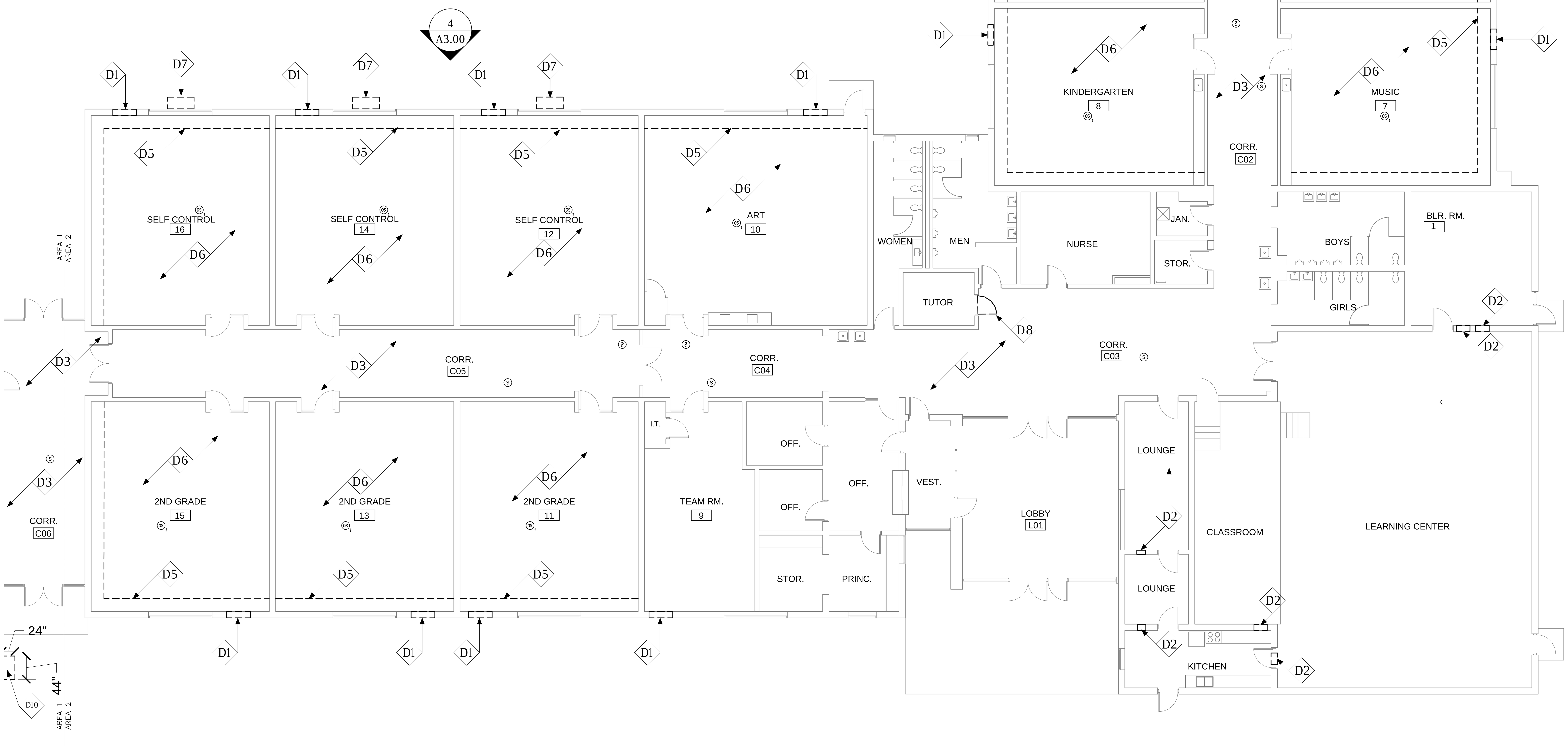
Sheet Title:
FIRST FLOOR DEMOLITION PLAN AREA-1

Proj. No.:	21012.20
Date:	02/18/2022
Drawn:	MI
Approved:	MS
Sheet No.:	D1.01

DEMOLITION KEYNOTES

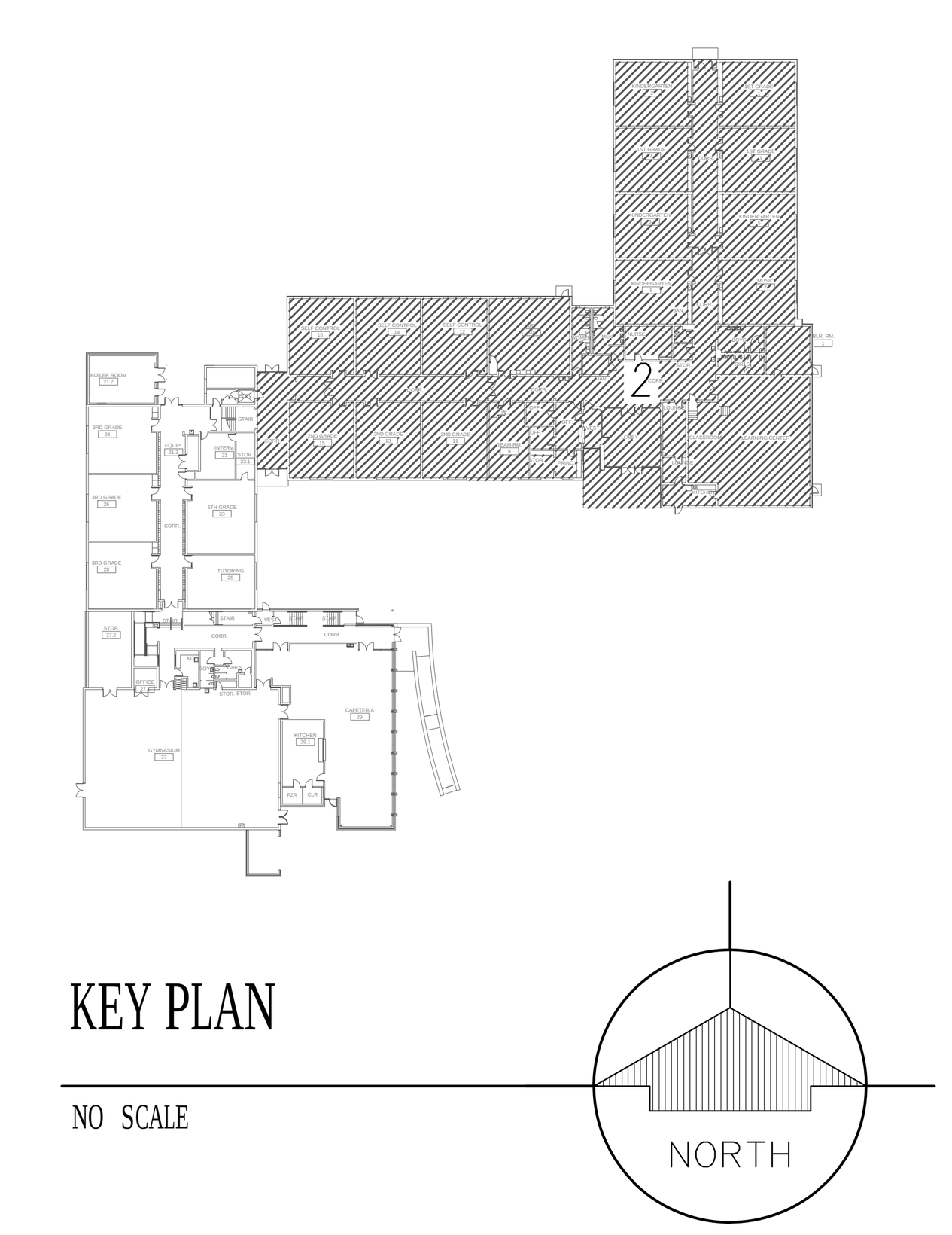
D1	CAREFULLY REMOVE PORTION OF EXISTING WALL TO ACCOMMODATE NEW LOUVER; TOOTH-IN SALVAGED MASONRY AT PERIMETER OF OPENING TO MATCH EXISTING COURSING –RETURN ADDITIONAL SALVAGED MASONRY TO OWNER. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D2	REMOVE PORTION OF EXISTING WALL TO ACCOMMODATE NEW DUCTWORK – REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D3	REMOVE EXISTING ACOUSTICAL CEILING TILE SYSTEM AND GRID IN ITS ENTIRETY TO ACCOMMODATE NEW WORK AND SALVAGE FOR REINSTALLATION.
D4	REMOVE EXISTING GYPSUM BOARD CEILING IN ITS ENTIRETY.
D5	REMOVE PORTION OF EXISTING GYPSUM BOARD/PLASTER TO ACCOMMODATE NEW WORK.
D6	ALTERNATE – REMOVE EXISTING GYPSUM BOARD/PLASTER CEILING IN ITS ENTIRETY TO ACCOMMODATE NEW WORK.
D7	REMOVE EXISTING WINDOW AIR CONDITIONING IN ITS ENTIRETY.
D8	REMOVE EXISTING DOOR AND FRAME IN ITS ENTIRETY
D9	REMOVE PORTION OF EXITING WINDOW TO ACCOMMODATE NEW LOUVER
D10	EXCAVATE GRADE TO PROVIDE WELL FOR NEW LOUVER





LEGEND

(dashed box)	DEMOLITION
(hatched box)	NEW WORK



KEY PLAN

NO SCALE

STATE OF ILLINOIS LICENSED ARCHITECT DANIEL G. SAAVEDRA 001-015740

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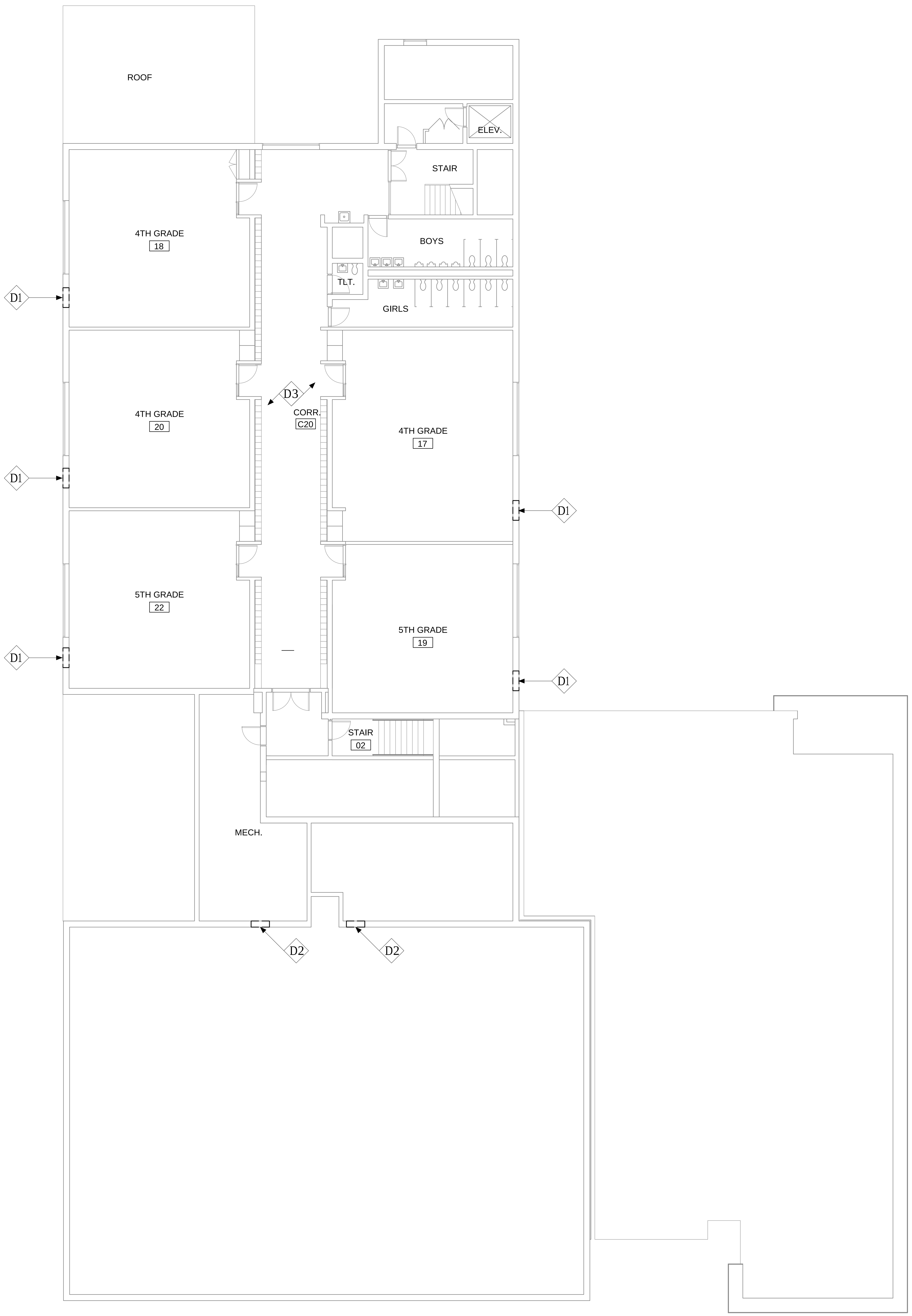
Revisions

No.	Date	
1	03/08/2022	Addendum # 2
2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

SPRING CREEK ELEMENTARY SCHOOL
HVAC UPGRADE
ROCKFORD, ILLINOIS

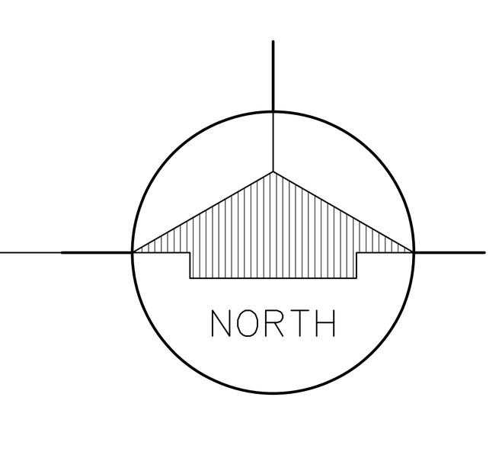
Sheet Title:
FIRST FLOOR DEMOLITION PLAN AREA 2

Proj. No.:	21012.20
Date:	02/18/2022
Drawn:	MI
Approved:	MS
Sheet No.:	D1.02



SECOND FLOOR DEMOLITION PLAN - AREA-1

1/8"= 1'-0"



DEMOLITION KEYNOTES

D1	CAREFULLY REMOVE PORTION OF EXISTING WALL TO ACCOMMODATE NEW LOUVER; TOOTH-IN SALVAGED MASONRY AT PERIMETER OF OPENING TO MATCH EXISTING COURSING -RETURN ADDITIONAL SALVAGED MASONRY TO OWNER. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION. (1)
D2	REMOVE PORTION OF EXISTING WALL TO ACCOMMODATE NEW DUCTWORK – REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D3	REMOVE EXISTING ACOUSTICAL CEILING TILE SYSTEM AND GRID IN ITS ENTIRETY TO ACCOMMODATE NEW WORK AND SALVAGE FOR REINSTALLATION. (3)
D4	REMOVE EXISTING GYPSUM BOARD CEILING IN ITS ENTIRETY.
D5	REMOVE PORTION OF EXISTING GYPSUM BOARD/PLASTER TO ACCOMMODATE NEW WORK.
D6	ALTERNATE – REMOVE EXISTING GYPSUM BOARD/PLASTER CEILING IN ITS ENTIRETY TO ACCOMMODATE NEW WORK.
D7	REMOVE EXISTING WINDOW AIR CONDITIONING IN ITS ENTIRETY.
D8	REMOVE EXISTING DOOR AND FRAME IN ITS ENTIRETY
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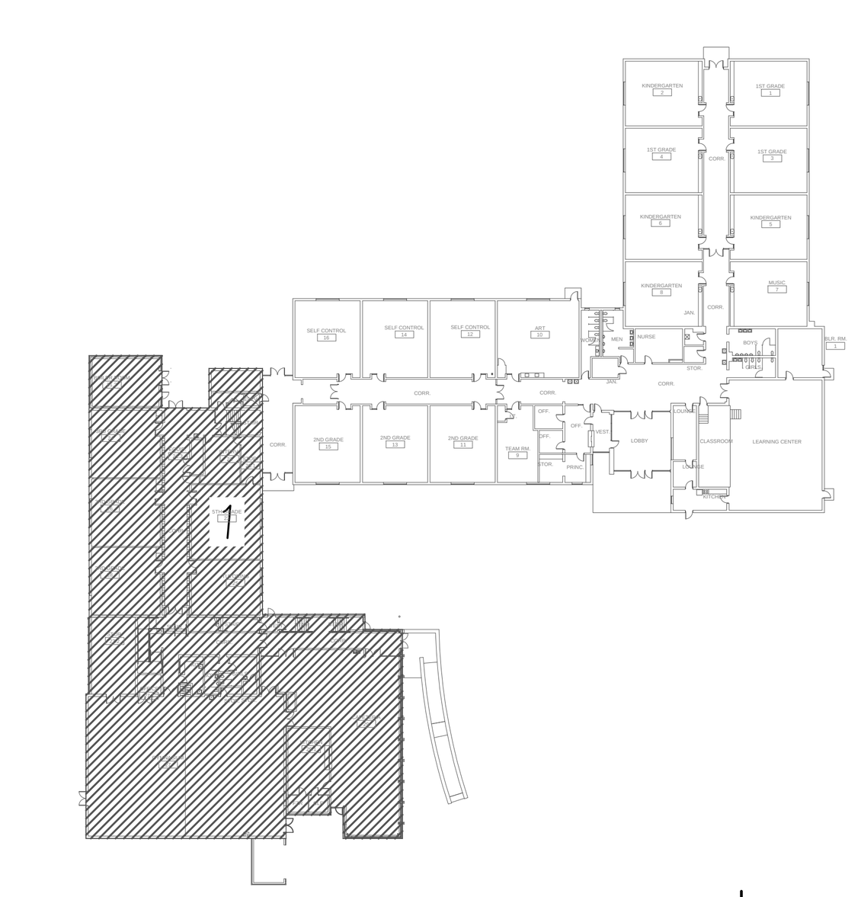
D10	EXCAVATE GRADE TO PROVIDE WELL FOR NEW LOUVER

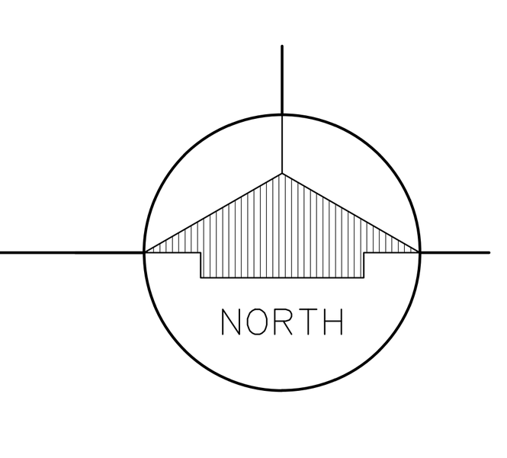
LEGEND

(dashed box)	DEMOLITION
(hatched box)	NEW WORK



KEY PLAN

NO SCALE



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No.	Date	Revisions
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2	03/15/2022	Addendum # 3
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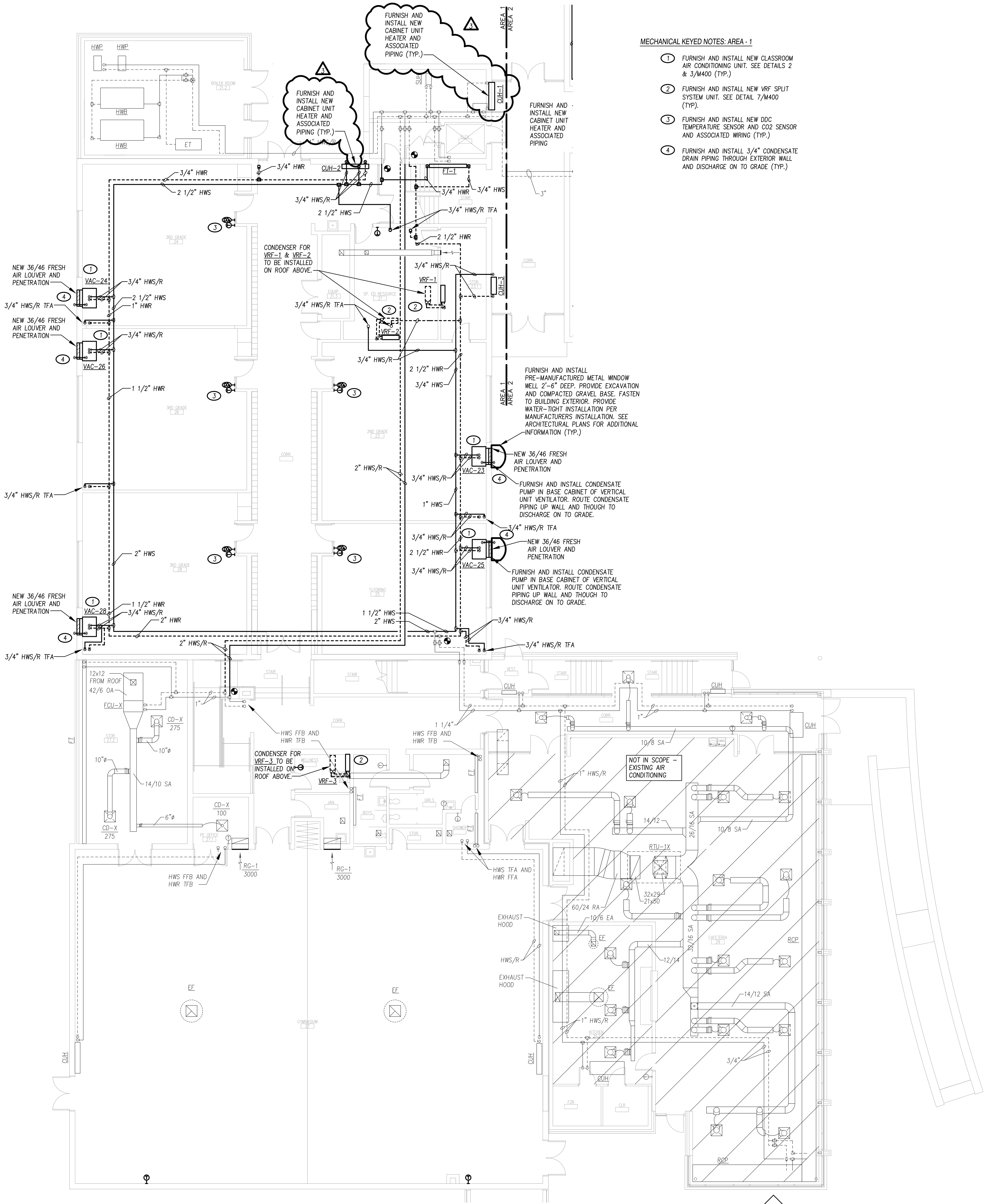
SPRING CREEK ELEMENTARY SCHOOL
HVAC UPGRADE
ROCKFORD, ILLINOIS

Sheet Title:
SECOND FLOOR DEMOLITION PLAN AREA -1

Proj. No.: 21012.20
Date: 02/18/2022
Drawn: MI
Approved: MS
Sheet No.: D1.11

MECHANICAL KEYED NOTES: AREA - 1

1. FURNISH AND INSTALL NEW CLASSROOM AIR CONDITIONING UNIT. SEE DETAILS 2 & 3/M400 (TYP.)
2. FURNISH AND INSTALL NEW VRF SPLIT SYSTEM UNIT. SEE DETAIL 7/M400 (TYP).
3. FURNISH AND INSTALL NEW DDC TEMPERATURE SENSOR AND CO2 SENSOR AND ASSOCIATED WIRING (TYP.)
4. FURNISH AND INSTALL 3/4" CONDENSATE DRAIN PIPING THROUGH EXTERIOR WALL AND DISCHARGE ON TO GRADE (TYP.)

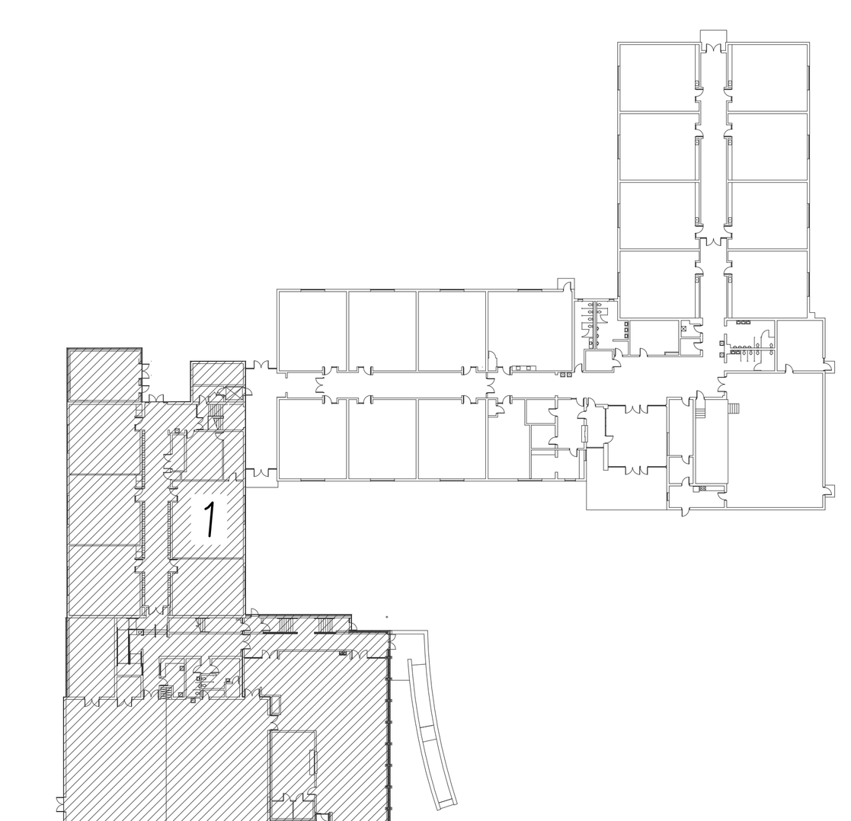


1 FIRST FLOOR PLAN - MECHANICAL NEW WORK - AREA 1
SCALE: 1/8" = 1'-0"

NORTH

GENERAL MECHANICAL NOTES:

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HVAC SYSTEMS AS INDICATED ON DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY MOST CURRENT INTERNATIONAL MECHANICAL CODE AND ANY APPLICABLE LOCAL CODES.
2. CONTRACTOR SHALL VISIT THE JOB SITE AND EXAMINE THE DRAWINGS OF OTHER TRADES PRIOR TO BIDDING TO THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS AND THE SCOPE OF THE PROJECT. FAILURE TO DO SO DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO UNDERSTAND THE SCOPE OR OF UNDERSTANDING ANY FIELD CONDITIONS WHICH COULD BE REASONABLY EXPECTED TO BE KNOWN BY A THOROUGH INVESTIGATION.
3. IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY DUCT, FITTING, TRANSITION, DAMPER, ETC., AND IT IS UNDERSTOOD THAT WHILE THE DRAWINGS MUST BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT, THE PROPER INSTALLATION ACCORDING TO THE TRUE INTENT AND MEANING OF THE DRAWINGS, LOCAL CODES AND STANDARD PRACTICES SHALL BE PROVIDED. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION. REPORT ANY PROBLEMS OR CONFLICTS TO THE OWNER OR ENGINEER.
4. ANY MINOR CHANGES IN THE LOCATION OF EQUIPMENT, DUCTS, PIPE CONTROL DEVICES, ETC., FROM THOSE LOCATIONS SHOWN ON THE DRAWINGS SHALL BE MADE WITHOUT EXTRA COST IF SO DIRECTED BY THE OWNERS REPRESENTATIVE OR ENGINEER BEFORE THE INSTALLATION IS MADE. A MINOR CHANGE IN LOCATION SHALL BE CONSIDERED TO BE WITHIN 6'-0" OF THE ORIGINALLY INDICATED LOCATIONS.
5. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS. VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED.
6. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE.
7. INSTALL SYSTEMS, MATERIALS AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS WHERE INSTALLED EXPOSED IN FINISHED SPACES AND GIVING RIGHT-OF-WAY PRIORITY TO SYSTEMS REQUIRED TO BE INSTALLED AT A SPECIFIED SLOPE.
8. INSTALL ALL HVAC EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
9. ALL OPENINGS IN FIRE WALLS DUE TO DUCTWORK, PIPING AND CONTROL CONDUIT SHALL BE FIRE STOPPED WITH AN APPROVED FIRE STOP MATERIAL.
10. PROVIDE ACCESS DOORS IN DUCTWORK OR WALLS/CEILING FOR OPERATION, ADJUSTMENT, AND MAINTENANCE OF ALL FANS, VALVES, COILS, AND MECHANICAL EQUIPMENT. COILS LOCATED IN DUCTWORK TO BE PROVIDED WITH ACCESS DOORS ON OUTLET SIDE OF COIL.
11. LOCATIONS AND SIZES OF ALL FLOOR AND WALL OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED AND THE OWNER.
12. CONTRACTOR SHALL COORDINATE CEILING DIFFUSER/GRILLE/REGISTER LOCATIONS WITH LIGHTING, FIRE ALARM EQUIPMENT AND FIRE SUPPRESSION SYSTEMS.
13. WHERE DEMOLITION WORK OCCURS, CONTRACTOR SHALL PATCH AND SEAL ALL WALLS, FLOORS AND CEILINGS TO MATCH EXISTING. CONTRACTOR SHALL VERIFY WITH OWNER ALL PATCHING MATERIALS AND INSTALLATION METHODS.
14. VENTILATING CONTRACTOR SHALL PROVIDE MANUAL BALANCE DAMPERS IN ALL BRANCH TAKE-OFFS TO SUPPLY DIFFUSERS. PROVIDE ADDITIONAL MANUAL BALANCE DAMPERS IN MAIN AND SUB-MAIN DUCTS AS REQUIRED TO ENSURE THE SUPPLY AND RETURN AIR SYSTEMS CAN BE BALANCED TO THE SPECIFIED DESIGN AIRFLOW.
15. IN AREAS WHERE A CEILING GRID EXISTS, THE VENTILATING CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF EXISTING CEILING GRID AND TILES AS NECESSARY FOR INSTALLATION OF VENTILATING WORK. ANY PORTION OF THE EXISTING TILES OR GRID WHICH BECOME DAMAGED DURING REMOVAL SHALL BE REPLACED BY THE VENTILATING CONTRACTOR.
16. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, FLANGES AND OTHER APPARATUS REQUIRING ACCESS ARE ACCESSIBLE.



KEY PLAN
SCALE: NOT TO SCALE

NORTH

DATE: 02/18/2022

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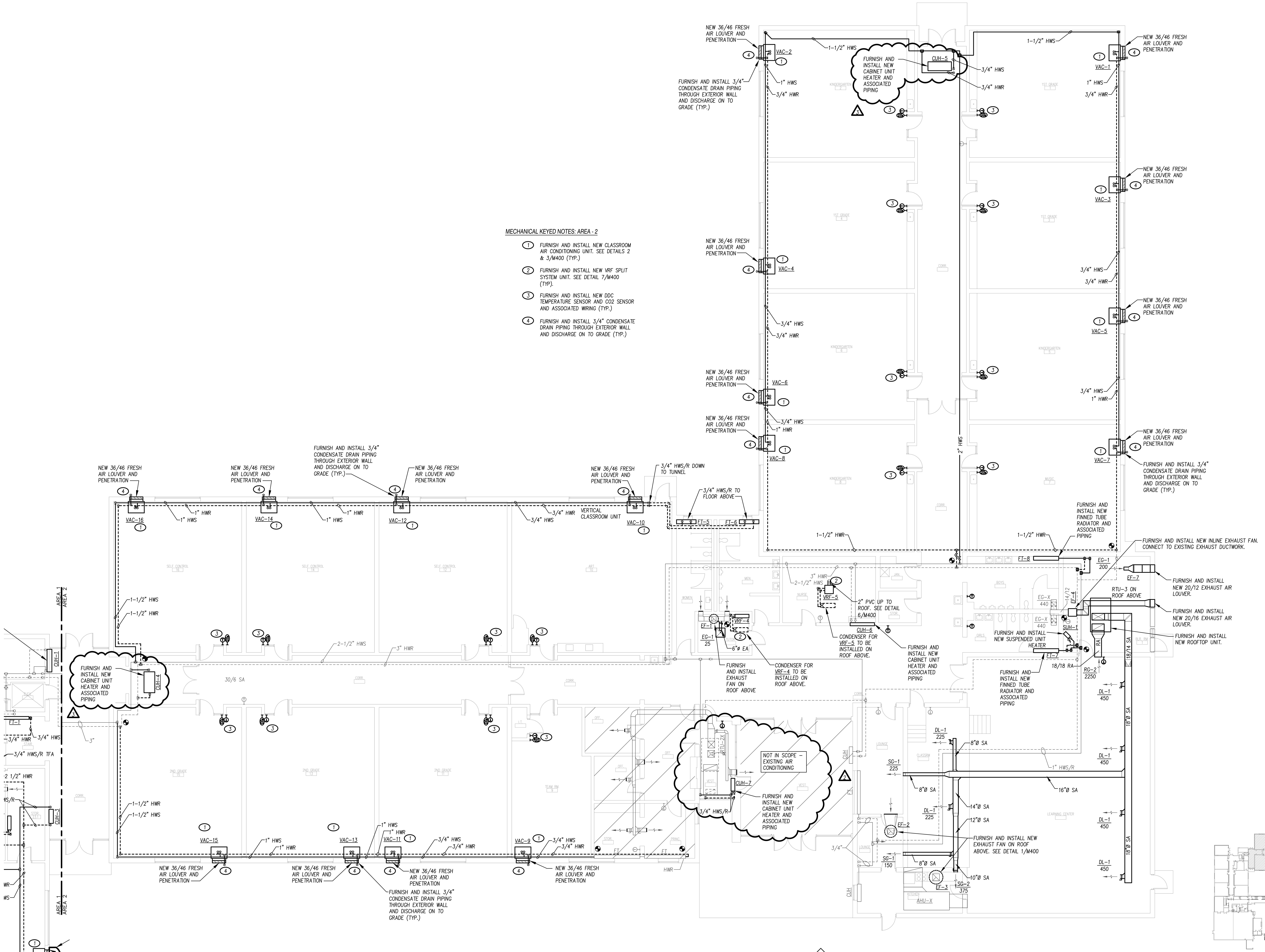
Revisions

No.	Date	
1	03/09/2022	ADDENDUM #2
2	03/16/2022	ADDENDUM #3
3	03/21/2022	ADDENDUM #4

SPRING CREEK ELEMENTARY SCHOOL
HVAC UPGRADE
ROCKFORD, ILLINOIS

Sheet Title: FIRST FLOOR PLAN - MECHANICAL NEW WORK - AREA 1

Proj. No.: 2249
Date: 02/18/2022
Drawn: AEC
Approved: RCR
Sheet No.: M111

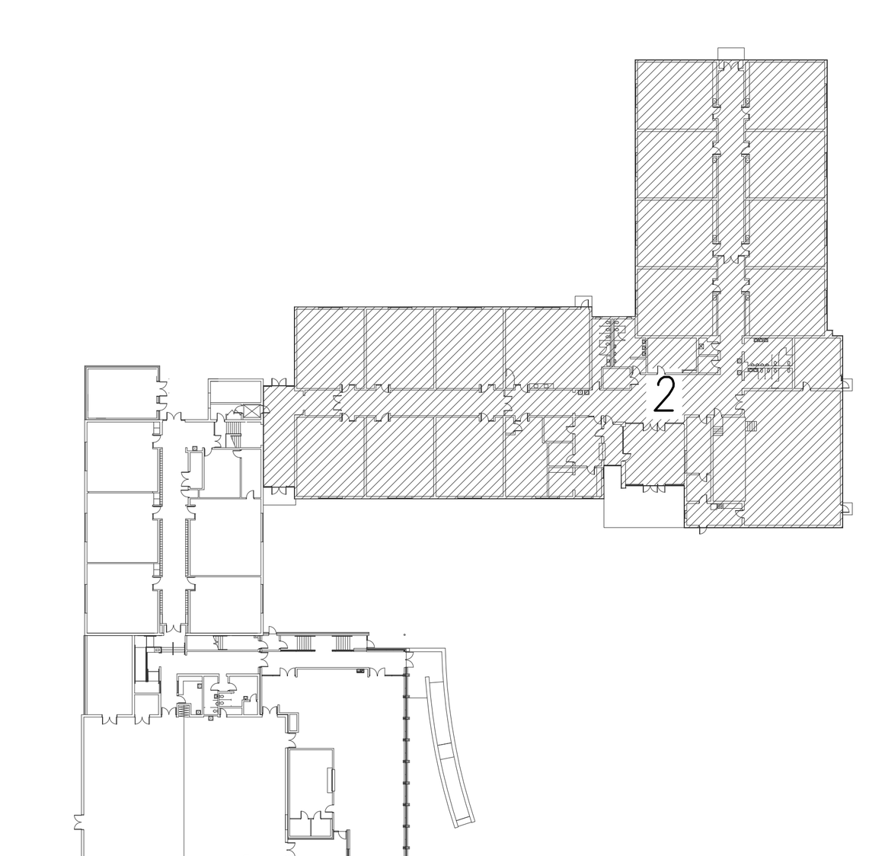


MECHANICAL KEYED NOTES: AREA - 2

1. FURNISH AND INSTALL NEW CLASSROOM AIR CONDITIONING UNIT. SEE DETAILS 2 & 3/M400 (TYP.)
2. FURNISH AND INSTALL NEW VRF SPLIT SYSTEM UNIT. SEE DETAIL 7/M400 (TYP).
3. FURNISH AND INSTALL NEW DDC TEMPERATURE SENSOR AND CO2 SENSOR AND ASSOCIATED WIRING (TYP.)
4. FURNISH AND INSTALL 3/4" CONDENSATE DRAIN PIPING THROUGH EXTERIOR WALL AND DISCHARGE ON TO GRADE (TYP.)

1 FIRST FLOOR PLAN - MECHANICAL NEW WORK - AREA 2
SCALE: 1/8" = 1'-0"

NORTH



KEY PLAN
SCALE: NOT TO SCALE

NORTH

LICENSED PROFESSIONAL ENGINEER RYAN C. REEF 062-056761 EXPIRES: 30NOV23 STATE OF ILLINOIS
DATE: 02/18/2022

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Revisions

No.	Date	
1	03/09/2022	ADDENDUM #2
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3	03/21/2022	ADDENDUM #4

SPRING CREEK ELEMENTARY SCHOOL
HVAC UPGRADE
ROCKFORD, ILLINOIS

Sheet Title:
FIRST FLOOR PLAN - MECHANICAL NEW WORK - AREA 2

Proj. No.:	2249
Date:	02/18/2022
Drawn:	AEC
Approved:	RCR
Sheet No.:	M112

PACKAGED CLASSROOM AIR CONDITIONING UNIT SCHEDULE

MARK	DESIGN BASIS		DESCRIPTION	UNIT DIMENSIONS			NOMINAL AIRFLOW CFM	OUTSIDE AIR CFM	COOLING COIL							HEATING COIL								ERV		MOTOR			REMARKS
	MAKE	MODEL / SIZE		LENGTH	HEIGHT	DEPTH			EAT (DB)	EAT (WB)	LAT (DB)	LAT (WB)	SYSTEM TYPE	TOTAL CAP. BTUH	SENSIBLE CAP. BTUH	EAT (F)	LAT (F)	EWT (F)	LWT (F)	TOTAL CAP. BTUH	FLUID TYPE	VALVE TYPE	FLOW GPM	TOTAL CAP. BTUH	SENSIBLE CAP. BTUH	HP	VOLTS	PHASE	
VAC-1	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	309	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	2-WAY	2.85	53507	33277	1/2	208	3	
VAC-2	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	309	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	2-WAY	2.85	53507	33277	1/2	208	3	
VAC-3	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	308	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	2-WAY	2.85	53507	33277	1/2	208	3	
VAC-4	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	308	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	2-WAY	2.85	53507	33277	1/2	208	3	
VAC-5	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	308	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-6	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	308	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	2-WAY	2.85	53507	33277	1/2	208	3	
VAC-7	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	309	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	3-WAY	2.58	45550	26864	1/3	208	3	
VAC-8	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	309	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	3-WAY	2.85	53507	33277	1/2	208	3	
VAC-9	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	361	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	3-WAY	2.58	45550	26864	1/3	208	3	
VAC-10	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	338	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	3-WAY	2.85	53507	33277	1/2	208	3	
VAC-11	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	310	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	2-WAY	2.85	53507	33277	1/2	208	3	
VAC-12	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	310	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-13	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	310	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	2-WAY	2.85	53507	33277	1/2	208	3	
VAC-14	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	310	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-15	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	310	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	2-WAY	2.85	53507	33277	1/2	208	3	
VAC-16	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	310	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-17	BARD	I36A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	1150	318	79.4	66.2	57.6	56.7	R-410A	34,700	27,081	50	95.7	160	120	57,000	WATER	2-WAY	2.85	53507	33277	1/2	208	3	
VAC-18	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	300	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-19	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	296	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-20	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	300	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	3-WAY	2.58	45550	26864	1/3	208	3	
VAC-22	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	300	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-23	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	312	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-24	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	302	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-25	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	282	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-26	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	302	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	
VAC-28	BARD	I30A1DB	I-TEC AIR CONDITIONER	31.4	94.0	47.6	900	302	79.9	66.6	58.8	57.0	R-410A	27,649	20,546	50	102.9	160	120	51,667	WATER	2-WAY	2.58	45550	26864	1/3	208	3	

3

NOTES:

1. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
2. PROVIDE LOUVER WALL CURB

SPLIT-SYSTEM AIR-CONDITIONING UNIT SCHEDULE

MARK	DESIGN BASIS		DESCRIPTION	COOLING		HEATING		EFFICIENCY (SEER)	ELECTRICAL DATA				REMARKS
	MANUFACTURER	MODEL		AIRFLOW (CFM)	COOLING CAPACITY MIN / MAX (BTUH)	AIRFLOW (CFM)	HEATING CAPACITY MIN / MAX (BTUH)		MCA (AMPS)	MOCP (AMPS)	VOLT.	PH	
VRF-1	MITSUBISHI	MSZ-FS06NA (INDOOR) MUZ-FS06NAH (OUTDOOR)	DUCTLESS HIGH-WALL HEAT PUMP	135-380	1,700-9,000	140-435	1,600-14,000	33.1	10	15	208	1	SEE NOTES 1 & 2
VRF-2	MITSUBISHI	MSZ-FS09NA (INDOOR) MUZ-FS09NAH (OUTDOOR)	DUCTLESS HIGH-WALL HEAT PUMP	135-380	1,700-12,000	140-435	1,600-18,000	30.5	10	15	208	1	SEE NOTES 1 & 2
VRF-3	MITSUBISHI	MSZ-FS06NA (INDOOR) MUZ-FS06NAH (OUTDOOR)	DUCTLESS HIGH-WALL HEAT PUMP	135-380	1,700-9,000	140-435	1,600-14,000	33.1	10	15	208	1	SEE NOTES 1 & 2
VRF-4	MITSUBISHI	MSZ-FS06NA (INDOOR) MUZ-FS06NAH (OUTDOOR)	DUCTLESS HIGH-WALL HEAT PUMP	135-380	1,700-9,000	140-435	1,600-14,000	33.1	10	15	208	1	SEE NOTES 1 & 2
VRF-5	MITSUBISHI	MSZ-FS09NA (INDOOR) MUZ-FS09NAH (OUTDOOR)	DUCTLESS HIGH-WALL HEAT PUMP	135-380	1,700-12,000	140-435	1,600-18,000	30.5	10	15	208	1	SEE NOTES 1 & 2

NOTES:

1. PROVIDE OPTIONAL WIRED PROGRAMMABLE THERMOSTAT.
2. COOLING PERFORMANCE IS BASED ON 95F OUTDOOR AIR TEMPERATURE AND 78F DB / 64F WB ENTERING AIR TEMPERATURE

HOT WATER CONVECTOR SCHEDULE

MARK	DESIGN BASIS		ELEMENT DESCRIPTION	ELEMENT SIZE			TOTAL CAPACITY (BTUH)	TUBE SIZE (IN)	NUMBER OF TUBES	# OF SECTIONS	FIN THICKNESS (IN)	FINS PER FT	EWT (F)	CAPACITY PER FT. (BTUH / FT)	FLOW RATE (GPM)	REMARKS
	MAKE	MODEL / SERIES		TOTAL LENGTH (FT)	HEIGHT (IN)	DEPTH (IN)										
FT-1	VULCAN	JV4	SLOPE TOP ENCLOSURE	6	3.63	4.25	9900	3/4	2	1	0.02	50	160	1650	0.5	
FT-2	VULCAN	JV4	SLOPE TOP ENCLOSURE	8.5	3.63	4.25	28050	3/4	2	2	0.02	50	160	1650	1.4	
FT-3	VULCAN	JV4	SLOPE TOP ENCLOSURE	4	3.63	4.25	6,600	3/4	2	1	0.02	50	160	1650	0.3	
FT-4	VULCAN	JV4	SLOPE TOP ENCLOSURE	4	3.63	4.25	6,600	3/4	2	1	0.02	50	160	1650	0.3	
FT-5	VULCAN	JV4	SLOPE TOP ENCLOSURE	3	3.63	4.25	4,950	3/4	2	1	0.02	50	160	1650	0.3	
FT-6	VULCAN	JV4	SLOPE TOP ENCLOSURE	3	3.63	4.25	4,950	3/4	2	1	0.02	50	160	1650	0.3	
FT-7	VULCAN	JV4	SLOPE TOP ENCLOSURE	5.5	3.63	4.25	9,075	3/4	2	1	0.02	50	160	1650	0.4	
FT-8	VULCAN	JV4	SLOPE TOP ENCLOSURE	5.5	3.63	4.25	9,075	3/4	2	1	0.02	50	160	1650	0.4	

ROOF TOP UNIT SCHEDULE

MARK	DESIGN BASIS		UNIT DESCRIPTION	AREA SERVED	DESIGN AIRFLOW (CFM)	EXT. STATIC (IN. W.C.)	COOLING PERFORMANCE - DX								OUTDOOR AIR	HEATING PERFORMANCE - GAS FIRED					ELECTRIAL DATA			REMARKS
							REFRIG. TYPE	SEER	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)	ENTERING AIR TEMPERATURE		LEAVING AIR TEMPERATURE			HEATING CAPACITY		TYPE	EAT (F)	LAT (F)				
	MAKE	MODEL / SERIES									(DB)	(WB)	(DB)	(WB)	(%)	INPUT (BTUH)	OUTPUT (BTUH)				MCA (AMPS)	VOLTS	PHASE	
RTU-4	TRANE	PRECEDENT	GAS PACKAGED ROOFTOP	GYMNASIUM	3000	0.75	R-410A	22.4	87.96	69.28	80	67	58.95	57.72	11.28	200000	162000	GAS	60	110.2	40	208	3	SEE NOTE 1
RTU-5	TRANE	PRECEDENT	GAS PACKAGED ROOFTOP	GYMNASIUM	3000	0.75	R-410A	22.4	87.96	69.28	80	67	58.95	57.72	11.28	200000	162000	GAS	60	110.2	40	208	3	SEE NOTE 1
RTU-3	TRANE	PRECEDENT	GAS PACKAGED ROOFTOP	LEARNING CENTER	3000	0.75	R-410A	22.4	87.96	69.28	80	67	58.95	57.72	30	200000	162000	GAS	60	110.2	40	208	3	SEE NOTE 1

NOTES:

1. PROVIDE SINGLE POINT ELECTRICAL CONNECTION AND FACTORY MOUNTED DISCONNECT.

EXHAUST FAN SCHEDULE

MARK	DESIGN BASIS		DESCRIPTION	DRIVE	PERFORMANCE			MOTOR			REMARKS
	MAKE	MODEL			AIRFLOW (CFM)	E.S.P. (IN. H2O)	R.P.M.	HP	VOLTS	PHASE	
EF-1	COOK	ACE-D	DOWNBLAST CENTRIFUGAL	DIRECT	1,375	0.25	1,075	1/6	115	1	SEE NOTES 1, 2, & 3
EF-2	COOK	ACE-D	DOWNBLAST CENTRIFUGAL	DIRECT	2,075	0.25	1,550	1/2	115	1	SEE NOTES 1, 2, & 3
EF-3	COOK	ACE-D	DOWNBLAST CENTRIFUGAL	DIRECT	2,075	0.25	1,550	1/2	115	1	SEE NOTES 1, 2, & 3
EF-4	COOK	SQN-D	CENTRIFUGAL SQUARE INLINE	DIRECT	880	0.25	1,140	1/6	115	1	SEE NOTES 1, 2, & 3
EF-5	COOK	ACE-D	DOWNBLAST CENTRIFUGAL	DIRECT	1,620	0.25	1,300	1/2	115	1	SEE NOTES 1, 2, & 3
EF-6	COOK	ACE-D	DOWNBLAST CENTRIFUGAL	DIRECT	1,620	0.25	1,300	1/2	115	1	SEE NOTES 1, 2, & 3
EF-7	COOK	SQN-D	CENTRIFUGAL SQUARE INLINE	DIRECT	200	0.25	1,140	1/6	115	1	SEE NOTES 1, 2, & 3

NOTES:

1. PROVIDED INSULATED ROOF CURB AND GRAVITY BACKDRAFT DAMPER
2. PROVIDE SIDE WALL CAP AND FAN SPEED CONTROL
3. PROVIDE SINGLE POINT ELECTRICAL CONNECTION AND FACTORY MOUNTED DISCONNECT

GRILLE AND DIFFUSER SCHEDULE

MARK	DESIGN BASIS		DESCRIPTION	MODULE SIZE	NECK SIZE	AIR PATTERN	FRAME	C.F.M.	S.P. (WATER)	NOISE LEVEL (NC)	REMARKS
	MAKE	MODEL / SERIES									
DL-1	TITUS	DL	DRUM LOUVER	18" X 6"	18" X 6"	ADJUSTABLE	SEE NOTE #2	500	0.1"	25	
SG-1	TITUS	300FL	SUPPLY GRILLE - DOUBLE DEFLECTION - 3/4" SPACING	14" X 6"	14" X 6"	ADJUSTABLE	SEE NOTE #2	150 - 300	0.1"	20	
SG-2	TITUS	300FL	SUPPLY GRILLE - DOUBLE DEFLECTION - 3/4" SPACING	18" X 8"	18" X 8"	ADJUSTABLE	SEE NOTE #2	301 - 500	0.1"	20	
EG-1 / RG-1	TITUS	PDR	PERFORATED CEILING	24" X 24"	6"	RETURN / EXHASUT	SEE NOTE #2	50 - 125	0.13"	13	
EG-2 / RG-2	TITUS	350ZRL	RETURN GRILLE - SINGLE DEFLECTION 0 DEG - 3/4" SPACING	36" X 18"	36" X 18"	RETURN / EXHASUT	SEE NOTE #2	2250	0.073	23	

NOTES:

1. ALL SUPPLY GRILLES AND DIFFUSERS SHALL BE CONSTRUCTED OF ALUMINUM UNLESS OTHERWISE NOTED.
2. COORDINATE DIFFUSER FRAME TYPE TO ENSURE COMPATIBILITY WITH CEILING AND/OR WALL TYPE, SEE ARCHITECTURAL SHEETS FOR ADDITIONAL INFORMATION.

SUSPENDED UNIT HEATER SCHEDULE

MARK	DESIGN BASIS		DESCRIPTION	DESIGN AIRFLOW CFM	HEATING CAPACITY (BTUH)	HOT WATER (GPM)	ELECTRICAL DATA					REMARKS
	MAKE	MODEL / SERIES					MTR HP	AMPS MCA	VOLTS	PHASE	HZ	
SUH-1	VULCAN	HV-108B	HORIZONTAL UNIT HEATER	1,800	46,526	2.3	1/12	2.8	115	1	60	SEE NOTES 1, 2, & 3

NOTES:

1. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
2. HEATNG CAPACITY IS BASED ON 160 DEG EWT AND 120 DEG LWT
3. ~~PROVIDE VARIABLE SPEED SWITCH~~
4. PROVIDE 3-WAY VALVE INSTALLATION PER DETAIL 3/M400.

3

CABINET UNIT HEATER SCHEDULE

MARK	DESIGN BASIS		DESCRIPTION	DESIGN AIRFLOW CFM	HEATING CAPACITY (BTUH)	COIL ROWS	FLUID TYPE	HOT WATER (GPM)	EWT (F)	LWT (F)	ELECTRICAL DATA				REMARKS
	MAKE	MODEL / SERIES									MOTOR (HP)	VOLTS	PHASE	HZ	
CUH-1	TRANE	FORCFLO	VERTICAL CABINET - SLOPED GRILL	500	37,000	4.0	WATER	1.84	160.0	120.0	1/4	115	1	60	SEE NOTES # 1, 2, 3
CUH-2	TRANE	FFNB1001	INVERTED VERTICAL CABINET WITH FRONT STAMPED LOUVER INLET AND OUTLET	1,050	54,500	2.0	WATER	2.70	160.0	119.6	.047	120	1	60	SEE NOTES # 1, 2, 3
CUH-3	TRANE	FORCFLO	VERTICAL CABINET - SLOPED GRILL	500	37,000	4.0	WATER	1.84	160.0	120.0	1/4	115	1	60	SEE NOTES # 1, 2, 3
CUH-4	TRANE	FORCFLO	HORIZONTAL RECESSED	500	42,040	4.0	WATER	2.10	160.0	120.0	1/10	115	1	60	SEE NOTES # 1, 2, 3
CUH-5	TRANE	FORCFLO	HORIZONTAL RECESSED	500	42,040	4.0	WATER	2.10	160.0	120.0	1/10	115	1	60	SEE NOTES # 1, 2, 3
CUH-6	TRANE	FORCFLO	VERTICAL CABINET - SLOPED GRILL	500	37,000	4.0	WATER	1.84	160.0	120.0	1/4	115	1	60	SEE NOTES # 1, 2, 3
CUH-7	TRANE	FORCFLO	VERTICAL CABINET - SLOPED GRILL	500	11,700	2.0	WATER	0.59	160.0	120.0	0.013	115	1	60	SEE NOTES # 1, 2, 3, 4

NOTES:

1. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
2. PROVIDE 1" MERV 8 FILTER
3. PROVIDE SURFACE MOUNTING FRAME AND KIT. SHALL BE MANUFACTURE PROVIDED AND SHALL MATCH EQUIPMENT FINISH AND COLOR.
4. SELECT UNIT WITH MEDIUM MOTOR SPEED.
5. PROVIDE ALL CABINET UNIT HEATERS WITH 3-WAY VALVE INSTALLATION PER DETAIL 3/M400.

3

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DATE: 02/18/2022

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Revisions

No.	Date	Revisions
1	03/09/2022	ADDENDUM #2
2	03/16/2022	ADDENDUM #3
3	03/21/2022	ADDENDUM #4

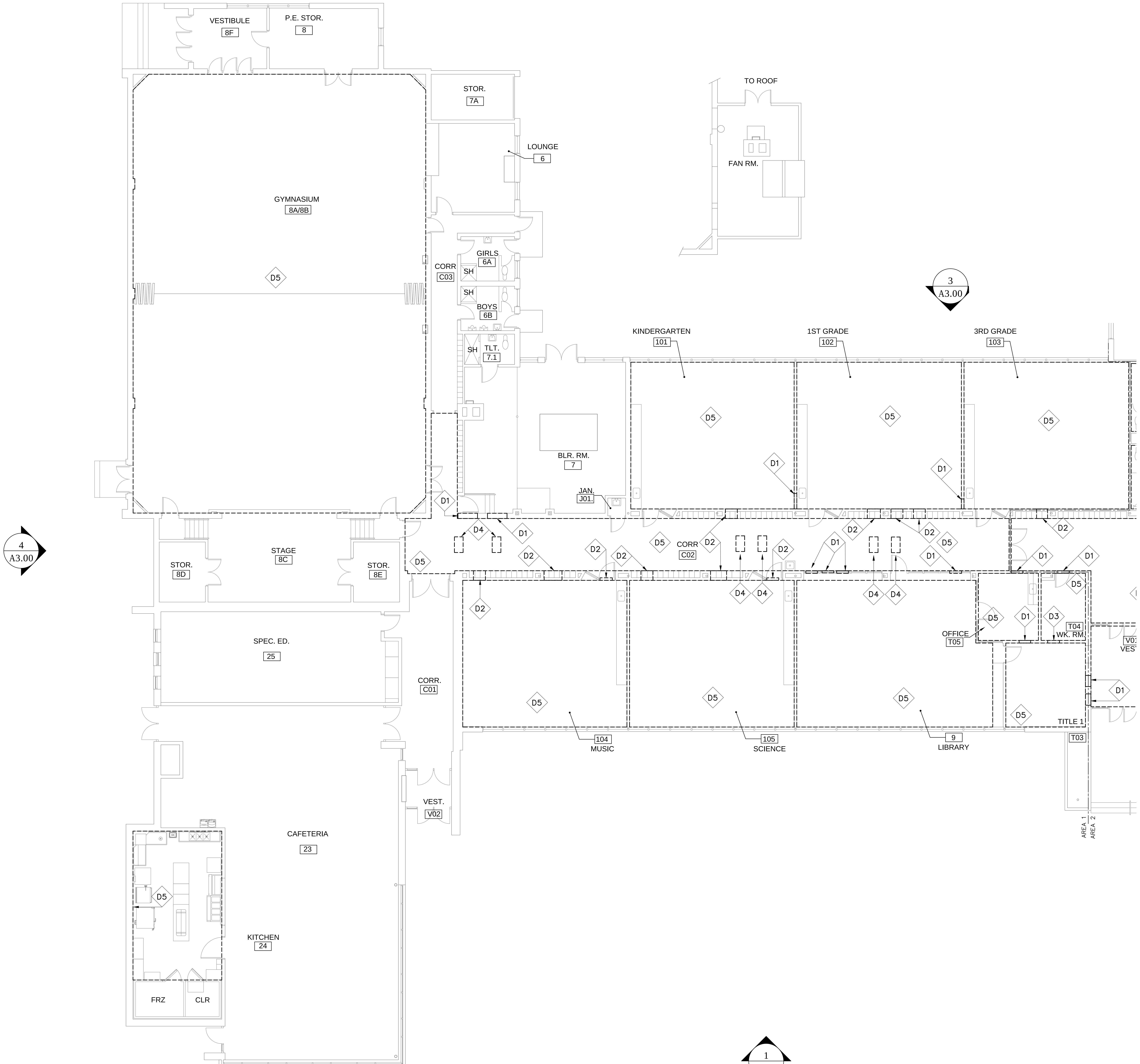
SPRING CREEK ELEMENTARY SCHOOL
HVAC UPGRADE
ROCKFORD, ILLINOIS

Sheet Title: MECHANICAL NOTES AND SCHEDULES

Proj. No.: 2249
Date: 02/18/2022
Drawn: AEC
Approved: RCR
Sheet No.: M500

DEMOLITION KEYNOTES

D1	CORE/REMOVE MASONRY AS NECESSARY TO ROUTE NEW DUCTWORK OR NEW PIPING. IF CORING TIGHT TO NEW DUCTWORK OR NEW PIPING IS NOT FEASIBLE, REMOVE FULL CMU AND/OR BRICK. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D2	REMOVE PORTION OF EXISTING FRAMING AND PLASTER AS NECESSARY TO ACCOMMODATE NEW DUCTWORK OR PIPING. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D3	WHERE NEW PIPING OR DUCTWORK IS BEING REPLACED. MODIFY OPENING TO ACCOMMODATE NEW WORK. IF CORING TIGHT OPENING TO NEW DUCTWORK OR NEW PIPING IS NOT FEASIBLE, REMOVE FULL CMU. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D4	REMOVE PORTION OF EXISTING ROOFING SYSTEM, ROOF DECK, AND ROOF STRUCTURE TO ACCOMMODATE NEW RTU. REFER TO MECHANICAL DRAWING FOR ADDITIONAL INFORMATION.
D5	REMOVE EXISTING ACOUSTIC CEILING TILE SYSTEM AND GRID IN ITS ENTIRETY.
D6	REMOVE EXISTING CEILING SYSTEM IN ITS ENTIRETY.

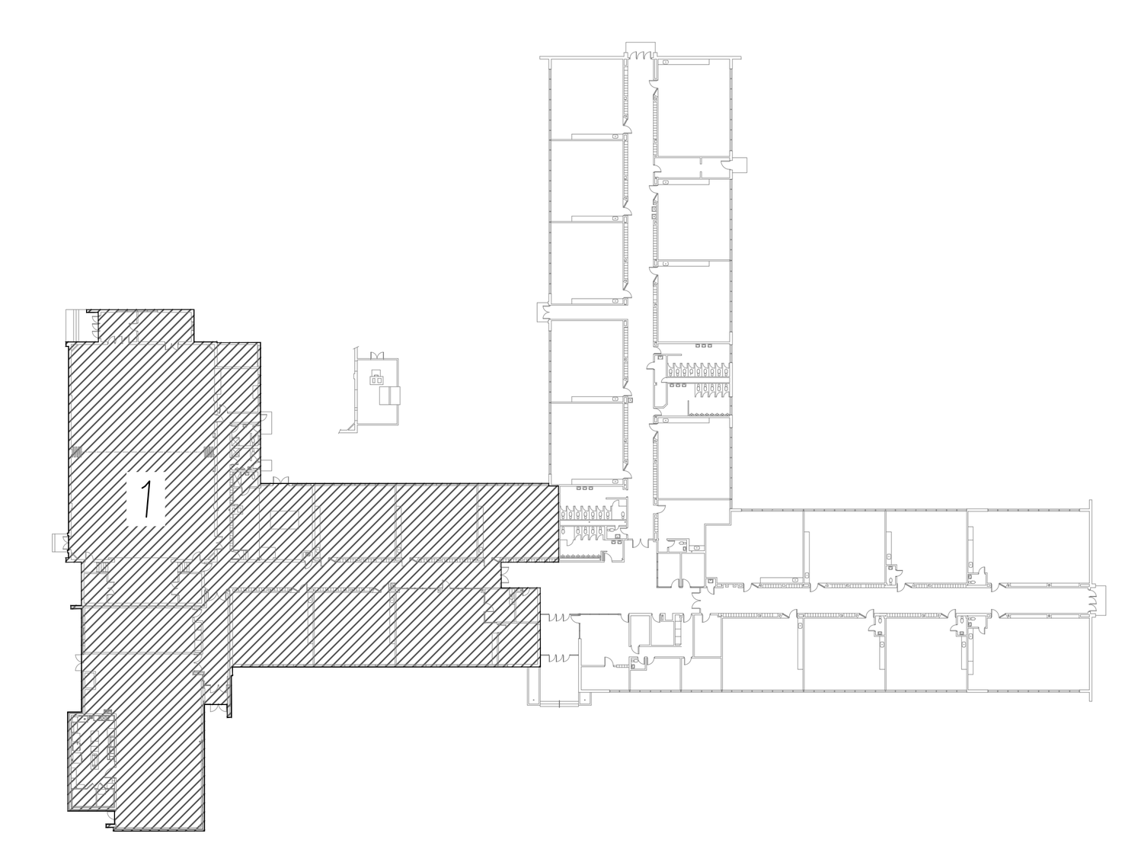


FIRST FLOOR DEMOLITION PLAN AREA 1

1/8" = 1'-0"

LEGEND

(dashed line)	DEMOLITION
(hatched)	NEW WORK



FIRST FLOOR
KEY PLAN

NO SCALE

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Revisions

No.	Date	
1	03.21.2022	Addendum 4

LATHROP ELEMENTARY SCHOOL
2603 CLOVER AVE.
ROCKFORD, ILLINOIS

Sheet Title: FIRST FLOOR DEMOLITION PLAN AREA 1

Proj. No.: 21012.40

Date: 02/18/2022

Drawn: MI

Approved: MS

Sheet No.: D1.01

DEMOLITION KEYNOTES

D1	CORE/REMOVE MASONRY AS NECESSARY TO ROUTE NEW DUCTWORK OR NEW PIPING. IF CORING TIGHT TO NEW DUCTWORK OR NEW PIPING IS NOT FEASIBLE, REMOVE FULL CMU AND/OR BRICK. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D2	REMOVE PORTION OF EXISTING FRAMING AND PLASTER AS NECESSARY TO ACCOMMODATE NEW DUCTWORK OR PIPING. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
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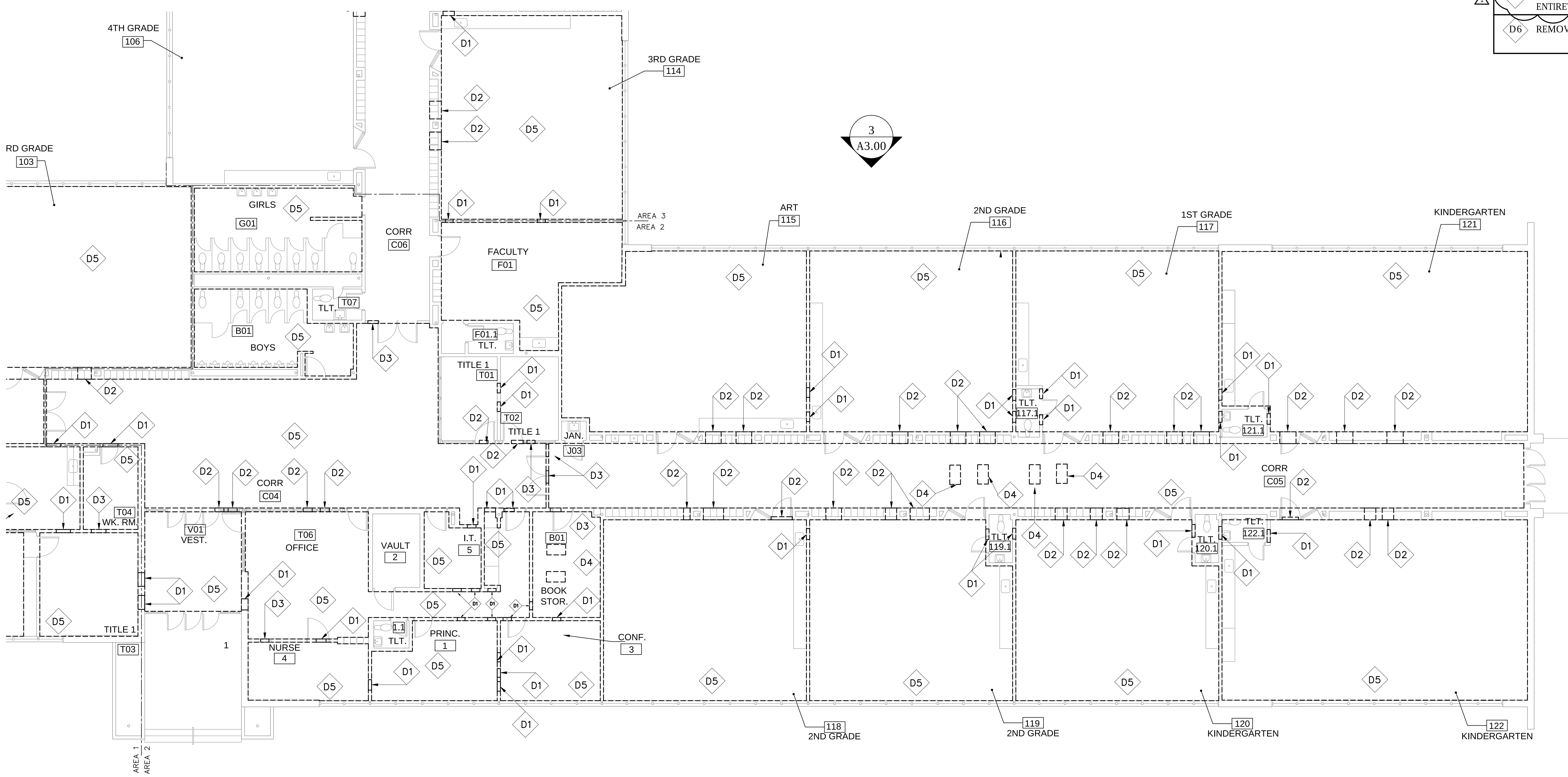
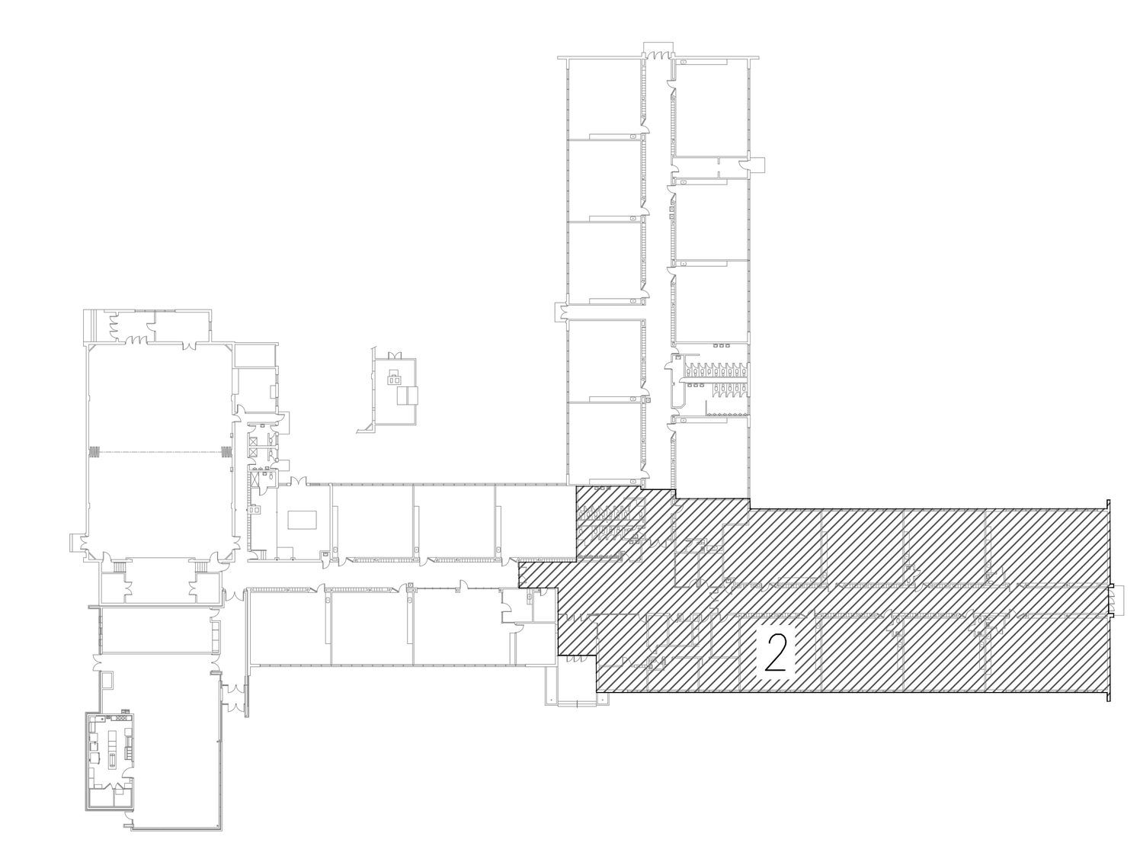


LEGEND

(dashed box)	DEMOLITION
(hatched box)	NEW WORK



FIRST FLOOR
KEY PLAN
NO SCALE
NORTH

FIRST FLOOR DEMOLITION PLAN AREA 2
1/8"= 1-0"
NORTH

STATE OF ILLINOIS
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Revisions

No.	Date	
1	03.21.2022	Addendum 4

LATHROP ELEMENTARY SCHOOL
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Sheet Title:
FIRST FLOOR DEMOLITION PLAN AREA 2

Proj. No.:	21012.40
Date:	02/18/2022
Drawn:	MI
Approved:	MS
Sheet No.:	D1.02

DEMOLITION KEYNOTES

D1	CORE/REMOVE MASONRY AS NECESSARY TO ROUTE NEW DUCTWORK OR NEW PIPING. IF CORING TIGHT TO NEW DUCTWORK OR NEW PIPING IS NOT FEASIBLE, REMOVE FULL CMU AND/OR BRICK. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D2	REMOVE PORTION OF EXISTING FRAMING AND PLASTER AS NECESSARY TO ACCOMMODATE NEW DUCTWORK OR PIPING. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D3	WHERE NEW PIPING OR DUCTWORK IS BEING REPLACED. MODIFY OPENING TO ACCOMMODATE NEW WORK. IF CORING TIGHT OPENING TO NEW DUCTWORK OR NEW PIPING IS NOT FEASIBLE, REMOVE FULL CMU. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
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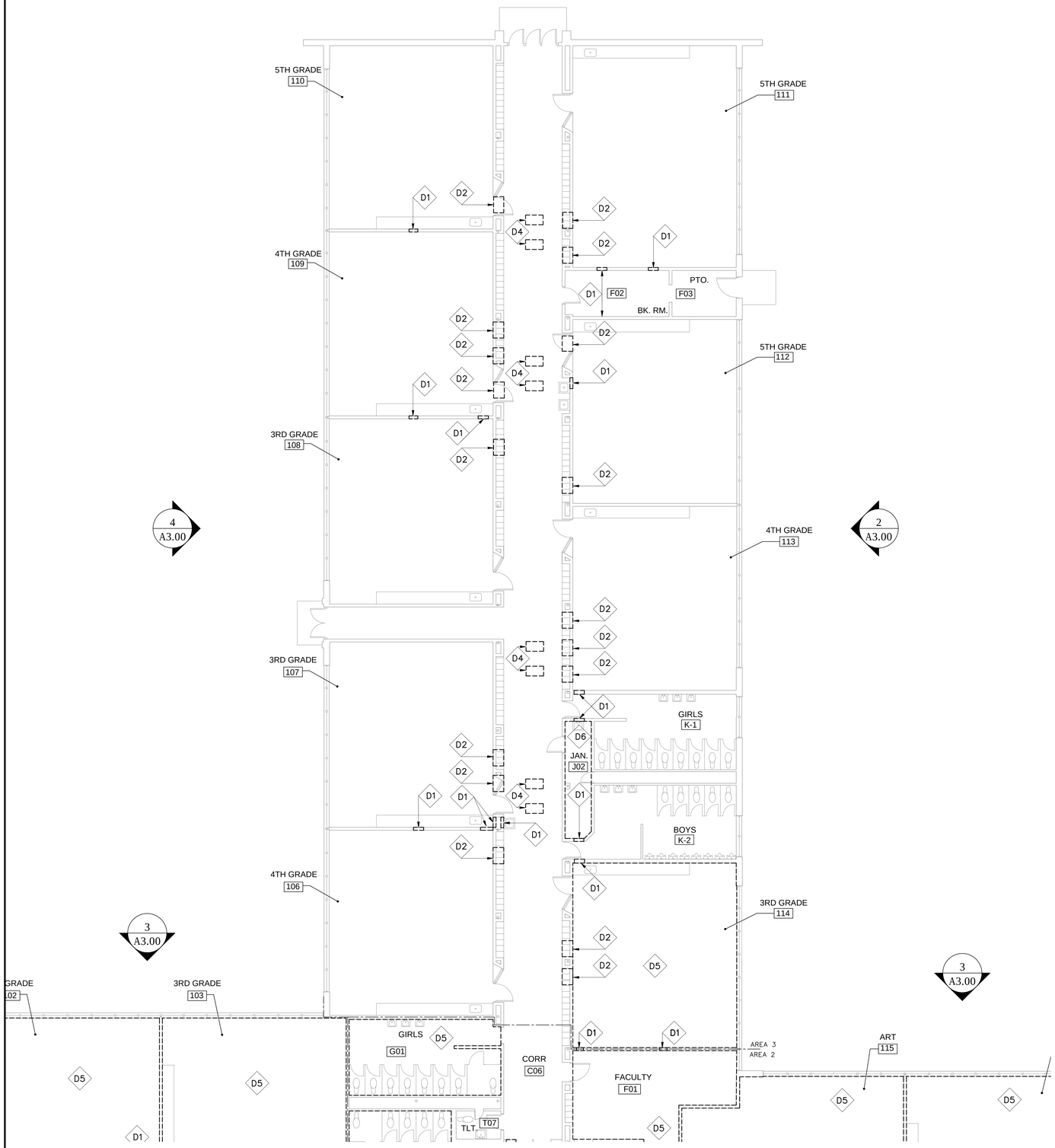
D6	REMOVE EXISTING CEILING SYSTEM IN ITS ENTIRETY.

1



FIRST FLOOR DEMOLITION PLAN AREA 3

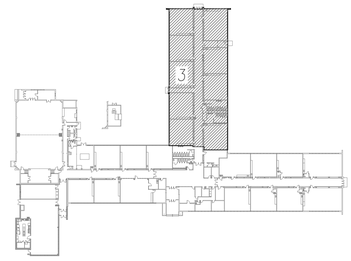
1/8"= 1-0"

NORTH

LEGEND

DEMOLITION

NEW WORK



FIRST FLOOR
KEY PLAN

NO SCALE

NORTH

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No.	Date	Revisions
1	03.21.2022	Addendum 4

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Sheet Title:
FIRST FLOOR DEMOLITION PLAN AREA 3

Proj. No.: 21012.40
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CEILING/ MEP COORDINATION NOTE:

CONTRACTOR SHALL COORDINATE IN THE FIELD PRIOR TO THE INSTALLATION OF MECHANICAL, ELECTRICAL ITEMS TO MAINTAIN THE MAXIMUM CEILING HEIGHT POSSIBLE.

ARCHITECTURE CEILINGS DRIVE THE LAYOUT OF PIPING MAINS, DUCTWORK, CONDUITS, ETC.

SUBMIT COORDINATION PLANS TO ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.

REFLECTED CEILING PLAN GENERAL NOTE

1. DESIGN INTENT IS TO CENTER NEW ACOUSTIC CEILING TILE AND PAINT EXPOSED ROOF STRUCTURE, CONDUITS, MECHANICAL DUCTWORK, ETC.
2. PROVIDE TRIM TO EXISTING GYPSUM BOARD/PLASTER TO MAINTAIN A CLEAN END, PAINT SOFFITS.

REFLECTED CEILING PLAN LEGEND

	2X2 SUSPENDED ACOUSTIC CEILING
	2X4 LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
	2X2 LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
	8"X48" LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
	RETURN AIR OR EXHAUST GRILLE - SEE MECHANICAL DRAWINGS
	SUPPLY AIR DIFFUSER - SEE MECHANICAL DRAWINGS
⊗	CEILING MOUNTED EXIT SIGN - SEE ELECTRICAL DRAWINGS
H⊗	WALL MOUNTED EXIT SIGN - SEE ELECTRICAL DRAWINGS
•	FIRE ALARM INDICATOR
OS	SENSOR SWITCH
PIR	SENSOR SWITCH
X'-X"	CEILING HEIGHT - VERIFY HEIGHTS WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.

REFLECTED CEILING PLAN KEYNOTES

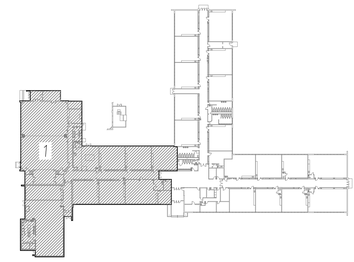
R1	EXPOSED STRUCTURE TO BE PAINTED.
R2	EXPOSED MECHANICAL, ELECTRICAL, AND PLUMBING ITEMS TO BE PAINTED, UNLESS OTHERWISE NOTED.
R3	EXPOSED SPIRAL DUCTWORK WITH FABRIC REFER TO MECHANICAL DRAWINGS
R4	EXPOSED DUCTWORK TO BE PAINTED

1 / A3.00

FIRST FLOOR REFLECTED CEILING PLAN AREA 1

1/8"= 1-0"

NORTH



FIRST FLOOR
KEY PLAN

NO SCALE

NORTH

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No.	Date	Revisions
1	03.21.2022	Addendum 4

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Sheet Title:
FIRST FLOOR REFLECTED CEILING PLAN AREA 1

Proj. No.:	21012.40
Date:	02/18/2022
Drawn:	MI
Approved:	MS
Sheet No.:	A2.01

REFLECTED CEILING PLAN KEYNOTES

- R1 EXPOSED STRUCTURE TO BE PAINTED.
- R2 EXPOSED MECHANICAL, ELECTRICAL, AND PLUMBING ITEMS TO BE PAINTED, UNLESS OTHERWISE NOTED.
- R3 EXPOSED SPIRAL DUCTWORK WITH FABRIC REFER TO MECHANICAL DRAWINGS
- R4 EXPOSED DUCTWORK TO BE PAINTED

CEILING/ MEP COORDINATION NOTE:

CONTRACTOR SHALL COORDINATE IN THE FIELD PRIOR TO THE INSTALLATION OF MECHANICAL, ELECTRICAL ITEMS TO MAINTAIN THE MAXIMUM CEILING HEIGHT POSSIBLE.

ARCHITECTURE CEILINGS DRIVE THE LAYOUT OF PIPING MAINS, DUCTWORK, CONDUITS, ETC.

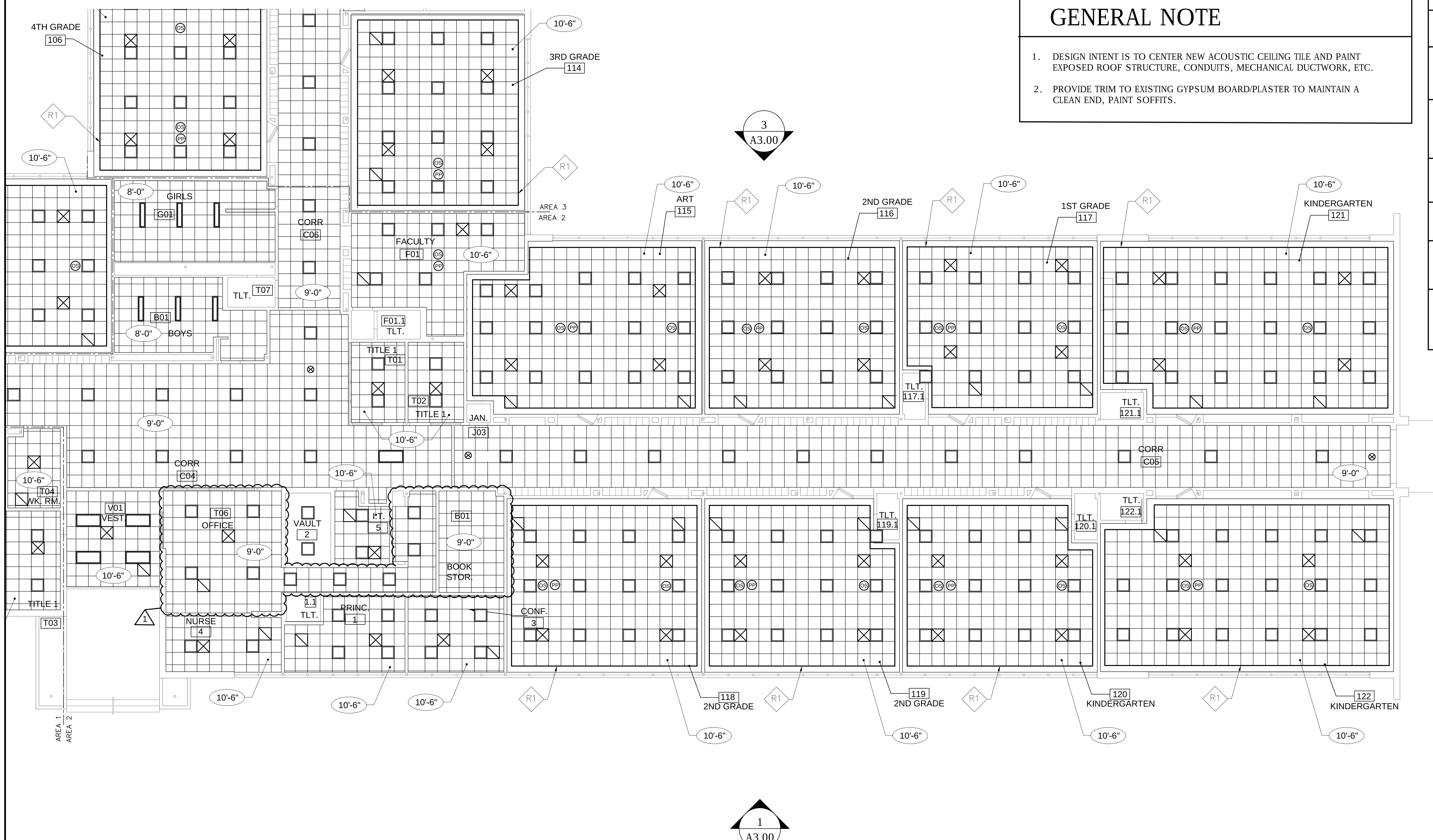
SUBMIT COORDINATION PLANS TO ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.

REFLECTED CEILING PLAN GENERAL NOTE

1. DESIGN INTENT IS TO CENTER NEW ACOUSTIC CEILING TILE AND PAINT EXPOSED ROOF STRUCTURE, CONDUITS, MECHANICAL DUCTWORK, ETC.
2. PROVIDE TRIM TO EXISTING GYPSUM BOARD/PLASTER TO MAINTAIN A CLEAN END, PAINT SOFFITS.

REFLECTED CEILING PLAN LEGEND

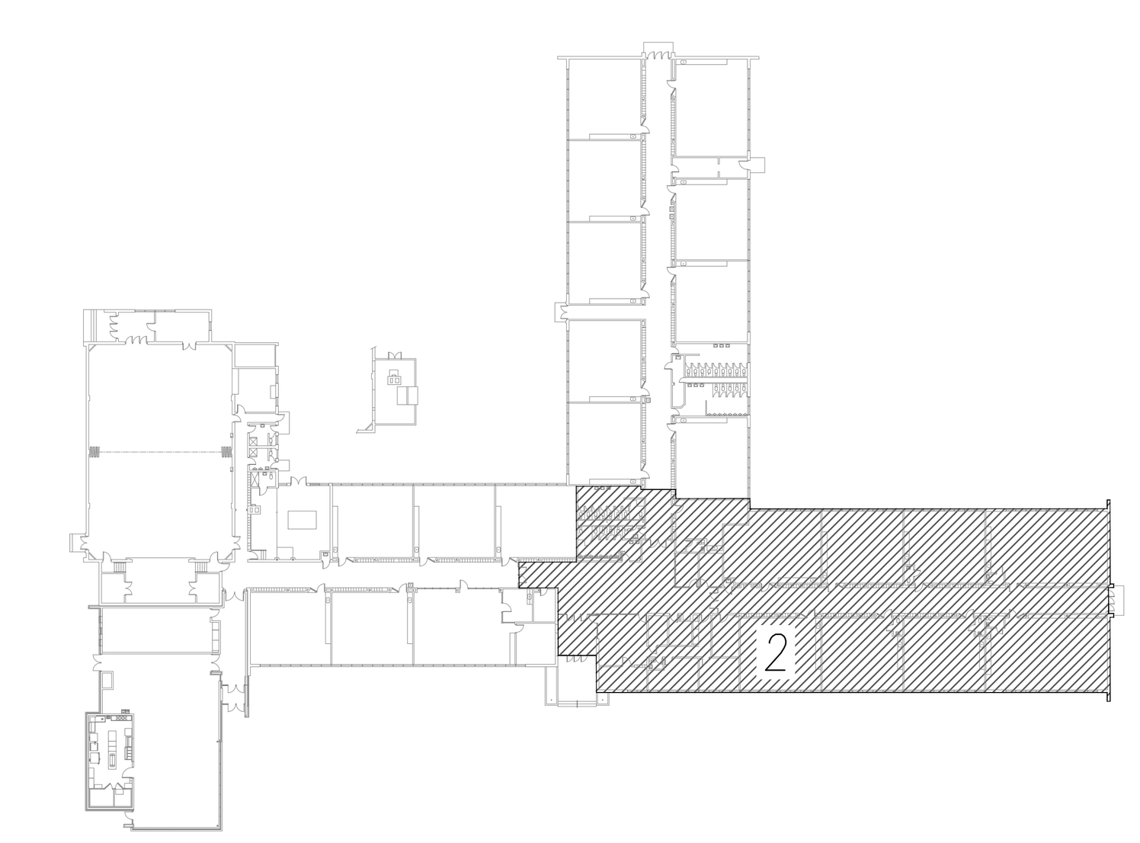
	2X2 SUSPENDED ACOUSTIC CEILING
	2X4 LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
	2X2 LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
	8"X48" LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
	RETURN AIR OR EXHAUST GRILLE - SEE MECHANICAL DRAWINGS
	SUPPLY AIR DIFFUSER - SEE MECHANICAL DRAWINGS
	CEILING MOUNTED EXIT SIGN - SEE ELECTRICAL DRAWINGS
	WALL MOUNTED EXIT SIGN - SEE ELECTRICAL DRAWINGS
	FIRE ALARM INDICATOR
	SENSOR SWITCH
	SENSOR SWITCH
X'-X"	CEILING HEIGHT - VERIFY HEIGHTS WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.



FIRST FLOOR REFLECTED CEILING PLAN AREA 2

1/8"= 1-0"

NORTH



FIRST FLOOR
KEY PLAN

NO SCALE

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1	03.21.2022	Addendum 4

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Sheet Title:
FIRST FLOOR REFLECTED CEILING PLAN AREA 2

Proj. No.: 21012.40
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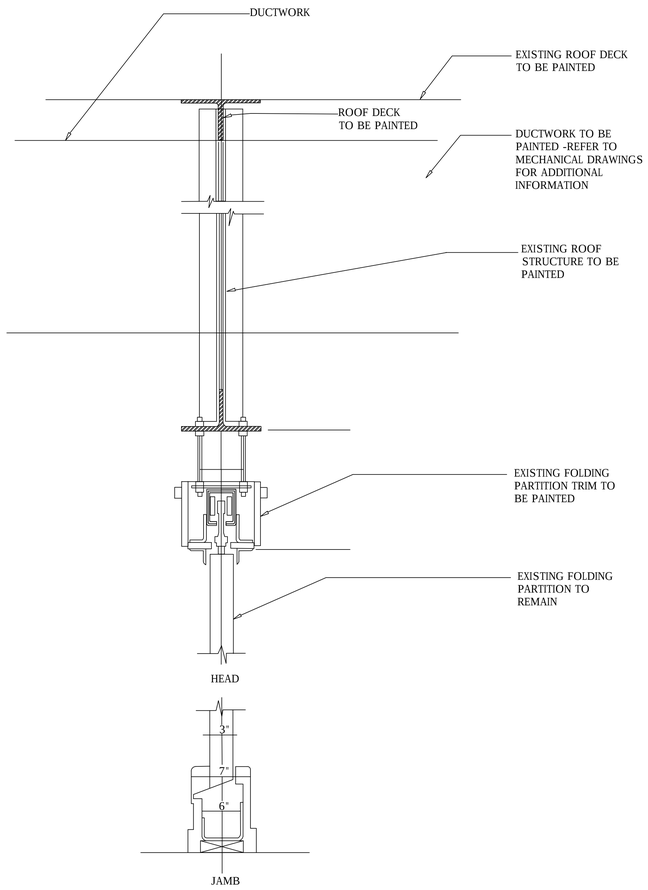
Approved: MS
Sheet No.: A2.02



1 EXISTING FOLDING PARTITION

1 1/2" = 1-0"

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No.	Date	Revisions
1	03.21.2022	Addendum 4

LATHROP ELEMENTARY SCHOOL
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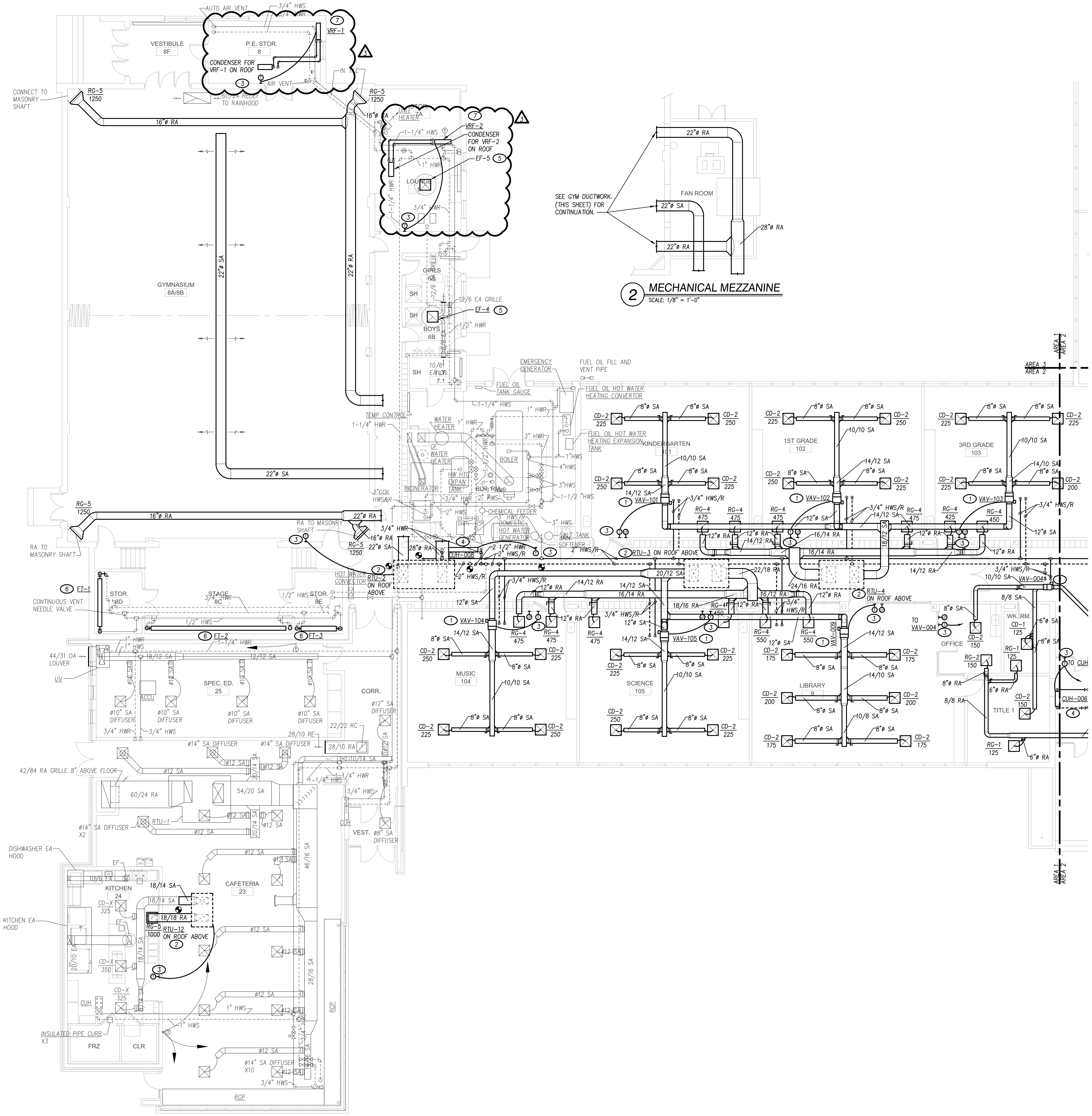
Sheet Title: ELEVATIONS AND SECTIONS

Proj. No.: 21012.40
Date: 02/18/2022
Drawn: MI
Approved: MS
Sheet No.: A3.01

1

MECHANICAL KEYED NOTES:

1. FURNISH AND INSTALL NEW VAV BOX PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. FURNISH AND INSTALL NEW ROOF-TOP UNIT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. FURNISH AND INSTALL NEW DDC THERMOSTAT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. FURNISH AND INSTALL NEW CABINET UNIT HEATER PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. FURNISH AND INSTALL NEW ROOF EXHAUST FAN PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
6. FURNISH AND INSTALL NEW FINNED TUBE RADIATOR PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
7. FURNISH AND INSTALL NEW VRF SPLIT SYSTEM UNIT. SEE DETAIL 6/M400 (TYP).



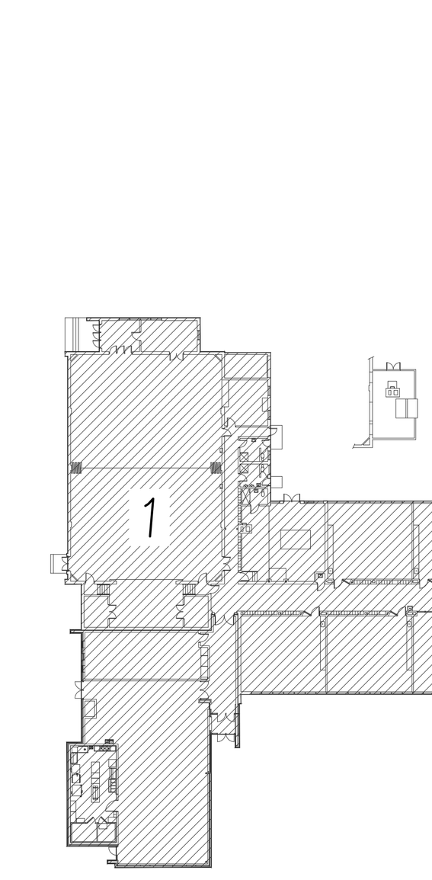
1 FIRST FLOOR PLAN - MECHANICAL NEW WORK - AREA 1
SCALE: 1/8" = 1'-0"

NORTH

2 MECHANICAL MEZZANINE
SCALE: 1/8" = 1'-0"

GENERAL MECHANICAL NOTES:

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HVAC SYSTEMS AS INDICATED ON DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY MOST CURRENT INTERNATIONAL MECHANICAL CODE AND ANY APPLICABLE LOCAL CODES.
2. CONTRACTOR SHALL VISIT THE JOB SITE AND EXAMINE THE DRAWINGS OF OTHER TRADES PRIOR TO BIDDING TO THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS AND THE SCOPE OF THE PROJECT. FAILURE TO DO SO DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO UNDERSTAND THE SCOPE OR OF UNDERSTANDING ANY FIELD CONDITIONS WHICH COULD BE REASONABLY EXPECTED TO BE KNOWN BY A THOROUGH INVESTIGATION.
3. IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY DUCT, FITTING, TRANSITION, DAMPER, ETC., AND IT IS UNDERSTOOD THAT WHILE THE DRAWINGS MUST BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT, THE PROPER INSTALLATION ACCORDING TO THE TRUE INTENT AND MEANING OF THE DRAWINGS, LOCAL CODES AND STANDARD PRACTICES SHALL BE PROVIDED. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION. REPORT ANY PROBLEMS OR CONFLICTS TO THE OWNER OR ENGINEER.
4. ANY MINOR CHANGES IN THE LOCATION OF EQUIPMENT, DUCTS, PIPE CONTROL DEVICES, ETC., FROM THOSE LOCATIONS SHOWN ON THE DRAWINGS SHALL BE MADE WITHOUT EXTRA COST IF SO DIRECTED BY THE OWNERS REPRESENTATIVE OR ENGINEER BEFORE THE INSTALLATION IS MADE. A MINOR CHANGE IN LOCATION SHALL BE CONSIDERED TO BE WITHIN 6'-0" OF THE ORIGINALLY INDICATED LOCATIONS.
5. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS. VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED.
6. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE.
7. INSTALL SYSTEMS, MATERIALS AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS WHERE INSTALLED EXPOSED IN FINISHED SPACES AND GIVING RIGHT-OF-WAY PRIORITY TO SYSTEMS REQUIRED TO BE INSTALLED AT A SPECIFIED SLOPE.
8. INSTALL ALL HVAC EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
9. ALL OPENINGS IN FIRE WALLS DUE TO DUCTWORK, PIPING AND CONTROL CONDUIT SHALL BE FIRE STOPPED WITH AN APPROVED FIRE STOP MATERIAL.
10. PROVIDE ACCESS DOORS IN DUCTWORK OR WALLS/CEILING FOR OPERATION, ADJUSTMENT, AND MAINTENANCE OF ALL FANS, VALVES, COILS, AND MECHANICAL EQUIPMENT. COILS LOCATED IN DUCTWORK TO BE PROVIDED WITH ACCESS DOORS ON OUTLET SIDE OF COIL.
11. LOCATIONS AND SIZES OF ALL FLOOR AND WALL OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED AND THE OWNER.
12. CONTRACTOR SHALL COORDINATE CEILING DIFFUSER/GRILLE/REGISTER LOCATIONS WITH LIGHTING, FIRE ALARM EQUIPMENT AND FIRE SUPPRESSION SYSTEMS.
13. WHERE DEMOLITION WORK OCCURS, CONTRACTOR SHALL PATCH AND SEAL ALL WALLS, FLOORS AND CEILINGS TO MATCH EXISTING. CONTRACTOR SHALL VERIFY WITH OWNER ALL PATCHING MATERIALS AND INSTALLATION METHODS.
14. VENTILATING CONTRACTOR SHALL PROVIDE MANUAL BALANCE DAMPERS IN ALL BRANCH TAKE-OFFS TO SUPPLY DIFFUSERS. PROVIDE ADDITIONAL MANUAL BALANCE DAMPERS IN MAIN AND SUB-MAIN DUCTS AS REQUIRED TO ENSURE THE SUPPLY AND RETURN AIR SYSTEMS CAN BE BALANCED TO THE SPECIFIED DESIGN AIRFLOW.
15. IN AREAS WHERE A CEILING GRID EXISTS, THE VENTILATING CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF EXISTING CEILING GRID AND TILES AS NECESSARY FOR INSTALLATION OF VENTILATING WORK. ANY PORTION OF THE EXISTING TILES OR GRID WHICH BECOME DAMAGED DURING REMOVAL SHALL BE REPLACED BY THE VENTILATING CONTRACTOR.
16. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, FLANGES AND OTHER APPARATUS REQUIRING ACCESS ARE ACCESSIBLE.



KEY PLAN
SCALE: NOT TO SCALE

NORTH

DATE: 02/18/2022

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Revisions

No.	Date	
1	03/09/2022	Addendum # 2
2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

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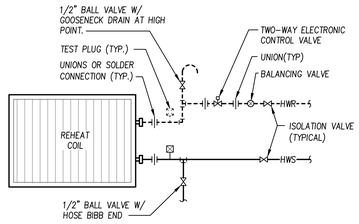
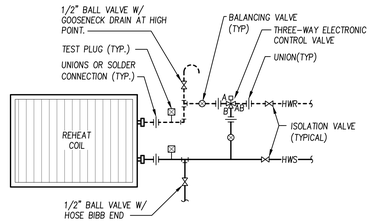
Sheet Title:
FIRST FLOOR PLAN - MECHANICAL AREA 1

Proj. No.:	2248
Date:	02/18/2022
Drawn:	AEC
Approved:	RCR
Sheet No.:	M111



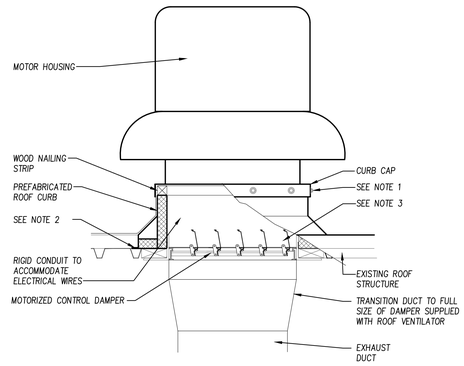
1 HOT WATER REHEAT COIL PIPING DETAIL

SCALE: NOT TO SCALE



2 HOT WATER REHEAT COIL PIPING DETAIL (3-WAY VALVE)

SCALE: NO SCALE

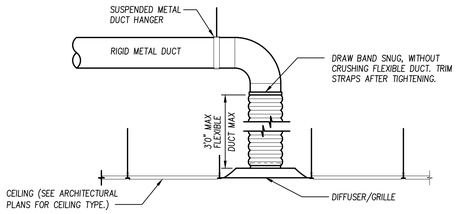


NOTE:

1. SECURE CURB CAP TO WOOD NAILING STRIP WITH 3/8" [10mm] CADMIUM PLATED LAG BOLTS NOT OVER 12" [305mm] ON CENTER.
2. SECURE ROOF CURB, DUCTWORK AND DAMPER TO ROOF WITH RUST RESISTANT BOLTS (METAL DECK AND BAR JOIST ROOF).
3. SIZE OF DUCT THROUGH ROOF SHALL NOT BE LARGER THAN CURB SUPPLIED WITH ROOF VENTILATOR.

3 CENTRIFUGAL ROOF EXHAUST FAN

SCALE: NOT TO SCALE

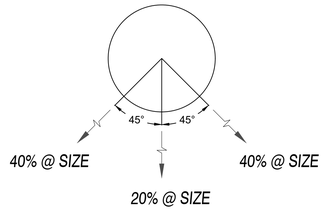


NOTE:

ATTACH FLEXIBLE DUCT TO RIGID METAL DUCT, TAPE INNER LINER TO RIGID METAL DUCT, THEN ATTACH WITH TWO NYLON TIE WRAPS; ONE FOR THE INNER LINER AND ONE FOR THE OUTER SHELL. FOLD THE OUTER SHELL INSIDE ITSELF SO THAT IT HAS NEAT EDGES PRIOR TO TIE WRAPPING.

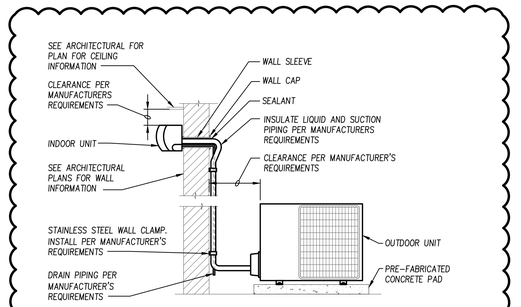
4 DIFFUSER CONNECTION DETAIL

SCALE: NOT TO SCALE



5 FABRIC DUCT DETAIL

SCALE: NOT TO SCALE



6 SPLIT SYSTEM DETAIL

SCALE: NOT TO SCALE

1

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No.	Date	Revisions
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2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

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Sheet Title:
MECHANICAL DETAILS

Proj. No.:	2248
Date:	02/18/2022
Drawn:	KAS
Approved:	RCR

Sheet No.:
M400

CABINET UNIT HEATER SCHEDULE

MARK	DESIGN BASIS		DESCRIPTION	DESIGN AIRFLOW CFM	FAN SPEED	HEATING CAPACITY (BTUH)	COIL ROWS	FLUID TYPE	HOT WATER (GPM)	EWT (F)	LWT (F)	EAT (F)	LAT (F)	ELECTRICAL DATA					REMARKS
	MAKE	MODEL / SERIES												MOTOR POWER 1 (HP)	MOTOR POWER 2 (HP)	VOLTS	PHASE	HZ	
CUH-001	TRANE	FFEB1001	HORIZONTAL RECESSED WITH BOTOM STAMPED LOUVER INLET AND OUTLET	1,050	HIGH	59,570	2.0	WATER	3.97	160.0	130.0	60.0	113.7	.047	.091	120	1	60	SEE NOTES # 1, 2, 3
CUH-002	TRANE	FFJB0201	INVERTED VERTICAL RECESSED WITH FRONT STAMPED LOUVER INLET AND OUTLET	100	HIGH	5,000	2.0	WATER	0.17	160.0	100.1	60.0	102.3	.002	–	120	1	60	SEE NOTES # 1, 2, 3
CUH-003	TRANE	FFJB0201	INVERTED VERTICAL RECESSED WITH FRONT STAMPED LOUVER INLET AND OUTLET	100	HIGH	5,000	2.0	WATER	0.17	160.0	100.1	60.0	102.3	.002	–	120	1	60	SEE NOTES # 1, 2, 3
CUH-004	TRANE	FFEB1001	HORIZONTAL RECESSED WITH BOTOM STAMPED LOUVER INLET AND OUTLET	1,050	HIGH	59,570	2.0	WATER	3.97	160.0	130.0	60.0	113.7	.047	.091	120	1	60	SEE NOTES # 1, 2, 3
CUH-005	TRANE	FFNB1001	INVERTED VERTICAL CABINET WITH FRONT STAMPED LOUVER INLET AND OUTLET	1,050	HIGH	54,500	2.0	WATER	2.70	160.0	119.6	60.0	109.1	.047	.091	120	1	60	SEE NOTES # 1, 2, 3
CUH-006	TRANE	FFJB0201	VERTICAL SLOPE TOP WITH FRONT TOE SPACE INLET AND TOP BAR GRILLE OUTLET	300	HIGH	12,000	2.0	WATER	0.40	160.0	99.3	60.0	97.9	.034	–	120	1	60	SEE NOTES # 1, 2, 3
CUH-007	TRANE	FFJB0201	VERTICAL SLOPE TOP WITH FRONT TOE SPACE INLET AND TOP BAR GRILLE OUTLET	300	HIGH	12,000	2.0	WATER	0.40	160.0	99.3	60.0	97.9	.034	–	120	1	60	SEE NOTES # 1, 2, 3
CUH-008	TRANE	FFNB1001	INVERTED VERTICAL CABINET WITH FRONT STAMPED LOUVER INLET AND OUTLET	1,050	HIGH	54,500	2.0	WATER	2.70	160.0	119.6	60.0	109.1	.047	.091	120	1	60	SEE NOTES # 1, 2, 3

NOTES:

1. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
2. PROVIDE 1" THROWAWAY FILTER
3. PROVIDE SURFACE MOUNTING FRAME AND KIT. SHALL BE MANUFACTURE PROVIDED AND SHALL MATCH EQUIPMENT FINISH AND COLOR.

EXHAUST FAN SCHEDULE

MARK	DESIGN BASIS		DESCRIPTION	DRIVE	PERFORMANCE			MOTOR			REMARKS
	MAKE	MODEL			AIRFLOW (CFM)	E.S.P. (IN. H2O)	R.P.M.	HP	VOLTS	PHASE	
EF-1	GREENHECK	G-140-VG	CENTRIFUGAL ROOF EXHAUST FAN	DIRECT	1,400	0.50"	1,051	1/2	120	1	SEE NOTE 1, 2, 3
EF-2	GREENHECK	G-140-VG	CENTRIFUGAL ROOF EXHAUST FAN	DIRECT	1,610	0.50"	1,126	1/2	120	1	SEE NOTE 1, 2, 3
EF-3	GREENHECK	G-095-D	CENTRIFUGAL ROOF EXHAUST FAN	DIRECT	500	0.50"	1,550	1/8	120	1	SEE NOTE 1, 2, 3
EF-4	GREENHECK	G-095-D	CENTRIFUGAL ROOF EXHAUST FAN	DIRECT	500	0.50"	1,550	1/8	120	1	SEE NOTE 1, 2, 3
EF-5	GREENHECK	G-130-B	CENTRIFUGAL ROOF EXHAUST FAN	DIRECT	1,150	0.50"	1,140	1/4	120	1	SEE NOTE 1, 2, 3

NOTES:

1. PROVIDED INSULATED ROOF CURB AND MOTORIZED DAMPER.
2. PROVIDE FAN SPEED CONTROL.
3. PROVIDE FACTORY MOUNTED DISCONNECT.

HOT WATER CONVECTOR SCHEDULE

MARK	DESIGN BASIS		ELEMENT DESCRIPTION	TYPE	ELEMENT SIZE			TUBE SIZE	# OF ELEMENTS	FIN SIZE	FINS PER FT	EWT (F)	CAPACITY PER FT. (BTUH / FT)
	MAKE	MODEL / SERIES			LENGTH (ft)	HEIGHT (IN)	DEPTH (IN)	(IN)					
FT-1	VULCAN (OR EQUAL)	VC435	COPPER TUBE – ALUMINUM FIN	HYDRONIC SLOPED TOP WALL FIN – TWO TIER	11'-6"	20"	4-1/2"	1"	1	3-5/8" X 4-1/4"	50	160	1020
FT-2	VULCAN (OR EQUAL)	VC435	COPPER TUBE – ALUMINUM FIN	HYDRONIC SLOPED TOP WALL FIN – TWO TIER	29'-0"	24"	4-1/2"	1"	1	3-5/8" X 4-1/4"	50	160	1540
FT-3	VULCAN (OR EQUAL)	VC435	COPPER TUBE – ALUMINUM FIN	HYDRONIC SLOPED TOP WALL FIN – TWO TIER	8'-0"	20"	4-1/2"	1"	1	3-5/8" X 4-1/4"	50	160	1020

SPLIT-SYSTEM AIR-CONDITIONING UNIT SCHEDULE

MARK	DESIGN BASIS		DESCRIPTION	COOLING		HEATING		EFFICIENCY (SEER)	ELECTRICAL DATA			
	MANUFACTURER	MODEL		AIRFLOW (CFM)	COOLING CAPACITY MIN / MAX (BTUH)	AIRFLOW (CFM)	HEATING CAPACITY MIN / MAX (BTUH)		MCA (AMPS)	MOCP (AMPS)	VOLT.	PH
VRF-1	MITSUBISHI	MSZ-FS09NA (INDOOR) MUZ-FS09NAH (OUTDOOR)	DUCTLESS HIGH-WALL HEAT PUMP	135-380	1,700-12,000	140-435	1,600-18,000	30.5	10	15	208	1
VRF-2	MITSUBISHI	MSZ-FS09NA (INDOOR) MUZ-FS09NAH (OUTDOOR)	DUCTLESS HIGH-WALL HEAT PUMP	135-380	1,700-12,000	140-435	1,600-18,000	30.5	10	15	208	1

NOTES:

1. PROVIDE OPTIONAL WIRED PROGRAMMABLE THERMOSTAT.
2. COOLING PERFORMANCE IS BASED ON 95F OUTDOOR AIR TEMPERATURE AND 78F DB / 64F WB ENTERING AIR TEMPERATURE

2

DATE: 02/18/2022

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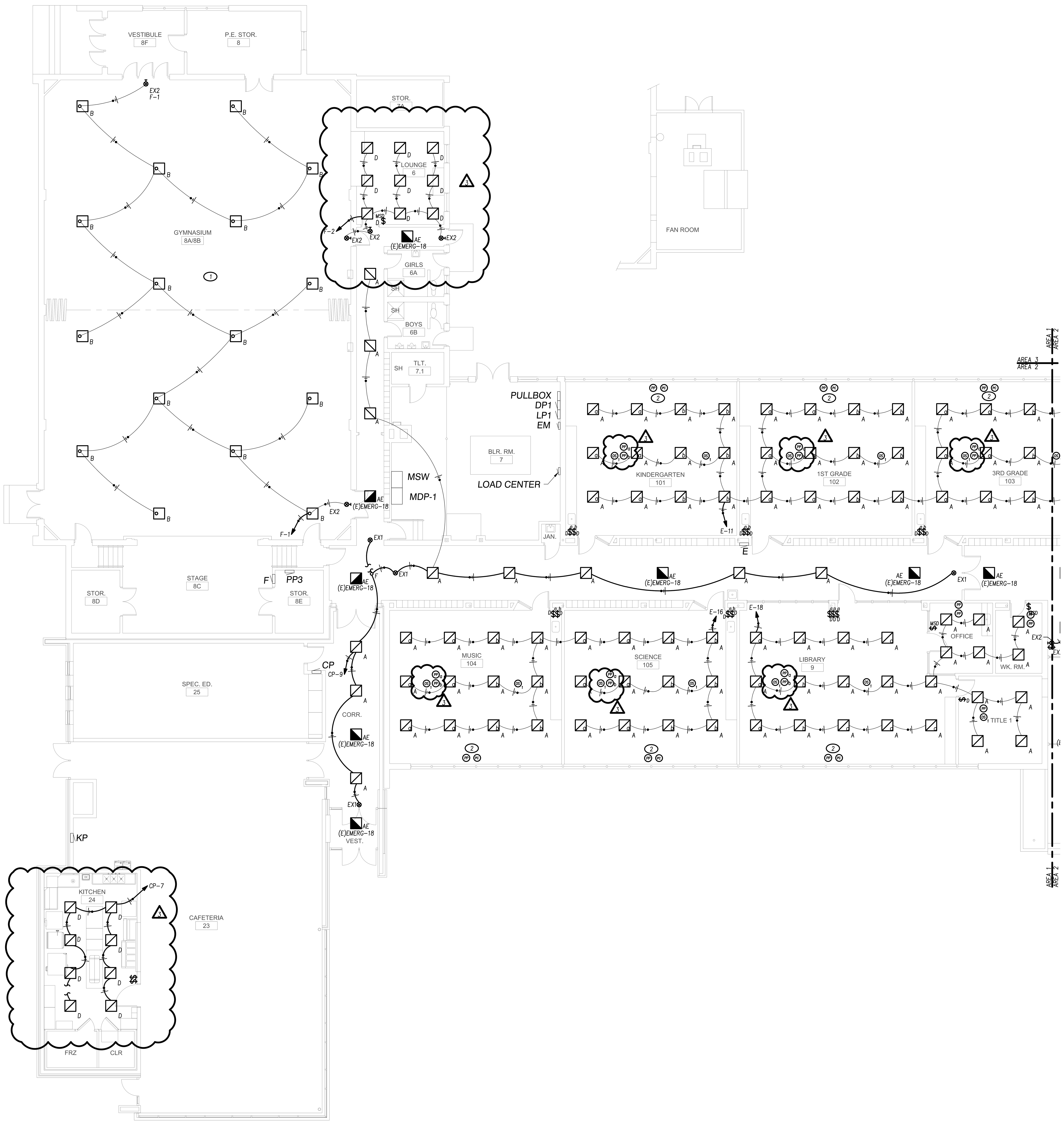
Sheet Title: MECHANICAL SCHEDULE

Proj. No.: 2248
Date: 02/18/2022
Drawn: AEC
Approved: RCR

Sheet No.: M501

KEYED ELECTRICAL NOTES (THIS SHEET):

1. REINSTALL PREVIOUSLY REMOVED LUMINAIRE AFTER CEILING WORK IS COMPLETE. RECONNECT TO CIRCUITRY AND LIGHTING CONTROLS PREVIOUSLY SERVING LUMINAIRES (TYPICAL ALL LUMINAIRES IN GYM).
2. FURNISH AND INSTALL DAYLIGHT HARVESTING DEVICE AND ASSOCIATED POWER PACK TO CONTROL LUMINAIRES NEAREST TO EXTERIOR WINDOWS (TYPICAL ALL CLASSROOMS).



1 FIRST FLOOR PLAN - ELECTRICAL NEW LIGHTING - AREA 1

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

NORTH

NOTE:
WORKING SPACE SHALL BE REQUIRED FOR ALL ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO SWITCHGEARS, PANELBOARDS, VARIABLE FREQUENCY DRIVES, DISCONNECT SWITCHES OR OTHER ENCLOSED EQUIPMENT. ALL INSTALLATIONS SHALL COMPLY WITH ARTICLE 110 OF THE NATIONAL ELECTRICAL CODE. THIS SHALL BE COORDINATED WITH ALL TRADES. RELOCATION OF ANY MATERIALS NOT IN COMPLIANCE WILL BE AT THE CONTRACTOR'S EXPENSE:

1. THE DEPTH OF THE WORKING SPACE SHALL NOT BE LESS THAN THAN 3'-0" BEYOND THE FRONT OF THE ELECTRICAL EQUIPMENT. IT SHALL BE CLEAR, EXTENDING FROM THE FLOOR TO THE HEIGHT OF THE TOP OF THE EQUIPMENT BUT NOT LESS THAN 6'-6". THE WIDTH SHALL BE EQUAL TO THE WIDTH OF THE EQUIPMENT BUT NOT LESS THAN 30".
2. THE SPACE DIRECTLY ABOVE AND BELOW THE EQUIPMENT SHALL BE DEDICATED TO ELECTRICAL SYSTEMS ONLY. THE SPACE SHALL BE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT EXTENDING FROM THE FLOOR TO THE STRUCTURE. NO PIPING, DUCTS OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS AREA.

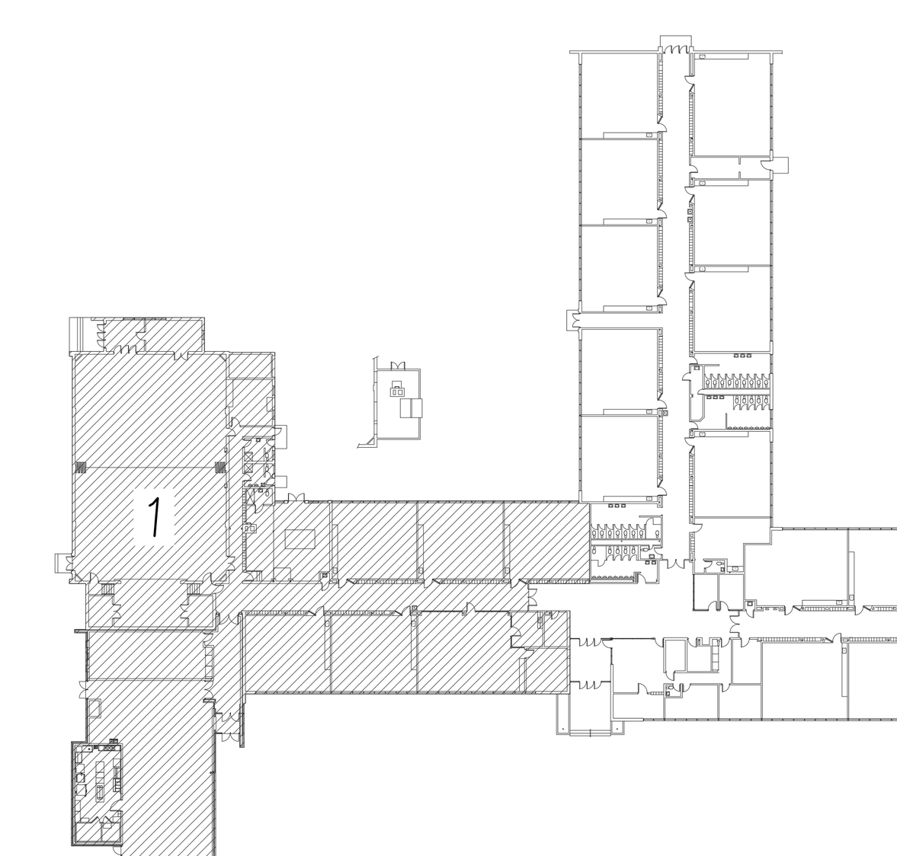
NOTE:
THE ELECTRICAL CONTRACTOR SHALL INCLUDE ALL LABOR AND MATERIALS IN BID PROPOSAL TO PATCH AND PAINT ECISTING WALLS TO MATCH EXISTING CONDITIONS, WHERE SURFACE/RECESSED ELECTRICAL EQUIPMENT AND RACEWAY SYSTEMS HAVE BEEN REMOVED.

NOTE:
ALL HOME RUN CONDUCTORS SHALL BE MINIMUM #10AWG.

NOTE:
ALL EMERGENCY AND EXIT LUMINAIRES SHALL BE CONNECTED TO AN UNSWITCHED PORTION OF THE LOCAL EMERGENCY LIGHTING CIRCUIT.

NOTE:

1. HANDWRITTEN BRANCH CIRCUIT PANELBOARD SCHEDULES ARE NOT ACCEPTABLE.
2. ALL CIRCUITS IN EXISTING PANELS MODIFIED WITH THE SCOPE OF WORK AND NEW PANELS SHALL HAVE TYPEWRITTEN CIRCUIT DIRECTORIES WITH SPECIFIC INFORMATION ON DEVICE AND ROOM(S) SERVED BY THE CORRESPONDING BREAKER.
3. INCLUDE A PRINTED THERMOGRAPHIC LABEL AT EACH BREAKER SPACE CORRESPONDING TO THE TYPEWRITTEN PANEL SCHEDULE.
4. ALL WIRING DEVICES SHALL HAVE A THERMOGRAPHIC LABEL ON EACH FACE PLATE INDICATING THE PANEL AND CIRCUIT NUMBER THE DEVICE IS SERVED BY.



KEY PLAN

SCALE: NOT TO SCALE

NORTH

DATE: 02/18/2022

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ROCKFORD PUBLIC SCHOOLS

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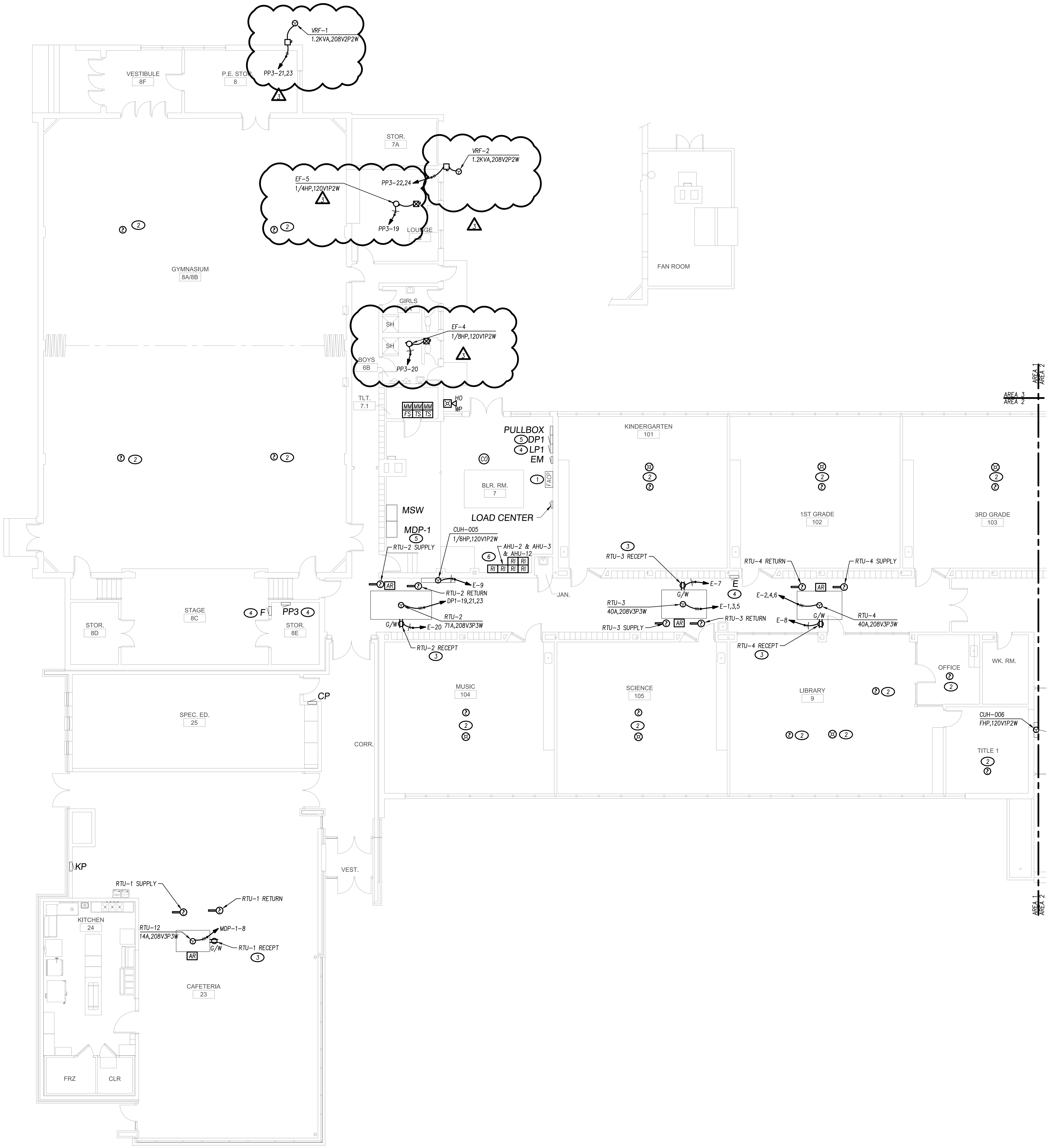
No.	Date	Revisions
1	03/09/2022	Addendum # 2
2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

LATHROP ELEMENTARY SCHOOL
2603 CLOVER AVE,
ROCKFORD, ILLINOIS 61102

Sheet Title: FIRST FLOOR PLAN - ELECTRICAL NEW LIGHTING - AREA 1

Proj. No.: 2248
Date: 02/18/2022
Drawn: MARB
Approved: BRK
Sheet No.: E111L



1 FIRST FLOOR PLAN - ELECTRICAL NEW WORK - AREA 1 POWER & SYSTEMS

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

NORTH

KEYED ELECTRICAL NOTES (THIS SHEET):

1. EXISTING FIRE ALARM CONTROL PANEL. REFER TO SHEET E300 FOR FURTHER INFORMATION.
2. REINSTALL PREVIOUSLY REMOVED CEILING MOUNTED DEVICE AFTER CEILING WORK IS COMPLETE. CEILING DEVICE SHALL BE LOCATED IN SAME LOCATION AS PREVIOUSLY REMOVED DEVICE.
3. FURNISH AND INSTALL CONVENIENCE MAINTENANCE RECEPTACLE FOR ROOF TOP UNIT. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
4. FURNISH AND INSTALL NEW CIRCUIT BREAKERS IN EXISTING BRANCH PANEL AS REQUIRED TO SERVE NEW LOADS. NEW CIRCUIT BREAKER TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS.
5. FURNISH AND INSTALL NEW CIRCUIT BREAKERS IN EXISTING DISTRIBUTION EQUIPMENT AS REQUIRED TO SERVE NEW LOADS. NEW CIRCUIT BREAKER TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS.
6. FURNISH AND INSTALL DUCT DETECTORS REMOTE INDICATORS. COORDINATE WITH SCHOOL ADMINISTRATION AND MAINTENANCE FOR ACCESSIBLE LOCATIONS.

NOTE:

WORKING SPACE SHALL BE REQUIRED FOR ALL ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO SWITCHGEARS, PANELBOARDS, VARIABLE FREQUENCY DRIVES, DISCONNECT SWITCHES OR OTHER ENCLOSED EQUIPMENT. ALL INSTALLATIONS SHALL COMPLY WITH ARTICLE 110 OF THE NATIONAL ELECTRICAL CODE. THIS SHALL BE COORDINATED WITH ALL TRADES. RELOCATION OF ANY MATERIALS NOT IN COMPLIANCE WILL BE AT THE CONTRACTOR'S EXPENSE:

1. THE DEPTH OF THE WORKING SPACE SHALL NOT BE LESS THAN THAN 3'-0" BEYOND THE FRONT OF THE ELECTRICAL EQUIPMENT. IT SHALL BE CLEAR, EXTENDING FROM THE FLOOR TO THE HEIGHT OF THE TOP OF THE EQUIPMENT BUT NOT LESS THAN 6'-6". THE WIDTH SHALL BE EQUAL TO THE WIDTH OF THE EQUIPMENT BUT NOT LESS THAN 30".
2. THE SPACE DIRECTLY ABOVE AND BELOW THE EQUIPMENT SHALL BE DEDICATED TO ELECTRICAL SYSTEMS ONLY. THE SPACE SHALL BE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT EXTENDING FROM THE FLOOR TO THE STRUCTURE. NO PIPING, DUCTS OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS AREA.

NOTE:

THE ELECTRICAL CONTRACTOR SHALL INCLUDE ALL LABOR AND MATERIALS IN BID PROPOSAL TO PATCH AND PAINT ECISTING WALLS TO MATCH EXISTING CONDITIONS, WHERE SURFACE/RECESSED ELECTRICAL EQUIPMENT AND RACEWAY SYSTEMS HAVE BEEN REMOVED.

NOTE:

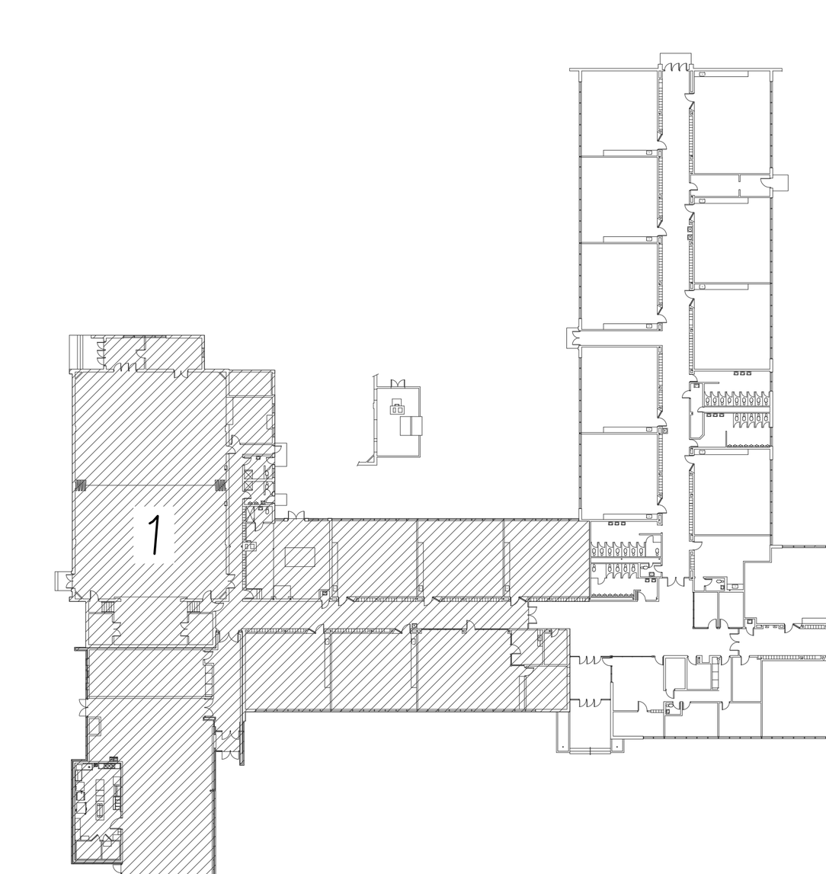
ALL HOME RUN CONDUCTORS SHALL BE MINIMUM #10AWG.

NOTE:

ALL EMERGENCY AND EXIT LUMINAIRES SHALL BE CONNECTED TO AN UNSWITCHED PORTION OF THE LOCAL EMERGENCY LIGHTING CIRCUIT.

NOTE:

1. HANDWRITTEN BRANCH CIRCUIT PANELBOARD SCHEDULES ARE NOT ACCEPTABLE.
2. ALL CIRCUITS IN EXISTING PANELS MODIFIED WITH THE SCOPE OF WORK AND NEW PANELS SHALL HAVE TYPEWRITTEN CIRCUIT DIRECTORIES WITH SPECIFIC INFORMATION ON DEVICE AND ROOM(S) SERVED BY THE CORRESPONDING BREAKER.
3. INCLUDE A PRINTED THERMOGRAPHIC LABEL AT EACH BREAKER SPACE CORRESPONDING TO THE TYPEWRITTEN PANEL SCHEDULE.
4. ALL WIRING DEVICES SHALL HAVE A THERMOGRAPHIC LABEL ON EACH FACE PLATE INDICATING THE PANEL AND CIRCUIT NUMBER THE DEVICE IS SERVED BY.



KEY PLAN

SCALE: NOT TO SCALE

NORTH

DATE: 02/18/2022

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Revisions

No.	Date	
1	03/09/2022	Addendum # 2
2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

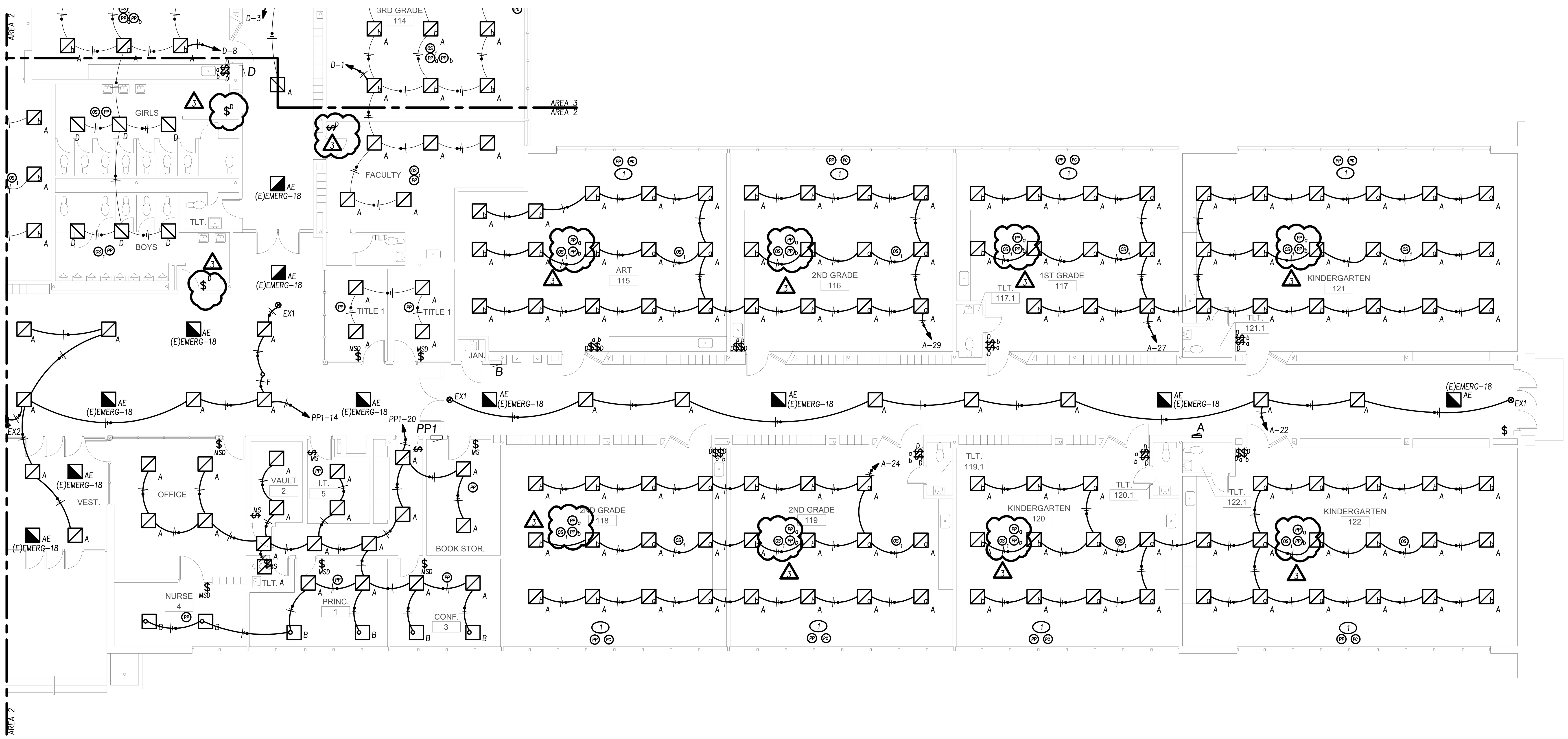
LATHROP ELEMENTARY SCHOOL
2603 CLOVER AVE,
ROCKFORD, ILLINOIS 61102

Sheet Title:
FIRST FLOOR PLAN - ELECTRICAL NEW WORK - AREA 1 POWER & SYSTEMS

Proj. No.:	2248
Date:	02/18/2022
Drawn:	MARB
Approved:	BRK
Sheet No.:	E111PS

KEYED ELECTRICAL NOTES (THIS SHEET):

1. FURNISH AND INSTALL DAYLIGHT HARVESTING DEVICE AND ASSOCIATED POWER PACK TO CONTROL LUMINAIRES NEAREST TO EXTERIOR WINDOWS (TYPICAL ALL CLASSROOMS).



1 FIRST FLOOR PLAN - ELECTRICAL NEW LIGHTING - AREA 2

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

NORTH

NOTE:

WORKING SPACE SHALL BE REQUIRED FOR ALL ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO SWITCHGEARS, PANELBOARDS, VARIABLE FREQUENCY DRIVES, DISCONNECT SWITCHES OR OTHER ENCLOSED EQUIPMENT. ALL INSTALLATIONS SHALL COMPLY WITH ARTICLE 110 OF THE NATIONAL ELECTRICAL CODE. THIS SHALL BE COORDINATED WITH ALL TRADES. RELOCATION OF ANY MATERIALS NOT IN COMPLIANCE WILL BE AT THE CONTRACTOR'S EXPENSE:

1. THE DEPTH OF THE WORKING SPACE SHALL NOT BE LESS THAN THAN 3'-0" BEYOND THE FRONT OF THE ELECTRICAL EQUIPMENT. IT SHALL BE CLEAR, EXTENDING FROM THE FLOOR TO THE HEIGHT OF THE TOP OF THE EQUIPMENT BUT NOT LESS THAN 6'-6". THE WIDTH SHALL BE EQUAL TO THE WIDTH OF THE EQUIPMENT BUT NOT LESS THAN 30".
2. THE SPACE DIRECTLY ABOVE AND BELOW THE EQUIPMENT SHALL BE DEDICATED TO ELECTRICAL SYSTEMS ONLY. THE SPACE SHALL BE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT EXTENDING FROM THE FLOOR TO THE STRUCTURE. NO PIPING, DUCTS OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS AREA.

NOTE:

THE ELECTRICAL CONTRACTOR SHALL INCLUDE ALL LABOR AND MATERIALS IN BID PROPOSAL TO PATCH AND PAINT ECISTING WALLS TO MATCH EXISTING CONDITIONS, WHERE SURFACE/RECESSED ELECTRICAL EQUIPMENT AND RACEWAY SYSTEMS HAVE BEEN REMOVED.

NOTE:

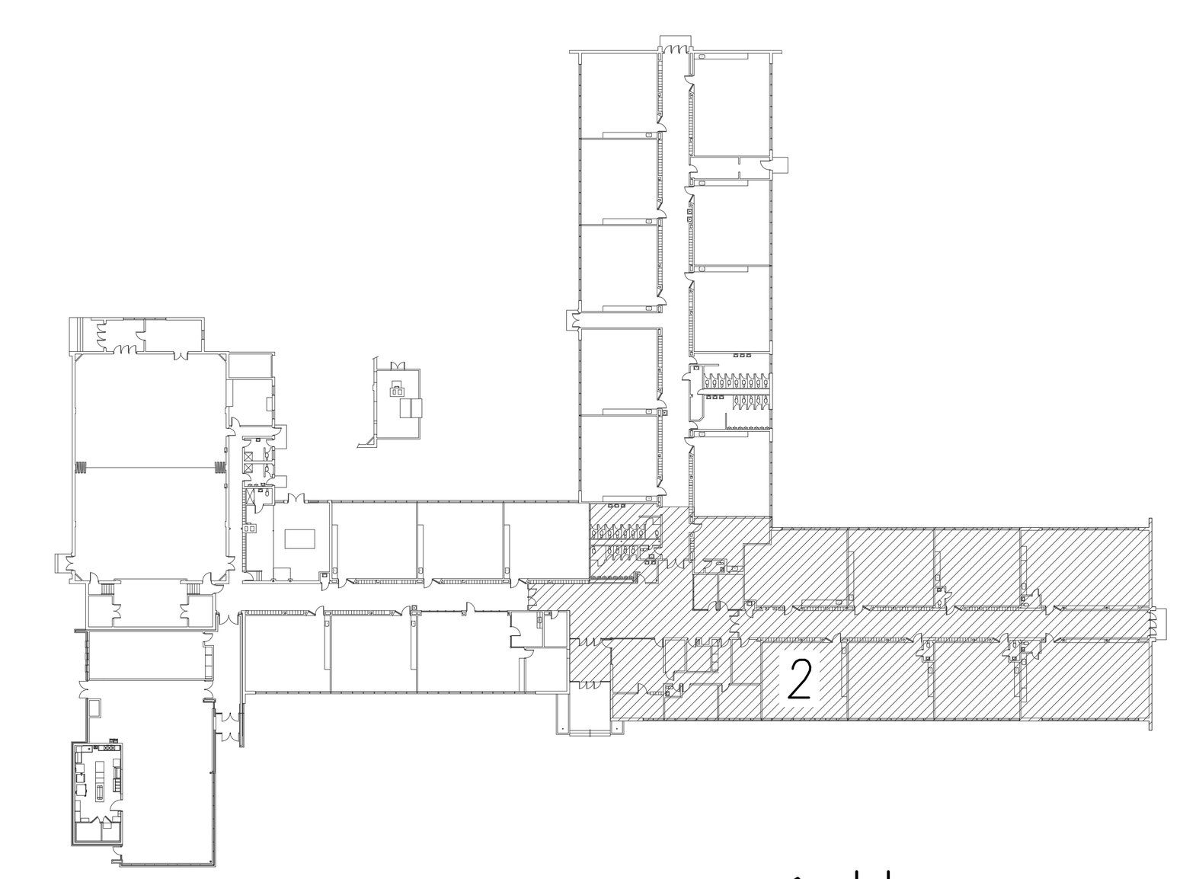
ALL HOME RUN CONDUCTORS SHALL BE MINIMUM #10AWG.

NOTE:

ALL EMERGENCY AND EXIT LUMINAIRES SHALL BE CONNECTED TO AN UNSWITCHED PORTION OF THE LOCAL EMERGENCY LIGHTING CIRCUIT.

NOTE:

1. HANDWRITTEN BRANCH CIRCUIT PANELBOARD SCHEDULES ARE NOT ACCEPTABLE.
2. ALL CIRCUITS IN EXISTING PANELS MODIFIED WITH THE SCOPE OF WORK AND NEW PANELS SHALL HAVE TYPEWRITTEN CIRCUIT DIRECTORIES WITH SPECIFIC INFORMATION ON DEVICE AND ROOM(S) SERVED BY THE CORRESPONDING BREAKER.
3. INCLUDE A PRINTED THERMOGRAPHIC LABEL AT EACH BREAKER SPACE CORRESPONDING TO THE TYPEWRITTEN PANEL SCHEDULE.
4. ALL WIRING DEVICES SHALL HAVE A THERMOGRAPHIC LABEL ON EACH FACE PLATE INDICATING THE PANEL AND CIRCUIT NUMBER THE DEVICE IS SERVED BY.



KEY PLAN

SCALE: NOT TO SCALE

NORTH

LICENSED PROFESSIONAL ENGINEER
BRIAN R. KEITH
062-050306
EXPIRES: 30NOV23
STATE OF ILLINOIS
DATE: 02/18/2022

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No.	Date	Revisions
1	03/09/2022	Addendum # 2
2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

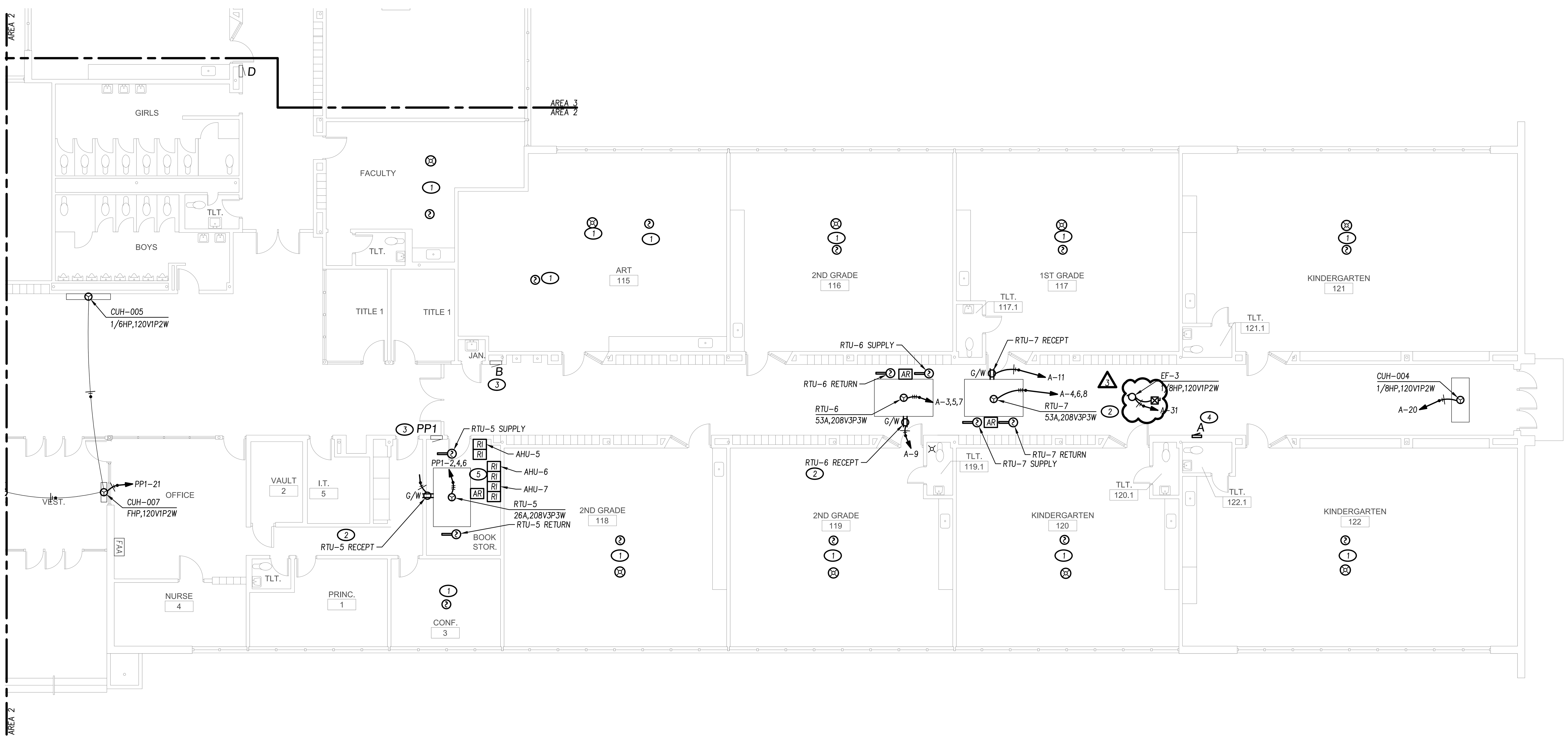
LATHROP ELEMENTARY SCHOOL
2603 CLOVER AVE,
ROCKFORD, ILLINOIS 61102

Sheet Title: FIRST FLOOR PLAN - ELECTRICAL NEW LIGHTING - AREA 2

Proj. No.:	2248
Date:	02/18/2022
Drawn:	MARB
Approved:	BRK
Sheet No.:	E112L

KEYED ELECTRICAL NOTES (THIS SHEET):

1. REINSTALL PREVIOUSLY REMOVED CEILING MOUNTED DEVICE AFTER CEILING WORK IS COMPLETE. CEILING DEVICE SHALL BE LOCATED IN SAME LOCATION AS PREVIOUSLY REMOVED DEVICE.
2. FURNISH AND INSTALL CONVENIENCE MAINTENANCE RECEPTACLE FOR ROOF TOP UNIT. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
3. FURNISH AND INSTALL NEW CIRCUIT BREAKERS IN EXISTING BRANCH PANEL AS REQUIRED TO SERVE NEW LOADS. NEW CIRCUIT BREAKER TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS.
4. FURNISH AND INSTALL NEW BRANCH PANEL IN BLOCK WALL IN LOCATION OF PREVIOUSLY REMOVED PANEL. RECONNECT ALL CIRCUITS TO NEW PANEL TO MATCH EXISTING LOADS. NEW BREAKERS SHALL MATCH EXISTING TYPE AND RATING. REFER TO SHEET E200 FOR FURTHER INFORMATION. INCLUDE TIME IN BID TO REPAIR, PATCH, AND PAINT BLOCK WALL TO MATCH EXISTING. COORDINATE ALL WORK WITH SCHOOL ADMINISTRATION AND MAINTENANCE. WORK MUST BE DONE IN OFF-SHIFT MANNER. OUTAGE MUST NOT EXCEED EIGHT CONSECUTIVE HOURS. INCLUDE TIME IN BID ON PREMIUM BASIS.
5. FURNISH AND INSTALL DUCT DETECTORS REMOTE INDICATORS. COORDINATE WITH SCHOOL ADMINISTRATION AND MAINTENANCE FOR ACCESSIBLE LOCATIONS.



1 FIRST FLOOR PLAN - ELECTRICAL NEW WORK - AREA 2 POWER & SYSTEMS

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

NORTH

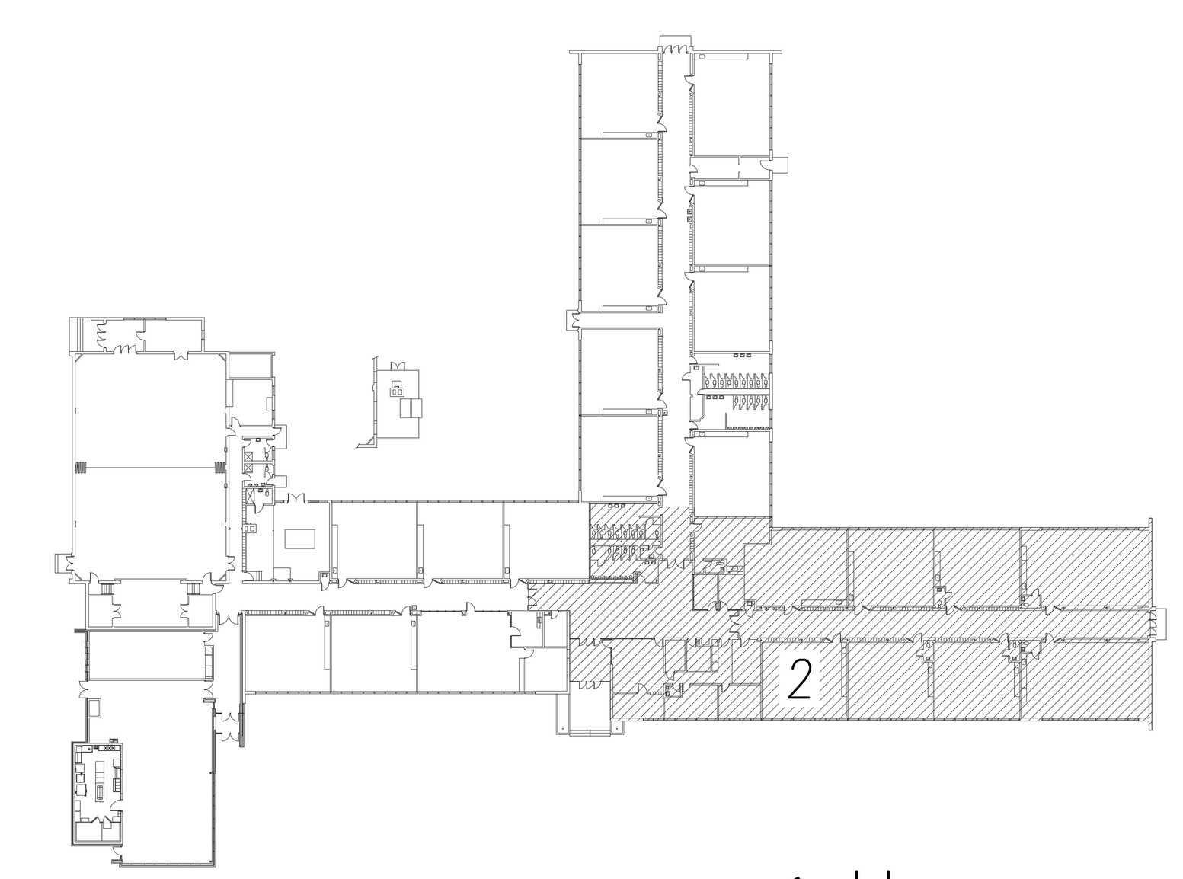
> **NOTE:**
> WORKING SPACE SHALL BE REQUIRED FOR ALL ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO SWITCHGEARS, PANELBOARDS, VARIABLE FREQUENCY DRIVES, DISCONNECT SWITCHES OR OTHER ENCLOSED EQUIPMENT. ALL INSTALLATIONS SHALL COMPLY WITH ARTICLE 110 OF THE NATIONAL ELECTRICAL CODE. THIS SHALL BE COORDINATED WITH ALL TRADES. RELOCATION OF ANY MATERIALS NOT IN COMPLIANCE WILL BE AT THE CONTRACTOR'S EXPENSE:
> 1. THE DEPTH OF THE WORKING SPACE SHALL NOT BE LESS THAN THAN 3'-0" BEYOND THE FRONT OF THE ELECTRICAL EQUIPMENT. IT SHALL BE CLEAR, EXTENDING FROM THE FLOOR TO THE HEIGHT OF THE TOP OF THE EQUIPMENT BUT NOT LESS THAN 6'-6". THE WIDTH SHALL BE EQUAL TO THE WIDTH OF THE EQUIPMENT BUT NOT LESS THAN 30".
> 2. THE SPACE DIRECTLY ABOVE AND BELOW THE EQUIPMENT SHALL BE DEDICATED TO ELECTRICAL SYSTEMS ONLY. THE SPACE SHALL BE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT EXTENDING FROM THE FLOOR TO THE STRUCTURE. NO PIPING, DUCTS OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS AREA.

> **NOTE:**
> THE ELECTRICAL CONTRACTOR SHALL INCLUDE ALL LABOR AND MATERIALS IN BID PROPOSAL TO PATCH AND PAINT ECISTING WALLS TO MATCH EXISTING CONDITIONS, WHERE SURFACE/RECESSED ELECTRICAL EQUIPMENT AND RACEWAY SYSTEMS HAVE BEEN REMOVED.

> **NOTE:**
> ALL HOME RUN CONDUCTORS SHALL BE MINIMUM #10AWG.

> **NOTE:**
> ALL EMERGENCY AND EXIT LUMINAIRES SHALL BE CONNECTED TO AN UNSWITCHED PORTION OF THE LOCAL EMERGENCY LIGHTING CIRCUIT.

> **NOTE:**
> 1. HANDWRITTEN BRANCH CIRCUIT PANELBOARD SCHEDULES ARE NOT ACCEPTABLE.
> 2. ALL CIRCUITS IN EXISTING PANELS MODIFIED WITH THE SCOPE OF WORK AND NEW PANELS SHALL HAVE TYPEWRITTEN CIRCUIT DIRECTORIES WITH SPECIFIC INFORMATION ON DEVICE AND ROOM(S) SERVED BY THE CORRESPONDING BREAKER.
> 3. INCLUDE A PRINTED THERMOGRAPHIC LABEL AT EACH BREAKER SPACE CORRESPONDING TO THE TYPEWRITTEN PANEL SCHEDULE.
> 4. ALL WIRING DEVICES SHALL HAVE A THERMOGRAPHIC LABEL ON EACH FACE PLATE INDICATING THE PANEL AND CIRCUIT NUMBER THE DEVICE IS SERVED BY.



KEY PLAN

SCALE: NOT TO SCALE

NORTH

LICENSED PROFESSIONAL ENGINEER
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062-050306
EXPIRES: 30NOV23
STATE OF ILLINOIS
DATE: 02/18/2022

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2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

LATHROP ELEMENTARY SCHOOL
2603 CLOVER AVE,
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Sheet Title: FIRST FLOOR PLAN - ELECTRICAL NEW WORK - AREA 2 POWER & SYSTEMS

Proj. No.: 2248

Date: 02/18/2022

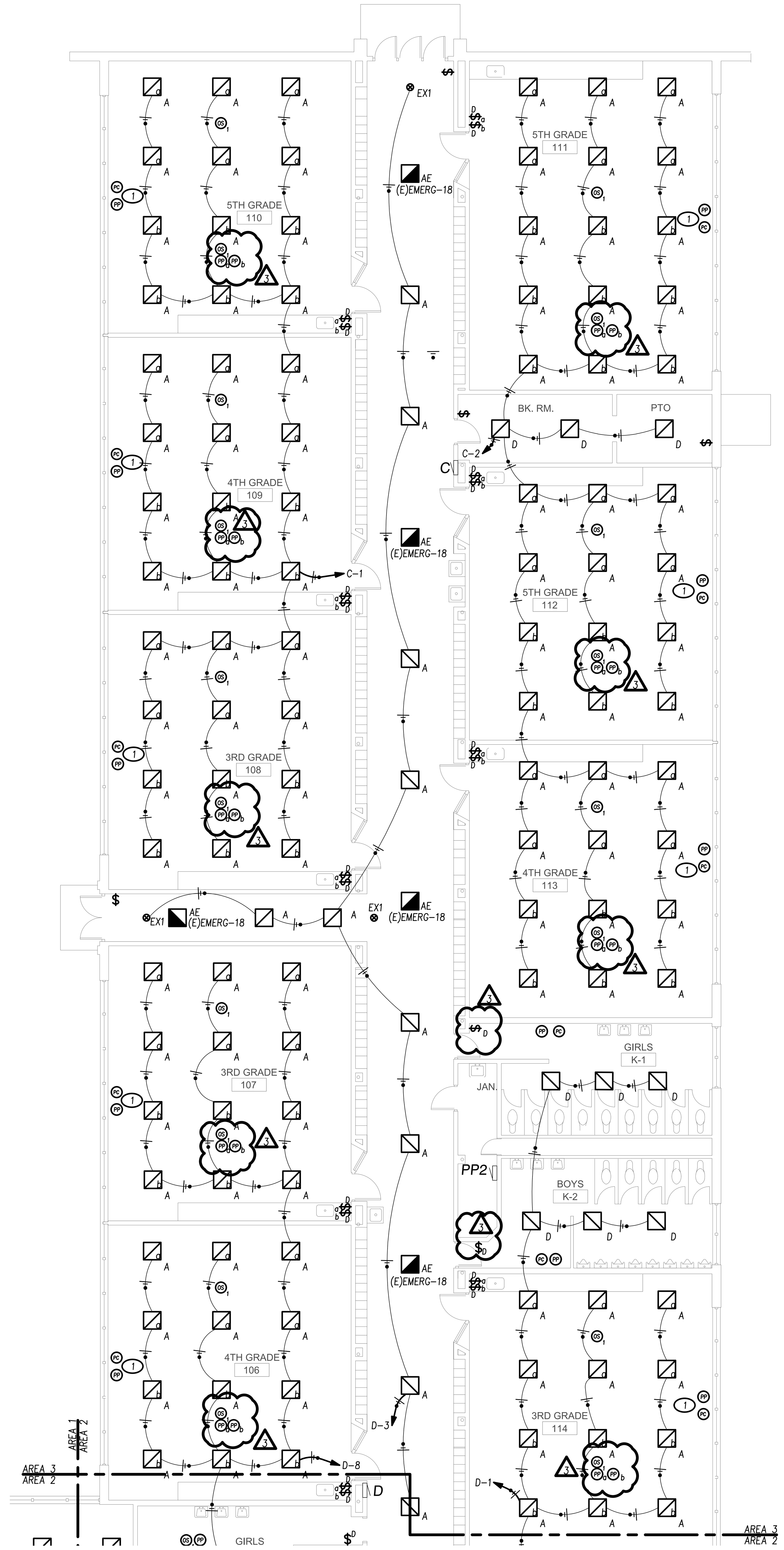
Drawn: MARB

Approved: BRK

Sheet No.: E112PS

KEYED ELECTRICAL NOTES (THIS SHEET):

1. FURNISH AND INSTALL DAYLIGHT HARVESTING DEVICE AND ASSOCIATED POWER PACK TO CONTROL LUMINAIRES NEAREST TO EXTERIOR WINDOWS (TYPICAL ALL CLASSROOMS).



1 FIRST FLOOR PLAN - ELECTRICAL NEW LIGHTING - AREA 3

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

NORTH

NOTE:
WORKING SPACE SHALL BE REQUIRED FOR ALL ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO SWITCHGEARS, PANELBOARDS, VARIABLE FREQUENCY DRIVES, DISCONNECT SWITCHES OR OTHER ENCLOSED EQUIPMENT. ALL INSTALLATIONS SHALL COMPLY WITH ARTICLE 110 OF THE NATIONAL ELECTRICAL CODE. THIS SHALL BE COORDINATED WITH ALL TRADES. RELOCATION OF ANY MATERIALS NOT IN COMPLIANCE WILL BE AT THE CONTRACTOR'S EXPENSE:

1. THE DEPTH OF THE WORKING SPACE SHALL NOT BE LESS THAN THAN 3'-0" BEYOND THE FRONT OF THE ELECTRICAL EQUIPMENT. IT SHALL BE CLEAR, EXTENDING FROM THE FLOOR TO THE HEIGHT OF THE TOP OF THE EQUIPMENT BUT NOT LESS THAN 6'-6". THE WIDTH SHALL BE EQUAL TO THE WIDTH OF THE EQUIPMENT BUT NOT LESS THAN 30".
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NOTE:
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NOTE:
ALL HOME RUN CONDUCTORS SHALL BE MINIMUM #10AWG.

NOTE:
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NOTE:

1. HANDWRITTEN BRANCH CIRCUIT PANELBOARD SCHEDULES ARE NOT ACCEPTABLE.
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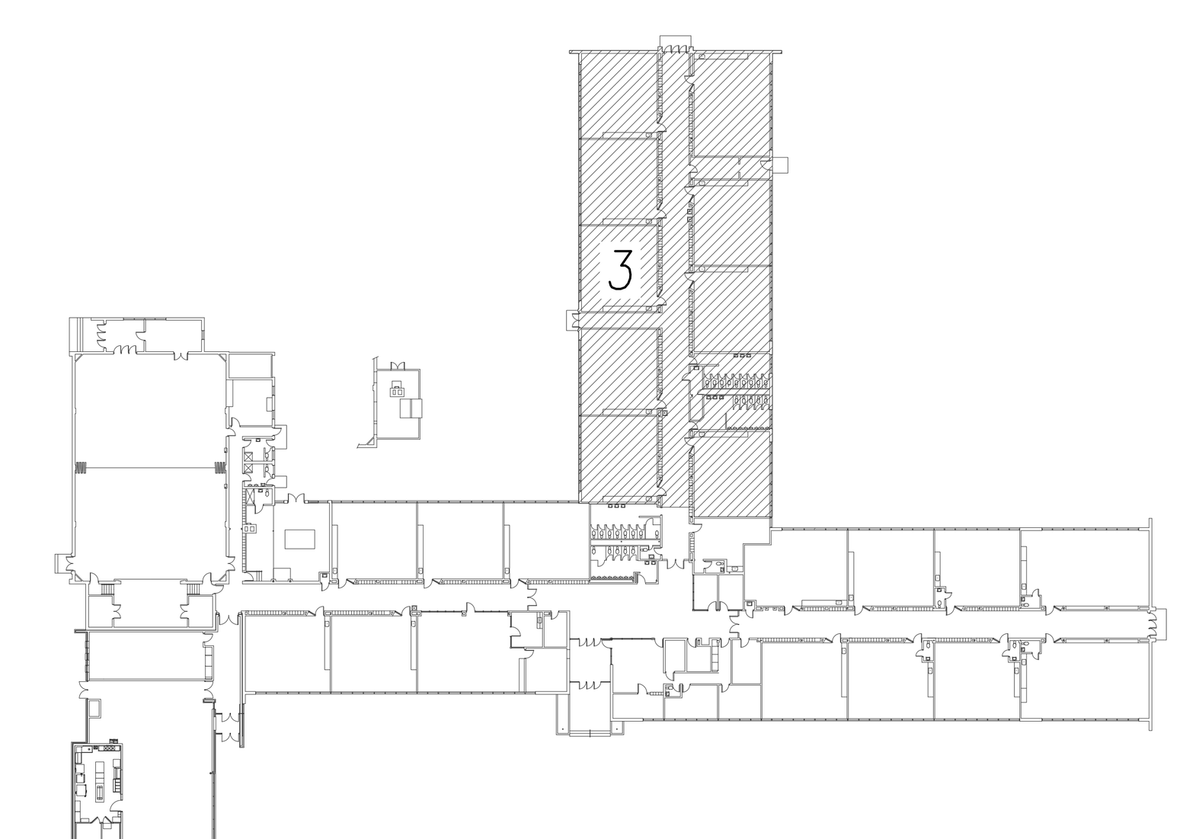
3. INCLUDE A PRINTED THERMOGRAPHIC LABEL AT EACH BREAKER SPACE CORRESPONDING TO THE TYPEWRITTEN PANEL SCHEDULE.
4. ALL WIRING DEVICES SHALL HAVE A THERMOGRAPHIC LABEL ON EACH FACE PLATE INDICATING THE PANEL AND CIRCUIT NUMBER THE DEVICE IS SERVED BY.



KEY PLAN

SCALE: NOT TO SCALE

NORTH

LICENSED PROFESSIONAL ENGINEER
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062-050306
EXPIRES: 30NOV23
STATE OF ILLINOIS

DATE: 02/18/2022

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2	03/15/2022	Addendum # 3
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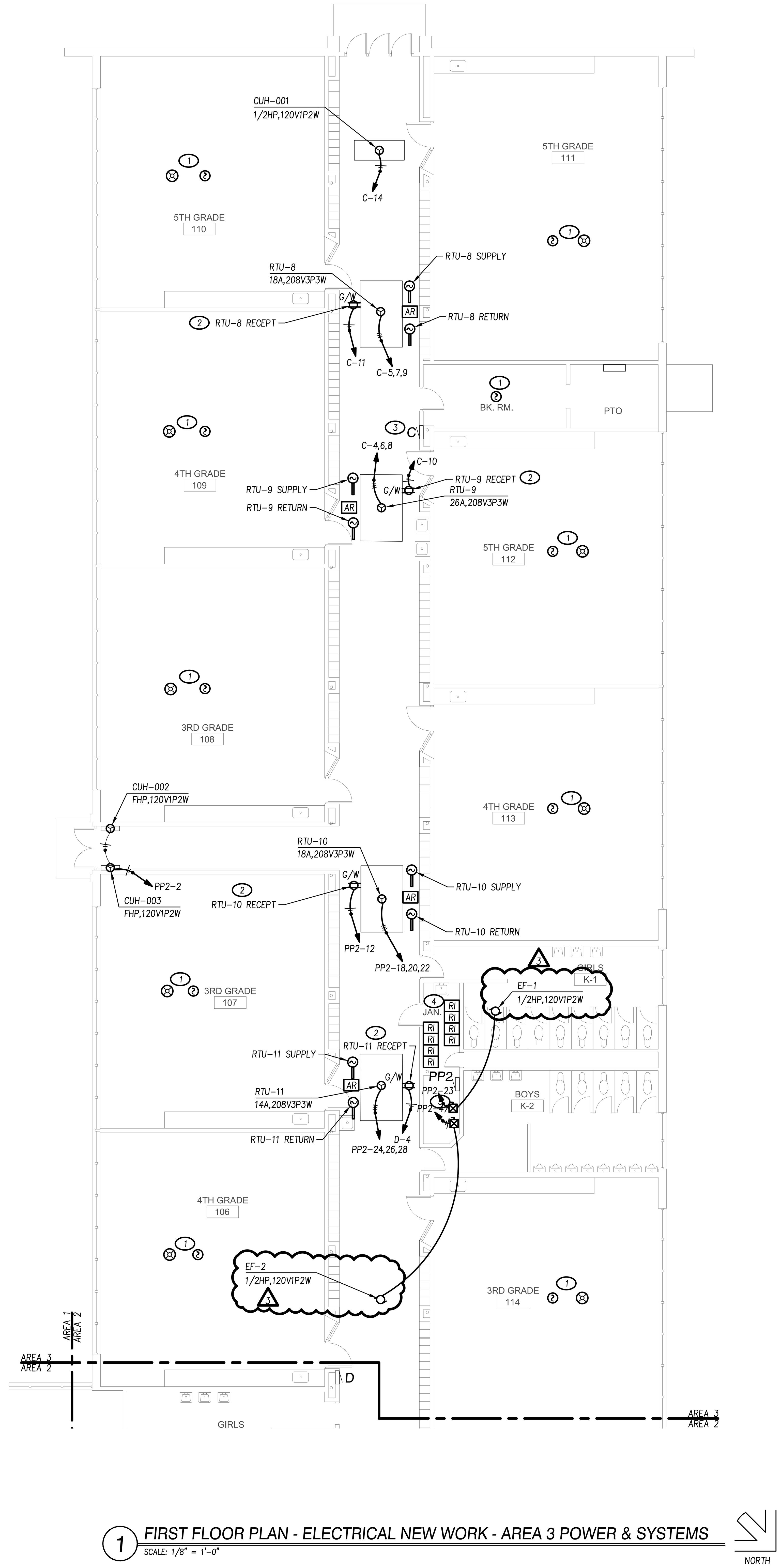
LATHROP ELEMENTARY SCHOOL
2603 CLOVER AVE,
ROCKFORD, ILLINOIS 61102

Sheet Title:
FIRST FLOOR PLAN - ELECTRICAL NEW LIGHTING - AREA 3

Proj. No.:	2248
Date:	02/18/2022
Drawn:	MARB
Approved:	BRK
Sheet No.:	E113L



1 FIRST FLOOR PLAN - ELECTRICAL NEW WORK - AREA 3 POWER & SYSTEMS
SCALE: 1/8" = 1'-0"

KEYED ELECTRICAL NOTES (THIS SHEET):

1. REINSTALL PREVIOUSLY REMOVED CEILING MOUNTED DEVICE AFTER CEILING WORK IS COMPLETE. CEILING DEVICE SHALL BE LOCATED IN SAME LOCATION AS PREVIOUSLY REMOVED DEVICE.
2. FURNISH AND INSTALL CONVENIENCE MAINTENANCE RECEPTACLE FOR ROOF TOP UNIT. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
3. FURNISH AND INSTALL NEW CIRCUIT BREAKERS IN EXISTING BRANCH PANEL AS REQUIRED TO SERVE NEW LOADS. NEW CIRCUIT BREAKER TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS.
4. FURNISH AND INSTALL DUCT DETECTORS REMOTE INDICATORS. COORDINATE WITH SCHOOL ADMINISTRATION AND MAINTENANCE FOR ACCESSIBLE LOCATIONS.

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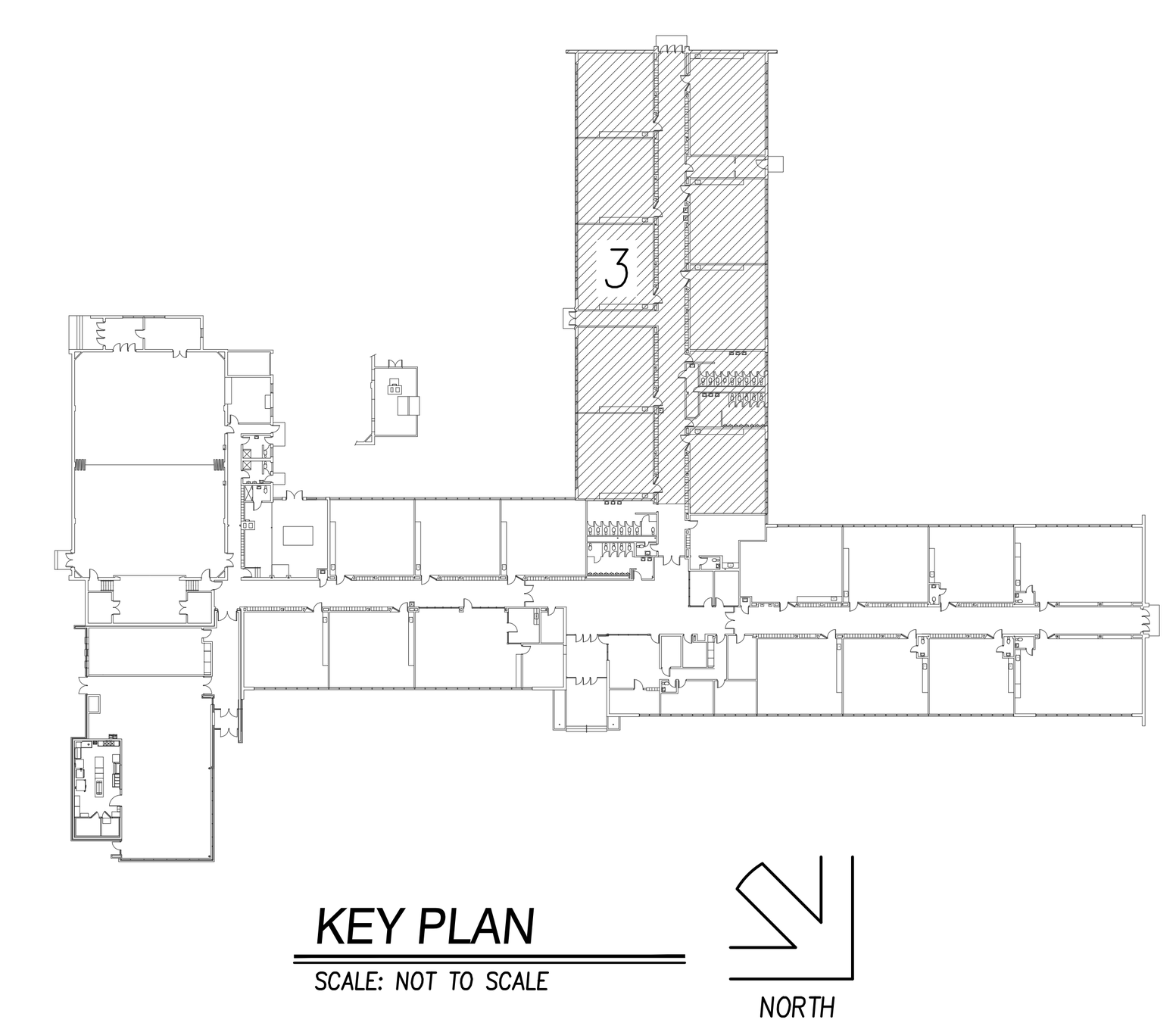
ALL HOME RUN CONDUCTORS SHALL BE MINIMUM #10AWG.

NOTE:
ALL EMERGENCY AND EXIT LUMINAIRES SHALL BE CONNECTED TO AN UNSWITCHED PORTION OF THE LOCAL EMERGENCY LIGHTING CIRCUIT.

NOTE:

1. HANDWRITTEN BRANCH CIRCUIT PANELBOARD SCHEDULES ARE NOT ACCEPTABLE.
2. ALL CIRCUITS IN EXISTING PANELS MODIFIED WITH THE SCOPE OF WORK AND NEW PANELS SHALL HAVE TYPEWRITTEN CIRCUIT DIRECTORIES WITH SPECIFIC INFORMATION ON DEVICE AND ROOM(S) SERVED BY THE CORRESPONDING BREAKER.
3. INCLUDE A PRINTED THERMOGRAPHIC LABEL AT EACH BREAKER SPACE CORRESPONDING TO THE TYPEWRITTEN PANEL SCHEDULE.
4. ALL WIRING DEVICES SHALL HAVE A THERMOGRAPHIC LABEL ON EACH FACE PLATE INDICATING THE PANEL AND CIRCUIT NUMBER THE DEVICE IS SERVED BY.



KEY PLAN
SCALE: NOT TO SCALE

LICENSED PROFESSIONAL ENGINEER
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No.	Date	Revisions
1	03/09/2022	Addendum # 2
2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

LATHROP ELEMENTARY SCHOOL
2603 CLOVER AVE,
ROCKFORD, ILLINOIS 61102

Sheet Title:
FIRST FLOOR PLAN - ELECTRICAL NEW WORK - AREA 3 POWER & SYSTEMS

Proj. No.:	2248
Date:	02/18/2022
Drawn:	MARB
Approved:	BRK
Sheet No.:	E113PS

EXISTING MAIN DISTRIBUTION PANEL FOR REFERENCE

MDP-1

ROOM: BOILER ROOM | VOLTS: 208Y/120V 3P 4W | AIC: 65,000
MOUNTING: FLUSH | BUS AMPS: 2000 | MAIN: MLO
FED FROM: UTILITY | NEUTRAL: 100% | LUGS: STANDARD
NOTE:

CKT #	CIRCUIT DESCRIPTION	KVA LOAD A	KVA LOAD B	KVA LOAD C	BREAKER TRIP/POLES	COND.	FEEDER RACEWAY AND CONDUCTORS
1	PANEL DP1	51.8	46.8	44.6	600/3	CU	(2)3"C,3#300MCM,#300MCM N,#1G
2	L-ROOF TOP UNIT	0	0	0	20/3	CU	–
3	PANEL KP	4.42	4.92	3.67	225/3	CU	2-1/2"C,3#4/0,#4/0N,#4G
4	PANEL CP	4.41	4.05	3.67	225/3	CU	2-1/2"C,3#4/0,#4/0N,#4G
5	PANEL PP1	6.52	6.35	5.62	100/3	CU	1-1/4"C,3#2,#2N,#8G
6	PANEL PP2	4.86	4.66	3.86	100/3	CU	1-1/4"C,3#2,#2N,#8G
7	PANEL PP3	2	2	2.5	100/3	CU	1-1/4"C,3#2,#2N,#8G
8	RTU-1	23.8			250/1	CU	2"C,1#250MCM,#250MCM N,#4G
9	PANEL A	16	16	16.4	225/3	CU	2-1/2"C,3#4/0,#4/0N,#4G
10	SPARE	0	0	0	20/3	CU	
11	SPARE	0	0	0	20/3	CU	
12	SPARE	0	0	0	20/3	CU	
13	SPARE	0	0	0	20/3	CU	
14	SPARE	0	0	0	20/3	CU	
15	SPARE	0	0	0	20/3	CU	
16	SPARE	0	0	0	20/3	CU	
17	SPARE	0	0	0	20/3	CU	
18	SPARE	0	0	0	20/3	CU	
19	SPARE	0	0	0	20/3	CU	
20	SPARE	0	0	0	20/3	CU	
	TOTAL CONNECTED KVA BY PHASE	114	84.9	80.3			

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	25	31.3	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	23.8	29.7	(125%)	HEATING	1.5	0	(100%)
OTHER MOTORS	126	126	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	39	24.5	(50%>10)	KITCHEN EQUIP	5.5	3.58	(65%)
CUSTOM LOAD	57	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	279	218	

BALANCED THREE PHASE AMPS 604

GENERAL SCHEDULE

3

CALLOUT	SYMBOL	VOLTS	AMPS	KVA	HP	CIRCUIT	WIRE CALLOUT	D.S. PROVIDED BY	D.S. INSTALLED BY	STARTER PROVIDED BY	STARTER INSTALLED BY
CUH-001		120V 1P 2W	9.8	1.18	1/2 HP	C-14	3/4"C,1#12,#12N,#12G	MC	MC	MC	MC
CUH-002		120V 1P 2W	0.83	0.1	F HP	PP2-2	3/4"C,1#10,#10N,#10G	MC	MC	MC	MC
CUH-003		120V 1P 2W	0.83	0.1	F HP	PP2-2	3/4"C,1#10,#10N,#10G	MC	MC	MC	MC
CUH-004		120V 1P 2W	3.9	0.47	1/8 HP	A-20	3/4"C,1#12,#12N,#12G	MC	MC	MC	MC
CUH-005		120V 1P 2W	4.4	0.53	1/6 HP	E-9	3/4"C,1#12,#12N,#12G	MC	MC	MC	MC
CUH-005		120V 1P 2W	4.4	0.53	1/6 HP	PP1-21	3/4"C,1#10,#10N,#10G	MC	MC	MC	MC
CUH-006		120V 1P 2W	0.83	0.1	F HP	PP1-21	3/4"C,1#10,#10N,#10G	MC	MC	MC	MC
CUH-007		120V 1P 2W	0.83	0.1	F HP	PP1-21	3/4"C,1#10,#10N,#10G	MC	MC	MC	MC
EF-1		120V 1P 2W	9.8	1.18	1/2 HP	PP2-23	3/4"C,1#10,#10N,#10G	EC	EC	EC	EC
EF-2		120V 1P 2W	9.8	1.18	1/2 HP	PP2-4	3/4"C,1#10,#10N,#10G	EC	EC	EC	EC
EF-3		120V 1P 2W	3.9	0.47	1/8 HP	A-31	3/4"C,1#10,#10N,#10G	EC	EC	EC	EC
EF-4		120V 1P 2W	3.9	0.47	1/8 HP	PP3-20	3/4"C,1#10,#10N,#10G	EC	EC	EC	EC
EF-5		120V 1P 2W	5.8	0.7	1/4 HP	PP3-19	3/4"C,1#10,#10N,#10G	EC	EC	EC	EC
RTU-2		208V 3P 3W	71	25.58		DP1-19,21,23	1-1/4"C,3#2,#8G	MC	MC	MC	MC
RTU-3		208V 3P 3W	40	14.41		E-1,3,5	3/4"C,3#6,#10G	MC	MC	MC	MC
RTU-4		208V 3P 3W	40	14.41		E-2,4,6	3/4"C,3#8,#10G	MC	MC	MC	MC
RTU-5		208V 3P 3W	26	9.37		PP1-2,4,6	3/4"C,3#8,#8G	MC	MC	MC	MC
RTU-6		208V 3P 3W	53	19.09		A-3,5,7	3/4"C,3#6,#8G	MC	MC	MC	MC
RTU-7		208V 3P 3W	53	19.09		A-4,6,8	3/4"C,3#6,#8G	MC	MC	MC	MC
RTU-8		208V 3P 3W	18	6.48		C-5,7,9	3/4"C,3#10,#10G	MC	MC	MC	MC
RTU-9		208V 3P 3W	26	9.37		C-4,6,8	3/4"C,3#8,#8G	MC	MC	MC	MC
RTU-10		208V 3P 3W	18	6.48		PP2-18,20,22	3/4"C,3#10,#10G	MC	MC	MC	MC
RTU-11		208V 3P 3W	14	5.04		PP2-24,26,28	3/4"C,3#10,#10G	MC	MC	MC	MC
RTU-12		208V 3P 3W	14	5.04		MDP-1-8	3/4"C,3#8,#8G	MC	MC	MC	MC
VRF-1		208V 2P 2W	5.77	1.2		PP3-21,23	3/4"C,2#10,#10G	EC	EC	MC	MC
VRF-2		208V 2P 2W	5.77	1.2		PP3-22,24	3/4"C,2#10,#10G	EC	EC	MC	MC

EXISTING BRANCH PANEL FOR REFERENCE

PANEL: EMERG
ROOM: BOILER ROOM | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: SURFACE | BUS AMPS: 100 | MAIN: MLO
FED FROM: DP1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE: | | ISO GND BUS

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.5	BOILER RM LIGHTS & EM GYM	a	2	20/1	0.5	EXIT & FLOUR. EM LIGHTS (N&W)
3	20/1	0.5	GYM OUTSIDE LIGHTS	b	4	20/1	0.5	GYM OUTSIDE LIGHTS
5	20/1	0.5	S. END & GYM EXITS & FLOUR. EM	c	6	20/1	0.5	EXIT & FLOUR EM LIGHTS
7	20/1	0.5	FIRE ALARM	a	8	20/1	0.5	INTERCOM & MASTER CLOCK SYSTEMS
9	20/1	0.5	FIRE DOOR HOLDERS	b	10	20/1	0.5	SECURITY PANEL RECEPT
11	20/2	0.5	C.A.D.	c	12	20/1	0	SPARE
13	|			a	14	20/1	0.5	BATT CHARGE
15	20/1	0.5	CAFE & EM HALL LIGHTS	b	16	–/1	0	SPACE
17	20/1	0	CAFE & HALL EXIT LIGHTS	c	18	–/1	0	SPACE
19	20/1	0.5	TURN AROUND PKGLT. LIGHTS	a	20	–/1	0	SPACE
21	20/1	0.5	CAFE OUTSIDE LIGHTS	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	2.5	3.13	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0	0	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0	0	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	1	1	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	4	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	7.5	4.13	

BALANCED THREE PHASE AMPS 11.4
PHASE BALANCE PERCENT: PHASE A 130% PHASE B 120% PHASE C 50.2%

EXISTING BRANCH PANEL FOR REFERENCE

PANEL: LP1
ROOM: BOILER ROOM | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: SURFACE | BUS AMPS: 100 | MAIN: MLO
FED FROM: DP1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE:

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.5	BOYS & GIRLS LIGHTS	a	2	20/1	0.5	RECEPT HALL
3	20/1	0.5	KITCHEN LIGHTS	b	4	20/1	0.5	KITCHEN RECEPT
5	20/1	0.5	HALL #1	c	6	20/1	0.5	BOILER RM RECEPT
7	20/1	0.5	KITCHEN RECEPT	a	8	20/1	0.5	UNKNOWN LOAD
9	20/1	0.5	KITCHEN RECEPT	b	10	20/1	0.5	KITCHEN EXHAUST FAN
11	20/1	0.5	KITCHEN RECEPT	c	12	20/1	0.5	STORAGE & GARAGE U.H.
13	20/1	0.5	FAN RM LIGHTS	a	14	20/1	0.5	BOILER RM WATER PUMP
15	20/1	0.5	GYM FAN CONTROLS	b	16	20/1	0.5	DOM. HOT WATER PUMP
17	20/1	0.5	URINAL FLUSH VALVE	c	18	20/1	0.5	CONV. PUMP
19	20/1	0.5	BOILER RM LIGHTS	a	20	20/1	0.5	HOT WATER PUMP
21	20/1	0.5	BOILER RM RECEPT	b	22	20/1	0.5	CONV. PUMP
23	20/1	0.5	BOILER RM RECEPT	c	24	20/1	0.5	CORR EX FAN
25	20/1	0.5	CONTACTOR CONTROL OUT. LIGHTS	a	26	20/1	0.5	UNKNOWN LOAD
27	20/1	0.5	BOILER #1	b	28	20/1	0.5	HOT WATER HEATER
29	20/1	0.5	BOILER #2	c	30	20/1	0.5	NEW TELEPHONE
31	20/1	0.5	UNKNOWN LOAD	a	32	20/1	0.5	OUTSIDE LIGHTS
33	20/1	0.5	UNKNOWN LOAD	b	34	20/1	0.5	OUTSIDE LIGHTS
35	–/1	0	SPACE	c	36	20/1	0.5	OUTSIDE LIGHTS
37	–/1	0	SPACE	a	38	20/1	0.5	OUTSIDE LIGHTS
39	–/1	0	SPACE	b	40	20/1	0.5	UNKNOWN LOAD
41	–/1	0	SPACE	c	42	–/1	0	SPACE

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	5	6.25	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0	0	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0	0	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	5.5	5.5	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	8	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	18.5	11.8	

BALANCED THREE PHASE AMPS 32.6
PHASE BALANCE PERCENT: PHASE A 105% PHASE B 105% PHASE C 89.2%

EXISTING BRANCH PANEL FOR REFERENCE

PANEL: KP
ROOM: CAFETERIA | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: FLUSH | BUS AMPS: 225 | MAIN: MLO
FED FROM: MDP-1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE:

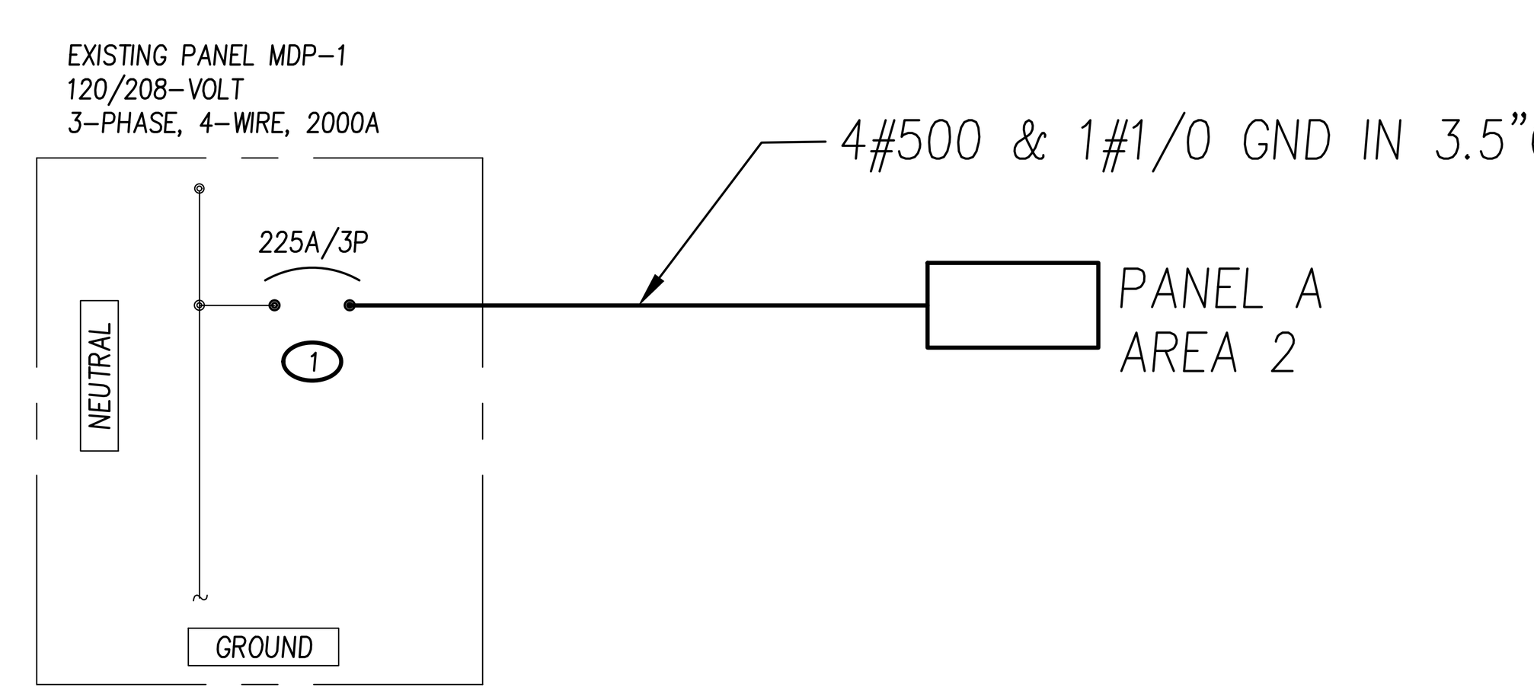
CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	–/1	0	SPACE	a	2	20/2	0.5	FREEZER COMPRESSOR
3	20/1	0.5	CONVECTION OVEN	b	4	|		
5	–/1	0	SPACE	c	6	–/3	0.5	FRIDGE COMPRESSOR
7	20/1	0.5	BRAISING SPACE	a	8	|		
9	20/1	0.5	FIRE SUPPRESSION	b	10	|		
11	20/1	0.5	CONV. RECEPT	c	12	–/1	0	SPACE
13	20/1	0.5	GEN PURPOSE RECEPT	a	14	20/1	0.5	FREEZER HEAT
15	20/1	0.5	GEN PURPOSE RECEPT	b	16	20/1	0.5	UNKNOWN LOAD
17	20/1	0.5	SANDWICH/SALAD UNIT	c	18	20/1	0.5	COOLER/FREEZER LIGHTS/HEAT TAPE
19	20/1	0.5	DISHWASHER FAN	a	20	20/1	0.5	COOLER FAN
21	20/1	0.5	DISPOSER	b	22	20/1	0.5	UNKNOWN LOAD
23	–/1	0	SPACE	c	24	20/1	0.5	UNKNOWN LOAD
25	20/1	0.5	OVEN/STEAMER	a	26	20/1	0.5	UNKNOWN LOAD
27	20/1	0.5	UNKNOWN LOAD	b	28	20/1	0.5	UNKNOWN LOAD
29	20/1	0.5	UNKNOWN LOAD	c	30	20/1	0.5	UNKNOWN LOAD
31	20/3	0.5	EXHAUST FAN HOOD 'EF-1'	a	32	–/1	0	SPACE
33	|			b	34	–/1	0	SPACE
35	|			c	36	–/1	0	SPACE
37	20/3	0.5	BOOSTER HEATER	a	38	20/3	0.5	DISHWASHER
39	|			b	40	|		
41	|			c	42	|		

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	0.5	0.625	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0	0	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0	0	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	2	2	(50%>10)	KITCHEN EQUIP	4.5	2.93	(65%)
CUSTOM LOAD	6	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	13	5.55	

BALANCED THREE PHASE AMPS 15.4
PHASE BALANCE PERCENT: PHASE A 102% PHASE B 113% PHASE C 84.6%

VOLTAGE DROP SCHEDULE

DEVICE	FEEDER VOLTAGE DROP	FEEDER WIRE SIZE	BRANCH CIRCUIT MAX VOLTAGE DROP	BRANCH CIRCUIT WIRE SIZE	TOTAL VOLTAGE DROP
F	0%	#3/0	0.83% (CKT 1)	#10	0.83%
LOAD CENTER	0%	#6	–	–	0%
MDP-1	0%	(5)#600MCM	**4.69% (TAP 8)**	#8	4.69%
A	2.88%	#4/0	1.11% (CKT 3,5,7)	#6	3.98%
CP	0.07%	#4/0	0.35% (CKT 7)	#10	0.41%
DP1	0.44%	(2)#300MCM	0.56% (CKT 19,21,23)	#2	1%
B	0.67%	#3/0	–	–	0.67%
D	2.32%	#2	0.94% (CKT 1)	#10	3.27%
C	**3.78%**	#2	0.92% (CKT 1)	#10	4.69%
E	1.03%	#3/0	0.84% (CKT 9)	#12	1.87%
EM	0.47%	#2	–	–	0.47%
LP1	0.5%	#2	–	–	0.5%
KP	0.13%	#4/0	–	–	0.13%
PP1	1.88%	#2	0.91% (CKT 21)	#10	2.79%
PP2	2.11%	#2	0.78% (CKT 4)	#10	2.9%
PP3	0.07%	#2	1.05% (CKT 19)	#10	1.12%
MSW	0%	#6	–	–	0%



1 PARTIAL ONE-LINE DIAGRAM
SCALE: N.T.S.

KEYED ELECTRICAL NOTES (THIS SHEET):

(1) FURNISH AND INSTALL NEW CIRCUIT BREAKER IN EXISTING DISTRIBUTION EQUIPMENT. NEW BREAKER TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS.

LICENSED PROFESSIONAL ENGINEER
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062-050306
EXPIRES: 30NOV23
STATE OF ILLINOIS
DATE: 02/18/2022

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Revisions

No.	Date	Revisions
1	03/09/2022	Addendum # 2
2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

LATHROP ELEMENTARY SCHOOL
2603 CLOVER AVE,
ROCKFORD, ILLINOIS 61102

Sheet Title:
ELECTRICAL PANEL SCHEDULES & ONE-LINE DIAGRAM

Proj. No.: 2248
Date: 02/18/2022
Drawn: MARB
Approved: BRK
Sheet No.: E200

NEW BRANCH PANEL TO REMAIN

PANEL: A
ROOM: NW CORRIDOR – NORTH | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: FLUSH | BUS AMPS: 225 | MAIN: MLO
FED FROM: MDP–1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE: CHICAGO SWITCHBOARD

	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION	
ML	1	20/1	0	RM 120 & 122	a	2	20/1	0	RM 117 & 121	ML
NB	3	80/3	19.1	RTU–6	b	4	80/3	19.1	RTU–7	NB
	5	|			c	6	|			
	7	|			a	8	|			
ML	9	20/1	0.2	RTU–6 RECEPTACLE	b	10	20/1	0.5	RECEP ROOM 20 & KIND #2	
ML	11	20/1	0.2	RTU–7 RECEPTACLE	c	12	20/1	0.5	UNKNOWN LOAD	
	13	20/1	0.5	CORRIDOR RECEPTACLES	a	14	20/1	0.5	CEILING HEATER	
	15	20/1	0.5	ROOM#17 KIND #1 RECEPTACLES	b	16	20/1	0.5	UNKNOWN LOAD	
	17	20/1	0.5	UNKNOWN LOAD	c	18	20/1	0.5	UNKNOWN LOAD	
	19	20/1	0.5	UNKNOWN LOAD	a	20	20/1	0.668	CUH–001, CUH–003	NL
	21	20/2	0.5	UNKNOWN LOAD	b	22	20/1	0.25	CORRIDOR LIGHTING	NL
	23	|			c	24	20/1	0.725	RM 116 & 119 LIGHTING	NL
NL	25	20/1	0.91	RM 120 &122 LIGHTING	a	26	100/3	0.5	UNKNOWN LOAD	
NL	27	20/1	0.94	RM 117 & 121 LIGHTING	b	28	|			
NL	29	20/1	0.81	RM 115 & 116 LIGHTING	c	30	|			
	31	20/1	0	SPARE	a	32	20/1	0	SPARE	
	33	20/1	0	SPARE	b	34	20/1	0	SPARE	
	35	20/1	0	SPARE	c	36	20/1	0	SPARE	
	37	20/1	0	SPARE	a	38	20/1	0	SPARE	
	39	20/1	0	SPARE	b	40	20/1	0	SPARE	
	41	20/1	0	SPARE	c	42	20/1	0	SPARE	

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	3.64	4.54	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	19.1	23.9	(125%)	HEATING	0.5	0.5	(100%)
OTHER MOTORS	19.8	19.8	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	1.9	1.9	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	3.5	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	48.4	50.6	
				BALANCED THREE PHASE AMPS	140		

PHASE BALANCE PERCENT: PHASE A 99% PHASE B 99.4% PHASE C 102%

ML = MODIFIED CIRCUIT LOAD
NL = NEW CIRCUIT LOAD
NB = FURNISH AND INSTALL NEW CIRCUIT BREAKER. TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS

EXISTING BRANCH PANEL TO REMAIN

PANEL: B
ROOM: NW CORRIDOR – SOUTH | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: FLUSH | BUS AMPS: 200 | MAIN: MLO
FED FROM: DP1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE: CHICAGO SWITCHBOARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.5	UNKNOWN LOAD	a	2	20/1	0.5	UNKNOWN LOAD
3	20/1	0.5	UNKNOWN LOAD	b	4	20/1	0.5	UNKNOWN LOAD
5	20/1	0.5	UNKNOWN LOAD	c	6	20/1	0.5	UNKNOWN LOAD
7	20/1	0.5	UNKNOWN LOAD	a	8	20/1	0.5	UNKNOWN LOAD
9	20/1	0.5	UNKNOWN LOAD	b	10	20/1	0.5	UNKNOWN LOAD
11	20/1	0.5	UNKNOWN LOAD	c	12	20/1	0.5	UNKNOWN LOAD
13	20/1	0.5	UNKNOWN LOAD	a	14	20/1	0.5	UNKNOWN LOAD
15	20/1	0.5	UNKNOWN LOAD	b	16	20/1	0.5	UNKNOWN LOAD
17	20/1	0.5	UNKNOWN LOAD	c	18	20/1	0.5	UNKNOWN LOAD
19	20/1	0.5	UNKNOWN LOAD	a	20	20/1	0.5	UNKNOWN LOAD
21	20/1	0.5	RM 16 RECPT	b	22	20/1	0.5	UNKNOWN LOAD
23	20/1	0	SPARE	c	24	20/1	0.5	KITCHEN RECEPT
25	20/1	0.5	LIGHTS ENTRY WAY	a	26	20/1	0.5	BARBER–COLMAN
27	20/1	0.5	OFFICE AIR UNITS	b	28	20/1	0.5	COPIER
29	20/1	0.5	CORR & TOILET EXH	c	30	20/1	0.5	SERVER ROOM
31	20/1	0.5	SIGN	a	32	20/3	0.5	UNKNOWN LOAD
33	50/2	0.5	STOVE	b	34	|		
35	|			c	36	|		
37	100/3	0	SPARE	a	38	20/3	0.5	#25 ENTRANCE
39	|			b	40	|		
41	|			c	42	|		

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	2	2.5	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0.5	0.125	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0	0	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	2	2	(50%>10)	KITCHEN EQUIP	0.5	0.5	(100%)
CUSTOM LOAD	11.5	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	16.5	5.63	
				BALANCED THREE PHASE AMPS	15.6		

PHASE BALANCE PERCENT: PHASE A 106% PHASE B 102% PHASE C 92.4%

EXISTING BRANCH PANEL TO REMAIN

PANEL: C
ROOM: W CORRIDOR – WEST | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: FLUSH | BUS AMPS: 100 | MAIN: 100
FED FROM: D | NEUTRAL: 100% | LUGS: STANDARD
NOTE: CHICAGO SWITCHBOARD

	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION	
ML	1	20/1	1.08	RM 108, 109, & 110 LIGHTING	a	2	20/1	1.26	RM 111, 112, & 113 LIGHTING	ML
ML	3	20/1	0	SPARE	b	4	40/3	9.37	RTU–9	NB
NB	5	25/3	6.48	RTU–8	c	6	|			
	7	|			a	8	|			
	9	|			b	10	20/1	0.2	RTU–9 RECEPTACLE	NL
ML	11	20/1	0.2	RTU–8 RECEPTACLE	c	12	20/1	0.5	RECEPT RM 11	
	13	20/1	0.5	RECEPT RM 12&13	a	14	20/1	0.668	CUH–001, CUH–002, CUH–004	NL
	15	20/1	0.5	RECEPT RM 9&10	b	16	20/1	0	SPARE	
	17	20/1	0.5	CORR RECEPT	c	18	20/1	0.5	UNKNOWN LOAD	
	19	20/1	0.5	B & G PUMP IN STORAGE RM	a	20	20/1	0	SPARE	
	21	20/1	0	SPARE	b	22	–/1	0	SPACE	
	23	20/1	0	SPARE	c	24	–/1	0	SPACE	
	25	–/1	0	SPACE	a	26	100/3	0	MAIN	
	27	–/1	0	SPACE	b	28	|			
	29	–/1	0	SPACE	c	30	|			

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	2.34	2.93	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	9.37	11.7	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	7.15	7.15	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	2.4	2.4	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	1	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	22.3	24.2	
				BALANCED THREE PHASE AMPS	67.1		

PHASE BALANCE PERCENT: PHASE A 125% PHASE B 80.6% PHASE C 94.1%

ML = MODIFIED CIRCUIT LOAD
NL = NEW CIRCUIT LOAD
NB = FURNISH AND INSTALL NEW CIRCUIT BREAKER. TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS

EXISTING BRANCH PANEL TO REMAIN

PANEL: CP
ROOM: SE CORRIDOR | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: FLUSH | BUS AMPS: 225 | MAIN: MLO
FED FROM: MDP–1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE: SQUARE D

	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION	
	1	20/1	0.5	RECEPT CASHIER	a	2	20/1	0.5	RECEPT GEN PURPOSE	
	3	20/1	0.5	ELEC WATER COOLER	b	4	20/1	0.5	UNKNOWN LOAD	
	5	20/1	0.5	LOCAL SOUND SYSTEM	c	6	20/1	0.5	RECEPT RESOURCE RM	
ML	7	20/1	0.24	KITCHEN LIGHTING	a	8	20/1	0.5	RECEPT RESOURCE RM	
ML	9	20/1	0.384	CORRIDOR LIGHTING	b	10	20/1	0.5	RECEPT RESOURCE RM	
	11	20/1	0.5	RECEPT CAFETERIA	c	12	20/1	0.5	UNKNOWN LOAD	
	13	20/1	0.5	RECEPT CAFETERIA	a	14	20/3	0.5	CONDENSING UNIT	
	15	20/1	0.5	RECEPT CAFETERIA	b	16	|			
	17	20/1	0.5	DWH–1, DWP–1	c	18	|			
	19	20/1	0.5	UNKNOWN LOAD	a	20	20/1	0.5	LIGHTS CAFETERIA	
	21	20/1	0.5	UNKNOWN LOAD	b	22	20/1	0.5	LIGHTS CAFETERIA	
	23	20/1	0.5	UNKNOWN LOAD	c	24	20/1	0	LIGHTS CAFE KITCHEN	
	25	20/1	0.5	UNKNOWN LOAD	a	26	20/1	0	SPARE	
	27	20/1	0.5	UNKNOWN LOAD	b	28	20/1	0	SPARE	
	29	20/1	0.5	UNKNOWN LOAD	c	30	20/2	0	SPARE	ML
	31	20/1	0.5	UNKNOWN LOAD	a	32	|			
	33	–/1	0	SPACE	b	34	–/1	0	SPACE	
	35	–/1	0	SPACE	c	36	–/1	0	SPACE	
	37	–/1	0	SPACE	a	38	–/1	0	SPACE	
	39	–/1	0	SPACE	b	40	–/1	0	SPACE	
	41	–/1	0	SPACE	c	42	–/1	0	SPACE	

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	1.62	2.03	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0	0	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0	0	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	4.5	4.5	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	6	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	12.1	6.53	
				BALANCED THREE PHASE AMPS	18.1		

PHASE BALANCE PERCENT: PHASE A 109% PHASE B 100% PHASE C 90.7%

EXISTING BRANCH PANEL TO REMAIN

PANEL: D
ROOM: W CORRIDOR – EAST | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: FLUSH | BUS AMPS: 100 | MAIN: 100
FED FROM: DP1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE: CHICAGO SWITCHBOARD

	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION	
ML	1	20/1	1.21	FACULTY, BATHROOMS, & RM 114 LIGHTING	a	2	20/1	0.5	COPIER LOUNGE	
ML	3	20/1	0.34	CORRIDOR LIGHTING	b	4	20/1	0.2	RTU–11 RECEPTACLE	ML
ML	5	20/1	0	SPARE	c	6	20/1	0.5	RECEPT RM 6, 7	
	7	20/1	0.5	UNKNOWN LOAD	a	8	20/1	1.17	BATHROOMS, RM 106 & 107 LIGHTING	ML
ML	9	20/1	0	SPARE	b	10	20/3	0	SPARE	NB
	11	20/1	0.5	RECEPT RM 14	c	12	|			
ML	13	20/1	0	SPARE	a	14	|			
	15	20/1	0.5	RECEPT FACULTY	b	16	20/1	0.5	CORR & RESTROOM EXHAUST	
ML	17	20/1	0	SPARE	c	18	20/1	0.5	EF–8 FACULTY	
	19	20/1	0.5	CARBER COLMAN	a	20	20/1	0.5	DRINKING FOUNTAIN	
	21	20/1	0.5	UNKNOWN LOAD	b	22	20/1	0.5	LOUNGE COPIER	
	23	20/1	0.5	UNKNOWN LOAD	c	24	20/1	0.5	LAMINATER LOUNGE	
	25	100/3	22.3	PANEL C	a	26	100/3	0	MAIN	
	27	|			b	28	|			
	29	|			c	30	|			

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	5.05	6.32	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	9.37	11.7	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	7.15	7.15	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	5.6	5.6	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	4.5	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	31.7	30.8	
				BALANCED THREE PHASE AMPS	85.4		

PHASE BALANCE PERCENT: PHASE A 129% PHASE B 80.7% PHASE C 89.8%

ML = MODIFIED CIRCUIT LOAD
NB = FURNISH AND INSTALL NEW CIRCUIT BREAKER. TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS

EXISTING BRANCH PANEL TO REMAIN

PANEL: E
ROOM: CENTRAL CORRIDOR | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: FLUSH | BUS AMPS: 200 | MAIN: 200
FED FROM: DP1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE: CHICAGO SWITCHBOARD

	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION	
NB	1	60/3	14.4	RTU–3	a	2	60/3	14.4	RTU–4	NB
	3	|			b	4	|			
	5	|			c	6	|			
ML	7	20/1	0.2	RTU–3 RECEPTACLE	a	8	20/1	0.2	RTU–4 RECEPTACLE	ML
ML	9	20/1	0.528	CUH–005	b	10	20/1	0.5	RECEPT RM 1	
ML	11	20/1	1.08	RM 101, 102, 103 LIGHTING	c	12	20/1	0.5	RECEPT ROOM 2–3	
	13	20/1	0.5	ROOMS 1, 2, 3 CONVECTOR	a	14	20/1	0.5	RECEPT LIBRARY	
	15	20/1	0.5	UNKNOWN LOAD	b	16	20/1	0.72	RM 104 & 105 LIGHTING	ML
	17	20/1	0.5	RECEPT ROOM 4 & 5	c	18	20/1	0.72	LIBRARY/WORK ROOM LIGHTING	ML
	19	20/1	0.5	CORRIDOR	a	20	20/1	0.2	RTU–2 RECEPTACLE	ML
	21	20/1	0.5	STORAGE & WORK ROOM	b	22	20/1	0.5	HEATER – WEST	
	23	20/1	0.5	CONF ROOM RECEPT	c	24	20/1	0.5	DRINKING FOUNTAIN	
	25	20/1	0.5	CORRIDOR EXHAUST	a	26	20/1	0.5	UNKNOWN LOAD	
	27	20/1	0.5	HEATER – EAST	b	28	20/3	0.5	UNKNOWN LOAD	
	29	–/1	0	SPACE	c	30	|			
	31	–/1	0	SPACE	a	32	|			
	33	–/1	0	SPACE	b	34	100/3	0	MAIN	
	35	–/1	0	SPACE	c	36	|			
	37	–/1	0	SPACE	a	38	|			

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	3.52	4.4	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	14.4	18	(125%)	HEATING	1	1	(100%)
OTHER MOTORS	14.9	14.9	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	3.6	3.6	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	2.5	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	40	42	
				BALANCED THREE PHASE AMPS	116		

PHASE BALANCE PERCENT: PHASE A 96.6% PHASE B 101% PHASE C 102%

ML = MODIFIED CIRCUIT LOAD
NB = FURNISH AND INSTALL NEW CIRCUIT BREAKER. TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS

EXISTING BRANCH PANEL TO REMAIN

PANEL: F
ROOM: STAGE | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: FLUSH | BUS AMPS: 200 | MAIN: 200
FED FROM: UTILITY | NEUTRAL: 100% | LUGS: STANDARD
NOTE: CHICAGO SWITCHBOARD

	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION	
ML	1	20/1	0.608	GYM LIGHTING	a	2	20/1	0.552	LOUNGE LIGHTING	ML
ML	3	20/1	0	SPARE	b	4	20/1	0	SPARE	ML
ML	5	20/1	0	SPARE	c	6	20/1	0	SPARE	ML
ML	7	20/1	0	SPARE	a	8	20/1	0	SPARE	ML
ML	9	20/1	0	SPARE	b	10	20/1	0	SPARE	ML
ML	11	20/1	0	SPARE	c	12	20/1	0	SPARE	ML
	13	20/1	0	STAGE	a	14	20/1	0.5	EAST WALL RECEPT	
	15	20/1	0	STAGE	b	16	20/1	0.5	WEST WALL RECEPT	
	17	20/1	0.5	STAGE STORAGE	c	18	20/1	0	SPARE	ML
	19	20/1	0.5	STAGE FRONT RECEPT	a	20	20/1	0.5	STAGE AMP RECEPT	
	21	20/1	0.5	WEST WALL RECEPT	b	22	20/1	0.5	RED BORDER	
	23	20/1	0.5	STAGE RECEPT	c	24	20/1	0.5	WHITE BORDER	
	25	20/1	0.5	UNKNOWN LOAD	a	26	20/1	0.5	BLUE BORDER	
	27	20/1	0.5	UNKNOWN LOAD	b	28	20/1	0.5	UNKNOWN LOAD	
	29	20/1	0.5	UNKNOWN LOAD	c	30	20/1	0.5	UNKNOWN LOAD	
	31	20/1	0.5	UNKNOWN LOAD	a	32	20/1	0.5	UNKNOWN LOAD	
	33	20/1	0.5	UNKNOWN LOAD	b	34	20/1	0.5	UNKNOWN LOAD	
	35	20/1	0.5	UNKNOWN LOAD	c	36	20/1	0.5	UNKNOWN LOAD	
	37	30/3	0.5	FRONT CONTACTOR	a	38	30/3	0.5	REAR CONTACTOR	
	39	|			b	40	|			
	41	|			c	42	|			

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	3.16	3.95	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0	0	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0	0	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	3	3	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	6.5	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	12.7	6.95	
				BALANCED THREE PHASE AMPS	19.3		

PHASE BALANCE PERCENT: PHASE A 118% PHASE B 90.8% PHASE C 90.8%

ML = MODIFIED CIRCUIT LOAD

EXISTING BRANCH PANEL TO REMAIN

PANEL: LOAD CENTER
ROOM: BOILER ROOM | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: SURFACE | BUS AMPS: 60 | MAIN: MLO
FED FROM: UTILITY | NEUTRAL: 100% | LUGS: STANDARD
NOTE: SQUARE D

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	40/3	0.5	KILN	a	2	20/1	0.5	KILN VENT
3	|			b	4	20/1	0.5	JACE/JCI PANELS
5	|			c	6	60/3	0	SPARE
7	20/1	0.5	GEN. EXHAUST FAN	a	8	|		
9	–/1	0	SPACE	b	10	|		
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	0	0	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	0	0	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0	0	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	0	0	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	2	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	2	0	
				BALANCED THREE PHASE AMPS	0		

PHASE BALANCE PERCENT: PHASE A 175% PHASE B 100% PHASE C 25%

EXISTING BRANCH PANEL TO REMAIN

PANEL: PP1
ROOM: BOOK STORAGE RM | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: SURFACE | BUS AMPS: 100 | MAIN: MLO
FED FROM: MDP–1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE: EATON

	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION	
	1	20/1	0.5	RECEPT KINDERGARTEN #1	a	2	40/3	9.37	RTU–5	NB
	3	20/1	0.5	RECEPT CLASSROOM #17	b	4	|			
	5	20/1	0.5	RECEPT CLASSROOM #16	c	6	|			
	7	20/1	0.5	RECEPT CLASSROOM #15	a	8	20/1	0.2	RTU–5 RECEPTACLE	ML
	9	20/1	0.5	RECEPT CLASSROOM #2	b	10	20/1	0.5	FCU–1	
	11	20/1	0.5	RECEPT CLASSROOM #20	c	12	20/1	0.5	JCI	
	13	20/1	0.5	RECEPT CLASSROOM #19	a	14	20/1	0.388	ENTRY/OFFICE CORRIDOR LIGHTING	
	15	20/1	0.5	RECEPT CLASSROOM #18	b	16	20/1	0.5	UNKNOWN LOAD	
	17	20/1	0.5	COPIER OFFICE	c	18	20/1	0.5	UNKNOWN LOAD	
	19	20/1	0.5	COPIER OFFICE	a	20	20/1	0.814	OFFICE LIGHTING	NL
NL	21	20/1	0.728	CUH–002, CUH–005	b	22	20/1	0	SPARE	
	23	20/1	0	SPARE	c	24	20/1	0	SPARE	
	25	–/1	0	SPACE	a	26	–/1	0	SPACE	
	27	–/1	0	SPACE	b	28	–/1	0	SPACE	
	29	–/1	0	SPACE	c	30	–/1	0	SPACE	

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	1.2	1.5	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	9.37	11.7	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	0.728	0.728	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	5.2	5.2	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	1.5	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	18.5	19.6	
				BALANCED THREE PHASE AMPS	54.5		

PHASE BALANCE PERCENT: PHASE A 106% PHASE B 103% PHASE C 91.2%

ML = MODIFIED CIRCUIT LOAD
NL = NEW CIRCUIT LOAD
NB = FURNISH AND INSTALL NEW CIRCUIT BREAKER. TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS

EXISTING BRANCH PANEL TO REMAIN

PANEL: PP2
ROOM: JAN. CLOSET – W CORR | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: SURFACE | BUS AMPS: 100 | MAIN: MLO
FED FROM: MDP–1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE: EATON

	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION	
	1	20/1	0.5	RECEPT CLASSROOM #	a	2	15/1	0.2	CUH–006	ML
	3	20/1	0.5	RECEPT CLASSROOM #	b	4	20/1	0	SPARE	ML
	5	20/1	0.5	RECEPT CLASSROOM #	c	6	20/1	0	SPARE	ML
	7	20/1	0.5	RECEPT CLASSROOM #7	a	8	20/1	0	SPARE	ML
	9	20/1	0.5	RECEPT CLASSROOM #6	b	10	15/1	0	SPARE	ML
	11	20/1	0.5	RECEPT CLASSROOM #14	c	12	15/1	0.2	RTU–10 RECEPTACLE	ML
	13	20/1	0.5	RECEPT CLASSROOM #12	a	14	20/1	0.5	FCU–2	
	15	20/1	0.5	RECEPT CLASSROOM #13	b	16	20/1	0.5	WASHER	
	17	20/1	0.5	RECEPT CLASSROOM #11	c	18	25/3	6.48	RTU–10	NB
	19	20/1	0.5	JCI	a	20	|			
	21	20/1	0.5	UNKNOWN LOAD	b	22	|			
	23	–/1	0	SPACE	c	24	20/3	5.04	RTU–11	
	25	–/1	0	SPACE	a	26	|		SPACE	
	27	–/1	0	SPACE	b	28	|		SPACE	
	29	–/1	0	SPACE	c	30	–/1	0	SPACE	

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	0	0	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	6.48	8.11	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	5.24	5.24	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	4.7	4.7	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	1.5	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	18.4	18.5	
				BALANCED THREE PHASE AMPS	51.5		

PHASE BALANCE PERCENT: PHASE A 107% PHASE B 103% PHASE C 90.2%

ML = MODIFIED CIRCUIT LOAD
NB = FURNISH AND INSTALL NEW CIRCUIT BREAKER. TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS

EXISTING BRANCH PANEL TO REMAIN

3

PANEL: PP3
ROOM: STAGE STORAGE RM | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: SURFACE | BUS AMPS: 100 | MAIN: MLO
FED FROM: MDP–1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE: EATON

	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION	
	1	20/1	0.5	RECEPT RM 5	a	2	15/1	0	SPARE	ML
	3	20/1	0.5	RECEPT RM 4	b	4	15/1	0	SPARE	ML
ML	5	20/1	0	SPARE	c	6	20/1	0.5	RECEPT RM 3	
ML	7	20/1	0	SPARE	a	8	20/1	0.5	RECEPT RM 2	
ML	9	20/1	0	SPARE	b	10	20/1	0.5	RECEPT RM 1	
	11	20/1	0.5	UNKNOWN LOAD	c	12	20/1	0.5	UNKNOWN LOAD	
	13	20/1	0.5	UNKNOWN LOAD	a	14	20/1	0.5	UNKNOWN LOAD	
	15	20/1	0.5	UNKNOWN LOAD	b	16	20/1	0.5	UNKNOWN LOAD	
	17	20/1	0.5	UNKNOWN LOAD	c	18	20/1	0.5	UNKNOWN LOAD	
NB	19	20/1	0.696	EF–5	a	20	20/1	0.468	EF–4	NB
NB	21	15/2	1.2	VRF–1	b	22	15/2	1.2	VRF–2	NB
	23	|		SPACE	c	24	|		SPACE	
	25	–/1	0	SPARE	a	26	–/1	0	SPACE	
	27	–/1	0	SPACE	b	28	–/1	0	SPACE	
	29	–/1	0	SPACE	c	30	–/1	0	SPACE	

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	0	0	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	1.2	1.5	(125%)	HEATING	0	0	(100%)
OTHER MOTORS	2.36	2.36	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	2.5	2.5	(50%>10)	KITCHEN EQUIP	0	0	(N/A)
CUSTOM LOAD	4	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	10.1	6.36	
				BALANCED THREE PHASE AMPS	17.7		

PHASE BALANCE PERCENT: PHASE A 93.1% PHASE B 96.3% PHASE C 111%

ML = MODIFIED CIRCUIT LOAD
NB = FURNISH AND INSTALL NEW CIRCUIT BREAKER. TYPE AND RATING SHALL MATCH EXISTING INSTALLATIONS

EXISTING BRANCH PANEL TO REMAIN

PANEL: DP1
ROOM: BOILER ROOM | VOLTS: 208Y/120V 3P 4W | AIC: 10,000
MOUNTING: FLUSH | BUS AMPS: 600 | MAIN: MLO
FED FROM: MDP–1 | NEUTRAL: 100% | LUGS: STANDARD
NOTE: SQUARE D

	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
	1	20/3	0	SPACE	a	2	100/3	18.5	PANEL LP1
	3	|			b	4	|		
	5	|			c	6	|		
	7	200/3	0	GYMNASIUM	a	8	35/3	0.5	BOILER HOT WATER PUMP
	9	|			b	10	|		
	11	|			c	12	|		
	13	150/3	0.5	OVEN	a	14	200/3	40	PANEL E
	15	|			b	16	|		
	17	|			c	18	|		
ML	19	150/3	19.1	RTU–2	a	20	200/3	16.5	PANEL B
	21	|			b	22	|		
	23	|			c	24	|		
	25	30/3	0.5	DOOR	a	26	35/3	0.5	BOILER HOT WATER PUMP
	27	|			b	28	|		
	29	|			c	30	|		
	31	15/3	0.5	GYM FAN	a	32	100/3	7.5	PANEL EM
	33	|			b	34	|		
	35	|			c	36	|		
	37	15/3	0.5	FAN CIRCUIT/PUMP	a	38	15/3	0.5	PUMP
	39	|			b	40	|		
	41	|			c	42	|		
	43	15/3	0.5	BOILER CIRCUIT/PUMP	a	44	15/3	0.5	PUMP
	45	|			b	46	|		
	47	|			c	48	|		
	49	15/3	0.5	BOILER CIRCUIT/PUMP	a	50	100/3	31.7	PANEL D
	51	|			b	52	|		
	53	|			c	54	|		

	CONN. KVA	CALC. KVA			CONN. KVA	CALC. KVA	
LIGHTING	18.1	22.6	(125%)	CONTINUOUS	0	0	(125%)
LARGEST MOTOR	19.1	23.9	(125%)	HEATING	1	0	(100%)
OTHER MOTORS	45.9	45.9	(100%)	NONCONTINUOUS	0	0	(100%)
RECEPTACLES	18.2	14.1	(50%>10)	KITCHEN EQUIP	1	1	(100%)
CUSTOM LOAD	34.5	0	(0%)	NONCOIN/DIVERSE	0	0	(N/A)
				TOTAL KVA	138	109	
				BALANCED THREE PHASE AMPS	302		

PHASE BALANCE PERCENT: PHASE A 109% PHASE B 98% PHASE C 93.1%

ML = MODIFIED CIRCUIT LOAD

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Revisions

No.	Date	
1	03/09/2022	Addendum # 2
2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

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Sheet Title: ELECTRICAL PANEL SCHEDULES

Proj. No.: 2248
Date: 02/18/2022
Drawn: MARB
Approved: BRK
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GENERAL ELECTRICAL DEMOLITION NOTES:

1. THE DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED FOR THIS PROJECT. THEY ARE NOT INTENDED TO INDICATE THE LOCATION OF ALL DEVICES, JUNCTION BOXES, CONDUITS, ETC.. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO VERIFY ALL RELEVANT EXISTING CONDITIONS.
2. DISCONNECT ALL ELECTRICAL SYSTEMS AS REQUIRED IN FLOORS, WALLS, CEILINGS AND OTHER STRUCTURES SCHEDULED FOR DEMOLITION.
3. ELECTRICAL ITEMS (i.e., LIGHTING FIXTURES, RECEPTACLES, SWITCHES, ETC.) REMOVED AND NOT RELOCATED, REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN (i.e., FOR MAINTENANCE PROPOSES).
4. PROVIDE TEMPORARY WIRING AND ASSOCIATED CONNECTIONS AS REQUIRED TO MAINTAIN EXISTING SYSTEMS OPERATION DURING CONSTRUCTION. ASSUME ALL EQUIPMENT MUST REMAIN OPERATIONAL DURING CONSTRUCTION UNLESS SPECIFICALLY NOTED OTHERWISE.
5. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER BEFORE TURNING OFF POWER TO CIRCUITS, FEEDERS, PANELS, ETC., OR DISABLING SYSTEMS IN PART OR WHOLE. COORDINATE ALL OUTAGES WITH OWNER.
6. PROTECT WALLS, CEILINGS, FLOORS, AND OTHER EXISTING FINISH WORK THAT ARE TO REMAIN AND ARE EXPOSED DURING SELECTIVE DEMOLITION OPERATIONS.
7. DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED. USE METHODS REQUIRED TO COMPLETE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS AND AS INDICATED IN THESE NOTES.
8. WHERE LIGHTS, SWITCHES, RECEPTACLES, OR OTHER ELECTRICAL ITEMS, ARE BEING REMOVED ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE PANEL BOARD OR FEEDER JUNCTION BOX SERVING THE DEVICE SHALL ALSO BE REMOVED, UNLESS THE CONDUIT CAN BE REUSED FOR NEW CONDUCTORS. EXISTING OPENINGS IN WALLS TO REMAIN SHALL BE PATCHED WITH DRYWALL, TAPED AND PAINTED TO MATCH EXISTING CONDITIONS. BLANK COVERPLATES OVER UNUSED OPENINGS ~~IS~~ ARE NOT ALLOWED. ALL ABANDONED CONDUITS EXTENDING FROM WALLS ABOVE CEILINGS SHALL BE CUT OFF FLUSH WITH THE STUD AND PLUGGED.
9. ALL CONDUIT SHALL BE REMOVED WHERE WALLS ARE BEING REMOVED. WHERE CONDUIT IS IN THE CONCRETE SLAB, CUT OFF FLUSH, PULL OUT WIRE, AND PLUG. WHERE CONDUIT IS RUN EXPOSED, ALL ASSOCIATED CLAMPS, SUPPORTS, HANGERS, ETC., SHALL ALSO BE REMOVED. CONDUIT CONCEALED IN WALL CONSTRUCTION MAY BE ABANDONED IN PLACE, IF NOT AFFECTED BY OTHER CONSTRUCTION.
10. THIS CONTRACTOR SHALL COORDINATE ALL HIS WORK WITH OTHER CONTRACTORS AT THE JOB SITE BEFORE REMOVING EXISTING AND INSTALLING NEW ELECTRICAL ITEMS.
11. EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATED EXISTING CONDUIT SHALL NOT BE ALLOWED. BONDING CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO ASSURE PROPER GROUND PATH.
12. EQUIPMENT/DEVICE REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND CONDUIT AND WIRING AS REQUIRED TO MAINTAIN CIRCUIT TO REMAINING EQUIPMENT.
13. PROCEED WITH SELECTIVE DEMOLITION SYSTEMATICALLY.
14. TRANSPORT DEMOLISHED MATERIALS FROM OWNER'S PROPERTY AND LEGALLY DISPOSE OF THEM.
15. REMOVE, STORE, CLEAN, REINSTALL, RECONNECT, AND MAKE OPERATIONAL ALL COMPONENTS INDICATED FOR RELOCATION.
16. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR OPERATING FACILITIES EXCEPT WHEN AUTHORIZED IN WRITING BY OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES AS ACCEPTABLE BY OWNER AND AUTHORITY HAVING JURISDICTION.
17. SEAL ALL UNUSED OPENINGS DUE TO REMOVAL OF ELECTRICAL EQUIPMENT TO MATCH EXISTING CONSTRUCTION. ALL UNUSED OPENINGS IN FIRE RATED WALLS SHALL BE SEALED WITH A UL LISTED FIRE SEALING SYSTEM TO MATCH THE EXISTING FIRE RATING.
18. PROPERLY CLOSE ALL UNUSED OPENINGS IN ELECTRICAL ENCLOSURES AND BOXES DUE TO REMOVAL OF ELECTRICAL MATERIALS.
19. CONTRACTOR SHALL REMOVE AND INSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK THAT IS OUTSIDE THE CONTRACT LIMITS OF CONSTRUCTION. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR. CONTRACTOR SHALL RECORD EXISTING DAMAGE PRIOR TO BEGINNING REMOVAL.
20. BALLASTS MANUFACTURED PRIOR TO 1980 CONTAIN PCB's AND SHALL BE DISPOSED OF BY A FEDERAL OR STATE E.P.A. APPROVED METHOD AND IN ACCORDANCE WITH SPECIFICATIONS.
21. FLUORESCENT LAMPS CONTAIN MERCURY AND SHALL BE DISPOSED OF BY A FEDERAL OR STATE E.P.A. APPROVED METHOD AND IN ACCORDANCE WITH SPECIFICATIONS.
22. WHERE TELECOMMUNICATIONS OUTLETS (VOICE/DATA/CATV ETC.) ARE BEING REMOVED, ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE TERMINATION EQUIPMENT SERVING THE DEVICE SHALL ALSO BE REMOVED.
23. WHERE LOW-VOLTAGE SYSTEM CABLING (VOICE/DATA/CATV ETC.) IS EXISTING TO REMAIN, AND SUPPORT METHODS ARE BEING REMOVED, CABLING MUST BE PROPERLY SUPPORTED AND PROTECTED DURING ALL DEMOLITION AND NEW CONSTRUCTION ACTIVITIES. PROVIDE NEW PERMANENT SUPPORT OF ANY CABLING THAT IS NOT OF SUFFICIENT LENGTH FOR EXISTING ROUTE AND A MODIFIED ROUTE IS NECESSARY.

GENERAL ELECTRICAL NOTES:

1. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES INCLUDING BUT NOT LIMITED TO THE NATIONAL ELECTRICAL CODE, THE INTERNATIONAL BUILDING CODE, AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES, AND INTERNATIONAL ENERGY CONSERVATION CODE. THE AUTHORITY HAVING JURISDICTION SHALL HAVE THE FINAL DECISION ON ALL INSTALLATIONS AND PRACTICES.
2. REFER TO THE MATERIAL SCHEDULE, LUMINAIRE SCHEDULE, AND OTHER ASSOCIATED SCHEDULES AND NOTES FOR MANUFACTURERS AND DESCRIPTIONS OF ELECTRICAL MATERIALS, DEVICES, AND EQUIPMENT.
3. ALL ELECTRICAL CONDUCTORS SHALL BE STRANDED COPPER WITH TYPE THHN-THWN INSULATION UNLESS SPECIFICALLY NOTED OTHERWISE. THE MINIMUM WIRE SIZE SHALL BE #12 AWG.
4. CIRCUIT IDENTIFICATION NUMBERS ARE TO COORDINATE CIRCUITING WITH THE ASSOCIATED PANEL. THE CIRCUIT NUMBERS SHALL BE FIELD MODIFIED TO BALANCE THE ELECTRICAL LOAD ON ALL PHASES AS EVENLY AS POSSIBLE.
5. ALL CIRCUITS REQUIRING NEUTRAL CONDUCTORS SHALL HAVE DEDICATED NEUTRALS. SHARED NEUTRALS ARE NOT ALLOWED.
6. A GREEN GROUNDING CONDUCTOR SHALL BE CONNECTED TO ALL LOADS SERVED. THE CONDUCTOR SHALL BE SIZED PER THE NATIONAL ELECTRICAL CODE TO ACCOMMODATE THE LOAD SERVED. ALL GROUNDING CONDUCTORS SHALL BE INSTALLED IN CONDUIT.
7. ALL BUILDING WIRING SHALL BE INSTALLED IN CONDUIT. MINIMUM SIZE SHALL BE 3/4".
8. MC CABLING IS NOT PERMITTED UNLESS SPECIFICALLY NOTED OTHERWISE.
9. ALL CONDUITS SHALL BE CONCEALED IN WALLS, ABOVE CEILINGS, ETC. WHERE POSSIBLE. ALL CONDUIT ROUTED EXPOSED SHALL BE A PRE-MANUFACTURED SURFACE RACEWAY (IE. WIREMOLD OR EQUAL) WITH THE EQUIVALENT USABLE AREA OF THE SUBSTITUTED CONDUIT. EXPOSED SURFACE RACEWAY SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL FROM ARCHITECT/ENGINEER. ALL EXPOSED SURFACE RACEWAY SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO WALLS AND CEILINGS. SURFACE WIREWAY SHALL BE FACTORY OR FIELD PAINTED TO MATCH MOUNTING SURFACE.
10. COORDINATE THE EXACT LOCATION OF ALL DEVICES LOCATED ABOVE OR BELOW COUNTERS, ETC. WITH OTHER TRADES, ARCHITECTURAL ELEVATIONS, AND REVIEWED SUBMITTALS PRIOR TO ROUGH-IN.
11. ALL CUTTING AND PATCHING REQUIRED FOR CONDUITS, DEVICES OR OTHER ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
12. ALL PENETRATIONS THROUGH FIRE-RATED WALLS, FLOORS, AND CEILINGS SHALL BE SEALED WITH AN APPROVED FIRE-RATED SYSTEM EQUAL TO OR EXCEEDING THE RATING OF THE MATERIAL PENETRATED.
13. COORDINATE LOCATIONS OF ALL ELECTRICAL ITEMS INCLUDING LIGHTING FIXTURES, CEILING MOUNTED DEVICES (OCCUPANCY SENSORS, FIRE ALARM DETECTORS, SPEAKERS, ETC.) WITH EACH OTHER AND WITH ALL SPRINKLER HEADS, AIR SUPPLY DIFFUSER AND AIR RETURN GRILLES. ALL CEILING DEVICES SHALL BE CENTERED IN CEILING TILE.
14. COORDINATE ALL MOUNTING OF ELECTRICAL MATERIALS, EQUIPMENT, AND DEVICES REQUIRED FOR EQUIPMENT/DEVICES SUPPLIED BY OTHERS. ELECTRICAL ITEMS SHALL BE MOUNTED TO AVOID ANY INTERFERENCE WITH OTHER EQUIPMENT OPERATION OR ACCESS. ALL INSTALLATIONS OF ELECTRICAL ITEMS FOR EQUIPMENT/DEVICES SUPPLIED BY OTHERS SHALL BE COORDINATED AND APPROVED BY SUPPLYING CONTRACTOR PRIOR TO ROUGH-IN.
15. BOXES LOCATED ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 24" OR A FIRE RATED MATERIAL EQUAL TO OR GREATER THAN THE FIRE WALL MATERIAL RATING SHALL BE INSTALLED AROUND THE BOX. BOXES LOCATED ON OPPOSITE SIDES OF NON-FIRE RATED WALLS SHALL BE OFFSET A MINIMUM 6".
16. REMOVE AND REINSTALL ALL CEILING TILES NECESSARY TO PERFORM REQUIRED ELECTRICAL WORK. ALL CEILING TILES WHICH ARE DAMAGED DURING REMOVAL/REINSTALLATION, SHALL BE REPLACED WITH NEW TILES OF THE SAME MANUFACTURER AND MODEL AS EXISTING TILE.
17. FLUSH MOUNT ALL TOGGLE SWITCHES AND FIRE ALARM MANUAL PULL STATIONS 42" ABOVE THE FINISHED FLOOR TO THE CENTER OF THE DEVICE UNLESS OTHERWISE NOTED. MOUNT FIRE ALARM VISUAL AND AUDIBLE/VISUAL UNITS +80" ABOVE FINISHED FLOOR OR 6" BELOW CEILING, WHICHEVER IS LOWER.
18. FLUSH MOUNT ALL RECEPTACLES AND TELECOMMUNICATIONS OUTLETS 18" ABOVE THE FINISHED FLOOR TO THE CENTER OF THE DEVICE UNLESS OTHERWISE NOTED.
19. 'A' SUBSCRIPT NEXT TO A DEVICE INDICATES INSTALLATION ABOVE COUNTER.
'B' SUBSCRIPT NEXT TO A DEVICE INDICATES INSTALLATION BELOW COUNTER. COORDINATE ALL LOCATIONS WITH ARCHITECTURAL DRAWINGS AND SUBMITTALS. FIELD VERIFY ALL LOCATIONS PRIOR TO ROUGH-IN.
20. LINE TYPE KEY:
   a. NEW WORK BY THE ELECTRICAL CONTRACTOR
   b. NEW WORK BY OTHERS OR EXISTING WORK TO REMAIN
   c. EXISTING WORK TO BE DEMOLISHED BY THE ELECTRICAL CONTRACTOR
21. INDICATES THE TYPE OF CONDUCTORS IN THE CONDUIT. VERIFY QUANTITY FOR EACH SPECIFIC LOAD SERVED.
   - GROUND CONDUCTOR
   - PHASE CONDUCTOR
   - NEUTRAL CONDUCTOR
22. CONDUCTOR TICK MARKS INDICATED ON CONDUITS DO NOT REPRESENT THE QUANTITY OF CONDUCTORS IN THE CONDUIT, BUT THE TYPE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE REQUIRED QUANTITY OF GROUND, NEUTRAL, PHASE, AND SWITCH LEGS IN EACH CONDUIT.
23. ALL REQUEST FOR CHANGE PROPOSALS ON THIS PROJECT SHALL INCLUDE A BREAKDOWN OF MATERIALS, LABOR, AND SUBCONTRACTORS, WITH SUFFICIENT DETAIL FOR ENGINEER EVALUATION. EACH SEPARATE PROPOSAL REQUEST ITEM SHALL INCLUDE SEPARATE MATERIALS AND LABOR BREAKDOWNS. EACH ITEM BREAKDOWN SHALL BE AN ITEMIZED LIST OF MATERIALS WITH QUANTITIES AND THE APPLIED LABOR UNITS, UNLESS OTHERWISE APPROVED. SUPPLIER BACK-UP PRICING SHALL BE INCLUDED ON THE SUPPLIERS' LETTERHEAD. ALL LABOR UNITS ASSOCIATED WITH THE NEW MATERIAL INSTALLATIONS SHALL NOT EXCEED 75% OF THE NECA 1 LABOR RATES, WITHOUT SPECIFIC PERMISSION.

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	DESCRIPTION	MODEL	INPUT VA	VOLTS
A		RECESSED ARCHITECTURAL 2'X2' INDIRECT LED TROFFER FIXTURE SUITABLE FOR INSTALLATION IN 2'X2' GRID CEILING WITH WHITE ALUMINUM HOUSING, SMOOTH REFLECTOR, CURVED, RIBBED, ACRYLIC DIFFUSER, MULTIVOLT INPUT, 4000 LUMEN OUTPUT AT 4000 DEG K, 82 CRI, NO SENSOR CONTROL, 0-10V DIMMING. FIXTURE SHALL HAVE MINIMUM 5-YEAR WARRANTY AND SHALL BE DLC LISTED.	LITHONIA 2BLT2 2X2 BLT ADP GZ10 LP840 N100	30	120V 1P 2W
AE		SAME AS FIXTURE TYPE 'A' FOR EMERGENCY USE		64	120V 1P 2W
B		EXISTING 2X2 PENDANT MOUNT FIXTURE. RETAIN FOR REUSE. REINSTALL WITH EXISTING CIRCUIT AND CONTROLS AFTER CEILING WORK IN FINSHED. PROVIDE CABLING FOR REINSTALLATION.	LITHONIA IBL	30	120V 1P 2W
C		SURFACE MOUNTED 4' LENSED LED DIRECT FIXTURE, 10"Wx4"Dx48"L NOMINAL DIMENSIONS, WHTIE FINISH, MULTIVOLT, 4000 LUMENS, 4000 K DEG COLOR TEMPURATURE, nLIGHT WITHOUT LUMEN MANAGEMENT, 0-10V DIMMING	LITHONIA STL4 MVOLT 40L MVOLT GZ10 LP840 N100	35	120V 1P 2W
D		RECESSED ARCHITECTURAL 2'X2' LED FLAT PANEL FIXTURE SUITABLE FOR INSTALLATION IN 2'X2' GRID CEILING WITH WHITE ALUMINUM HOUSING, SMOOTH REFLECTOR, CURVED, RIBBED, ACRYLIC DIFFUSER, MULTIVOLT INPUT, 4000 LUMEN OUTPUT AT 4000 DEG K, 82 CRI, NO SENSOR CONTROL, 0-10V DIMMING. FIXTURE SHALL HAVE MINIMUM 5-YEAR WARRANTY AND SHALL BE DLC LISTED.	LITHONIA CPANL 2X2 4400 40 MVOLT	64	120V 1P 2W
EM1		EMERGENCY LIGHTING UNIT, WALL MOUNT, MINIMUM 90-MINUTES ILLUMINATION UPON LOSS OF POWER, COMPACT LOW-PROFILE THERMOPLASTIC HOUSING, 120/277-VOLT INPUT, TWO 5.4-WATT KRYPTON LAMPS, MAINTENANCE-FREE LEAD-CALCUIM BATTERY.	LITHONIA ELM2 MCPHILBEN COOPER HUBBELL	50	120V 1P 2W
EX1		COMBINATION EMERGENCY/EXIT FIXTURE, LED, TOP, BACK, OR END MOUNTING, STENCIL FACE, WHITE THERMOPLASTIC HOUSING, TWO 6-WATT HALOGEN MR16 LAMPS SINGLE FACE WITH EXTRA FACE PLATE AND COLOR PANEL FOR FIELD CONVERSION TO DOUBLE FACE, RED PANEL, 120/277 DUAL VOLTAGE, WITH LEAD-CADMIUM BACK-UP BATTERY.	LITHONIA LHQM S W 3 R 120/277 DAY-BRITE COOPER HUBBELL	20	120V 1P 2W
EX2		WALL MOUNTED EXIT SIGN		64	120V 1P 2W
F		FIRE ALARM INDICATOR. RETAIN FOR REUSE. REINSTALL WITH EXISTING CIRCUIT AND CONTROLS AFTER CEILING WORK IN FINSHED. PROVIDE CABLING FOR REINSTALLATION.		64	120V 1P 2W

LUMINAIRE SCHEDULE NOTES

1. CONTRACTOR SHALL REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, MECHANICAL SYSTEM PLANS, DETAILS, SECTIONS, AND ELEVATIONS FOR AID IN COORDINATION OF FIXTURE LOCATIONS AND ANY INTERFERENCES.
2. CONTRACTOR SHALL PROVIDE COPIES OF COMPLETE FIXTURE SCHEDULES, LIGHTING PLANS, AND LIGHTING SPECIFICATIONS TO ALL SUPPLIERS OR MANUFACTURERS' REPRESENTATIVES INVOLVED IN FIXTURE PRICING OR ORDERING, PRIOR TO BID.
3. FIXTURES SHALL BE PROVIDED WITH FEATURES, OPTIONS, AND ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION AND THOSE LISTED IN FIXTURE MODEL NUMBERS PROVIDED, SPECS., AND WRITTEN DESCRIPTION. IF CONFLICTS EXIST BETWEEN THESE, NOTIFY A/E FOR CLARIFICATION PRIOR TO BIDDING OR ORDERING.
4. ALL FIXTURES RECESSED IN, OR SUSPENDED FROM SUSPENDED ACOUSTICAL TILE (S.A.T.) CEILINGS SHALL HAVE INDEPENDENT SUPPORT FROM BUILDING FRAMING OR OTHER APPROVED STRUCTURE.
5. CONTRACTOR SHALL VERIFY LUMINAIRE TYPES INDICATED ARE COMPATIBLE WITH MANUFACTURERS' CURRENT MODEL FIXTURES SUBMITTED. NOTIFY A/E IMMEDIATELY OF DISCREPANCIES AND MAKE NECESSARY CORRECTIONS PRIOR TO BIDDING.
6. ALL LAMP AND DRIVER COMBINATIONS SHALL BE CEE CERTIFIED.
7. LAY-IN LIGHTING FIXTURES: USE GRID AS A SUPPORT ELEMENT.
8. INSTALL CEILING SUPPORT SYSTEM RODS OR WIRES INDEPENDENT OF THE CEILING SUSPENSION DEVICES FOR EACH FIXTURE FOR SUPPLEMENTAL SUPPORT. LOCATE NOT MORE THAN 6 INCHES FROM THE LIGHTING FIXTURE CORNERS.
9. SUPPORT CLIPS: FASTEN TO LIGHTING FIXTURES AND TO CEILING GRID MEMBERS AT OR NEAR EACH FIXTURE CORNER WITH CLIPS THAT ARE UL LISTED FOR THE APPLICATION.
10. FIXTURES OF SIZES LESS THAN THE CEILING GRID: INSTALL AS INDICATED ON THE REFLECTED CEILING PLANS OR CENTER IN ACOUSTICAL PANEL. SUPPORT FIXTURES INDEPENDENTLY WITH AT LEAST TWO 3/4-INCH METAL CHANNELS SPANNING AND SECURED TO THE CEILING TEES.
11. ALL INTERIOR LED COLORS SHALL BE 4K UNLESS SPECIFICALLY NOTED OTHERWISE.

SWITCH SCHEDULE

ITEM	SYMBOL	DESCRIPTION	MANUFACTURER
1	COVER PLATES	ALL COVER PLATES FOR DEVICES SHALL BE THERMOPLASTIC CONSTRUCTION IN FINISHED AREAS. COVER PLATES IN UNFINISHED SPACES SHALL BE GALVANIZED STEEL CONSTRUCTION. ALL DEVICES AND COVER PLATE COLORS SHALL MATCH EXISTING INSTALLATIONS EXACTLY. ALL DEVICE PLATES SHALL INCLUDE A PRE-PRINTED LABEL INDICATING THE PANEL AND CIRCUIT NUMBER SERVING THE DEVICE. THE LABEL SHALL HAVE A CLEAR BACK GROUND WITH BLACK LETTERING.	HUBBELL LEVITON PASS & SEYMOUR LUTRON COOPER
2	$\$_D$	ARCHITECTURAL LOW-VOLTAGE WALL BOX DIMMER, PUSH BUTTON TYPE, WITH PRESET, SUITABLE FOR USE WITH LED LIGHTING CONTROL, 120-VOLT. DIMMER SWITCH SHALL BE COMPATIBLE FOR USE WITH LED LIGHTING AS INDICATED ON DRAWINGS. EXTEND CAT 5E CABLE FROM SWITCH TO ASSOCIATED nLIGHT DEVICES PER MANUFACTURER INSTRUCTIONS.	nLIGHT NPODM 4P DX
3	$\$_{MSD}$	ARCHITECTURAL WALL/SWITCH OCCUPANCY SENSOR, WITH 0-10VDC DIMMING CAPABILITY, 180 DEGREE COVERAGE OF 900 SQFT, INFRARED TECHNOLOGY 120/277 VOLT, DIGITAL TIME DELAY ADJUSTABLE FROM 30 SECONDS TO 30 MINUTES, ADJUSTABLE SENSITIVITY FROM 20% TO 100% ADJUSTABLE LIGHT LEVEL SETTINGS FROM 2 TO 100 FOOT-CANDLES, COMPATIBLE WITH ALL ELECTRONIC BALLAST, WITH LED INDICATOR TO INDICATE OCCUPANCY .EXTEND CAT 5E CABLE FROM SWITCH TO ASSOCIATED nLIGHT DEVICES PER MANUFACTURER INSTRUCTIONS.	nLIGHT NWSX
3	$\$_3$	ARCHITECTURAL LOW-VOLTAGE WALL BOX SWITCH, 3-WAY, PUSH BUTTON TYPE, WITH PRESET, SUITABLE FOR USE WITH LED LIGHTING CONTROL, 120-VOLT. SWITCH SHALL BE COMPATIBLE FOR USE WITH LED LIGHTING AS INDICATED ON DRAWINGS. EXTEND CAT 5E CABLE FROM SWITCH TO ASSOCIATED nLIGHT DEVICES PER MANUFACTURER INSTRUCTIONS.	nLIGHT NPODM
4	PP	nLIGHT DIMMING RELAY POWER PACK, LOW-VOLTAGE, SUITABLE FOR INTERFACE INCLUDING ON/OFF AND DIMMING CONTROL FOR GROUPS OF LUMINAIRES. EXTEND CAT 5E CABLE FROM SWITCH TO ASSOCIATED nLIGHT DEVICES PER MANUFACTURER INSTRUCTIONS.	nLIGHT nPP16 D
5	OS_1	nLIGHT DUAL-TECHNOLOGY (PASSIVE INFRARED (PIR) AND ULTRASONIC OR MICROPHONIC), EXTENDED RANGE CEILING SENSOR, 360 DEGREE COVERAGE OF 30 FEET, LOW-VOLTAGE, TIME DELAY ADJUSTMENT FROM 30-SECONDS TO 20-MINUTES. EXTEND CAT 5E CABLE FROM SWITCH TO ASSOCIATED nLIGHT DEVICES PER MANUFACTURER INSTRUCTIONS.	nLIGHT nCM PDT 10 RJB
5	PC	nLIGHT CEILING MOUNT LOW VOLTAGE DAYLIGHT HARVESTING PHOTOCELL FOR AUTOMATIC DIMMING CONTROL OF LUMINAIRES. EXTEND CAT 5E FROM PHOTOCELL TO OTHER nLIGHT DEVICES PER MANUFACTURERS INSTRUCTION.	nLIGHT nCM ADCX

MATERIAL SCHEDULE

3

ITEM	SYMBOL	DESCRIPTION	MANUFACTURER
1	COVER PLATES	COVER PLATES IN FINISHED SPACES SHALL BE WHITE THERMOPLASTIC CONSTRUCTION. COVER PLATES IN UNFINISHED SPACES SHALL BE GLAVANIZED STEEL CONSTRUCTION. ALL DEVICES AND COVER PLATE COLORS SHALL MATCH EXISTING INSTALLATIONS EXACTLY.	HUBBELL LEVITON PASS & SEYMOUR LUTRON COOPER
2		ELECTRICAL EQUIPMENT CONNECTION; SIZE CONNECTION PER THE NATIONAL ELECTRICAL CODE, UNLESS LARGER CAPACITY IS NOTED OTHERWISE. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.	
3	G/W	DUPLEX GROUND-FAULT WEATHERPROOF RECEPTACLE; STRAIGHT BLADE, 20-AMPERE SPECIFICATION GRADE, 3-WIRE GROUNDING TYPE, IMPACT RESISTANT THERMOPLASTIC FACE, TAMPER RESISTANT, TEST AND RESET BUTTONS IN FACE, FEDERAL SPECIFICATION AND U.L. LISTED, 2003 U.L. 943 COMPLIANT WITH WEATHERPROOF BOX AND GASKETED COVERPLATE, NEMA 4 RATED "WHILE-IN-USE".	HUBBELL 5300 SERIES/ WPM826MP LEVITON PASS & SEYMOUR COOPER
4	MSW	EXISTING FLOOR MOUNTED MAIN DISTRIBUTION SWITCH CIRCUIT BREAKER IN NEMA 1 ENCLOSURE, 2000AMPERE, 120/208V, 3-PHASE, 4-WIRE, BUS RATING AS INDICATED ON RISER DIAGRAMS AND PANEL SCHEDULES. FURNISH AND INSTALL BREAKERS AS REQUIRED FOR NEW CIRCUIT LOADS, AS INDICATED ON PANEL SCHEDULES.	SQUARE D QED
5	MDP-1	EXISTING FLOOR MOUNTED DISTRIBUTION PANELBOARD IN NEMA 1 ENCLOSURE, 120/208V, 3-PHASE, 4-WIRE, BUS RATING AS INDICATED ON RISER DIAGRAMS AND PANEL SCHEDULES. FURNISH AND INSTALL BREAKERS AS REQUIRED FOR NEW CIRCUIT LOADS, AS INDICATED ON PANEL SCHEDULES.	SQUARE D QED
6	CP, DP1, EM, KP, LOAD CENTER, LP1,	EXISTING SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD IN NEMA 1 ENCLOSURE, 120/208V, 3-PHASE, 4-WIRE, BUS RATING AS INDICATED ON RISER DIAGRAMS AND PANEL SCHEDULES. FURNISH AND INSTALL BREAKERS AS REQUIRED FOR NEW CIRCUIT LOADS, AS INDICATED ON PANEL SCHEDULES.	SQUARE D NQ SERIES
7	A, B, C, D, E, F,	EXISTING SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD IN NEMA 1 ENCLOSURE, 120/208V, 3-PHASE, 4-WIRE, BUS RATING AS INDICATED ON RISER DIAGRAMS AND PANEL SCHEDULES. FURNISH AND INSTALL BREAKERS AS REQUIRED FOR NEW CIRCUIT LOADS, AS INDICATED ON PANEL SCHEDULES.	CHICAGO SWITCHBOARD
8	PP1, PP2, PP3	EXISTING SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD IN NEMA 1 ENCLOSURE, 120/208V, 3-PHASE, 4-WIRE, BUS RATING AS INDICATED ON RISER DIAGRAMS AND PANEL SCHEDULES. FURNISH AND INSTALL BREAKERS AS REQUIRED FOR NEW CIRCUIT LOADS, AS INDICATED ON PANEL SCHEDULES.	EATON
9	$\$_M$	FRACTIONAL HORSEPOWER MANUAL MOTOR SWITCH, 120-VOLT, LOCKABLE IN THE 'OFF' POSITION, NEMA 1 ENCLOSURE. SIZE AND QUANTITY OF POLES SHALL MATCH EQUIPMENT DEVICE IS SERVING.	SQUARE D CLASS 2510 TYPE K EATON-CUTLER HAMMER G.E. INDUSTRIAL SIEMENS
10		DISCONNECT SWITCH, 600-VOLT, NON-FUSIBLE HEAVLY DUTY, LOCKABLE IN OFF POSITION, PROVIDE GROUND LUG, UL LISTED. COORDINATE ENCLOSURE TYPE WITH LOCATION. SIZE AND QUANTITY OF POLES SHALL MATCH EQUIPMENT DEVICE IS SERVING.	SQUARE D CLASS 2510 TYPE K EATON-CUTLER HAMMER G.E. INDUSTRIAL SIEMENS
11		COMBINATION POLYPHASE MAGNETIC STARTER/NON-FUSIBLE DISCONNECT SWITCH, VERIFY ENCLOSURE TYPE AND RATING WITH LOCATION, TWO-POLE, FUSED CONTROL TRANSFORMER, RED RUN PILOT LIGHT, HAND-OFF-AUTO SWITCH, 1 N.O. AND 1 N.C. AUXILIARY CONTACTS, MINIMUM NEMA 1 STARTER SIZE, WITH MELTING THERMAL OVERLOADS SIZED PER MOTOR NAMEPLATE. COORDINATE AMPERAGE AND HORSEPOWER RATING WITH EQUIPMENT SERVED ON DRAWINGS.	SQUARE D CLASS 8538 EATON-CUTLER HAMMER G.E. INDUSTRIAL SIEMENS

DATE: 02/18/2022

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Revisions

No.	Date	
1	03/09/2022	Addendum # 2
2	03/15/2022	Addendum # 3
3	03/21/2022	Addendum # 4

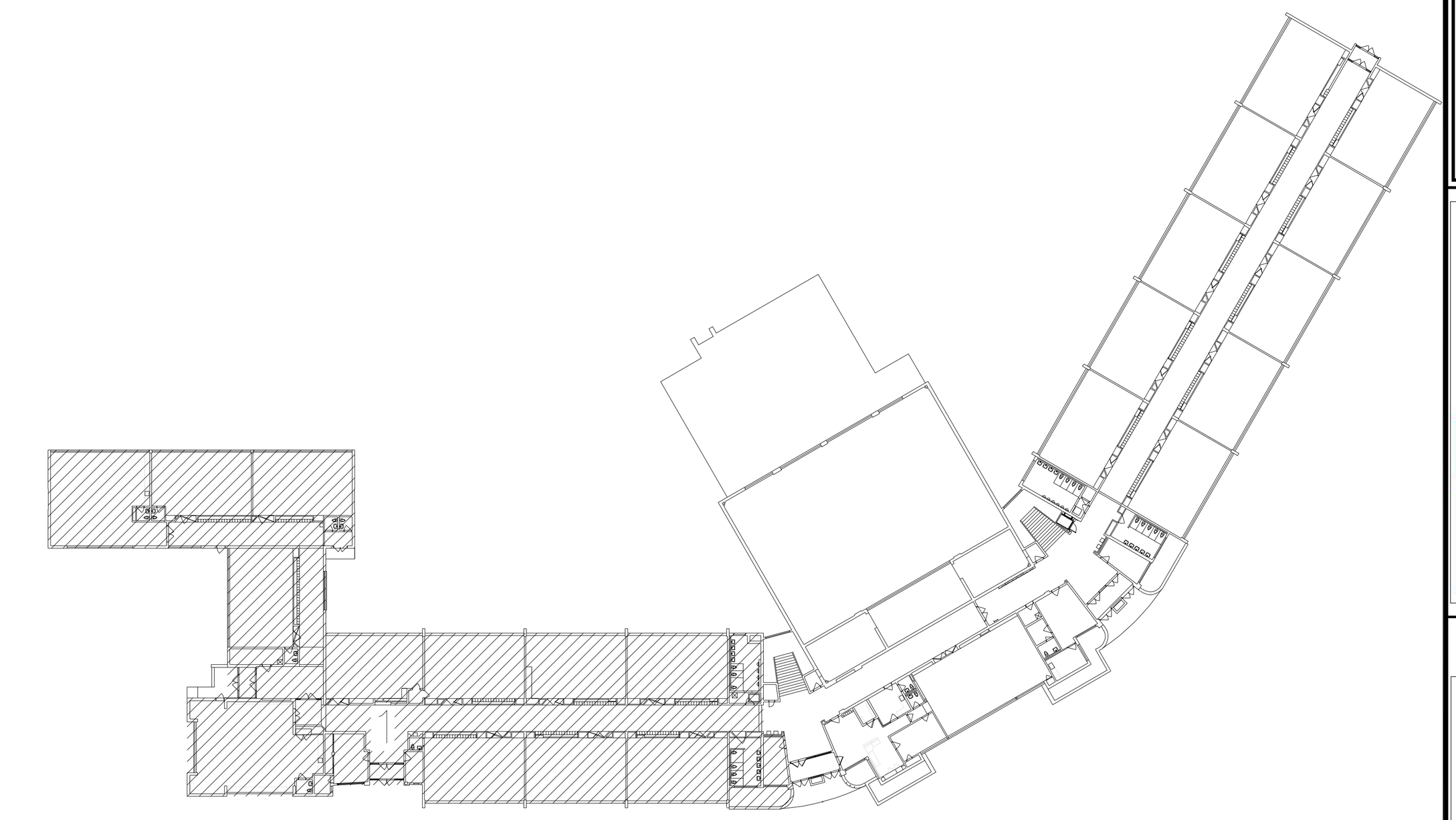
LATHROP ELEMENTARY SCHOOL
2603 CLOVER AVE,
ROCKFORD, ILLINOIS 61102

Sheet Title: ELECTRICAL MATERIAL SCHEDULES & GENERAL NOTES

Proj. No.: 2248
Date: 02/18/2022
Drawn: MARB
Approved: BRK
Sheet No.: E500

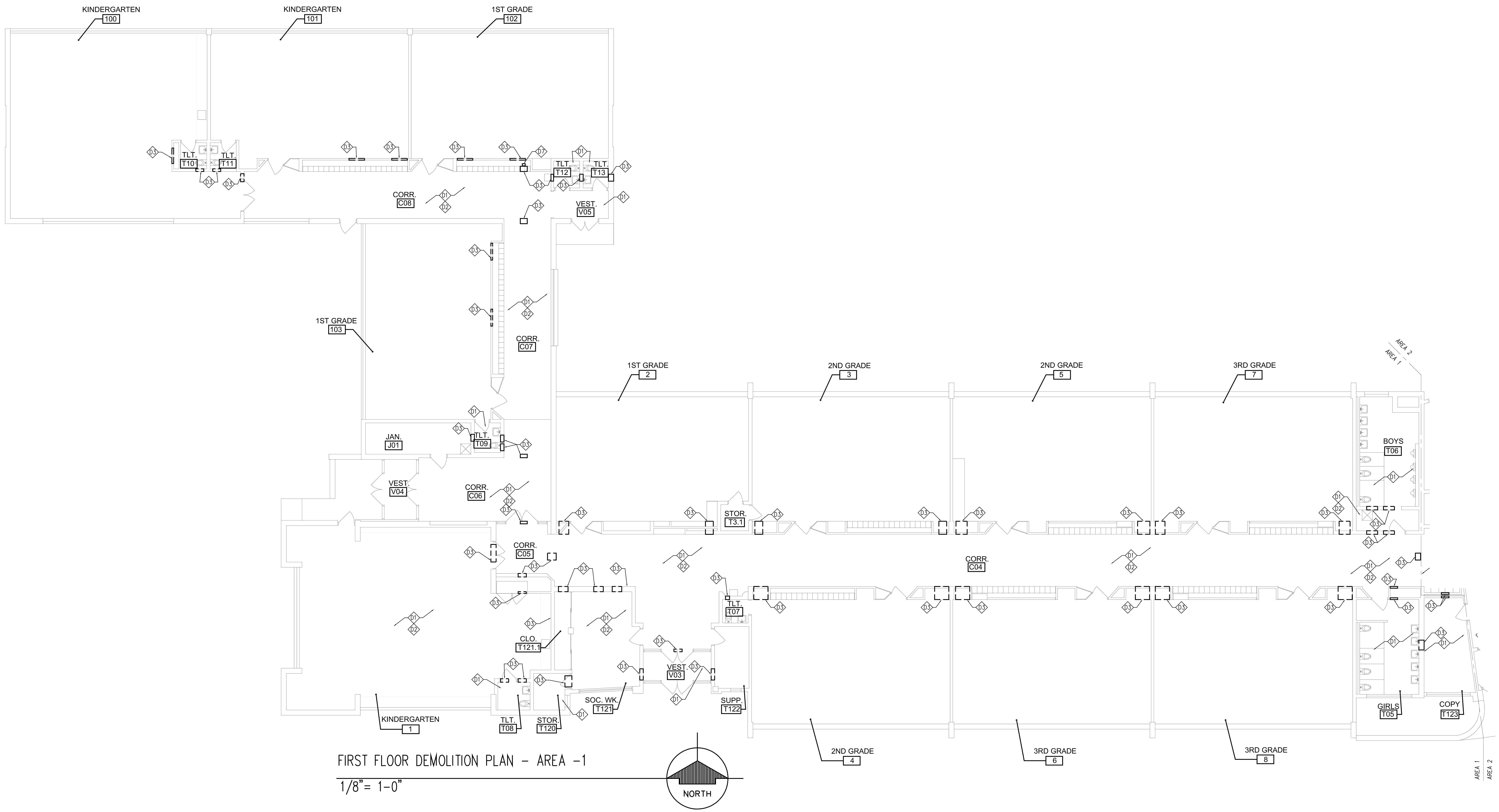
DEMOLITION KEYNOTES

D1	REMOVE EXISTING ACOUSTICAL CEILING TILE SYSTEM AND GRID IN ITS ENTIRETY.
D2	REMOVE EXISTING LIGHT FIXTURES IN ITS ENTIRETY. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D3	REMOVE PORTION OF EXISTING WALL TO ACCOMMODATE NEW WORK. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D4	REMOVE PORTION OF EXISTING WALL TO ACCOMMODATE NEW HOLLOW METAL DOORS.
D5	REMOVE EXISTING LOUVERS; REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D6	REMOVE PORTION OF EXISTING ROOF SYSTEM, ROOF DECK AND ROOF STRUCTURE TO ACCOMMODATE NEW WORK. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.



KEY PLAN

NOT TO SCALE



FIRST FLOOR DEMOLITION PLAN - AREA -1

1/8"= 1-0"

STATE OF ILLINOIS LICENSED ARCHITECT DANIEL G. SAAVEDRA 001-015740

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No.	Date	Revisions
1	03/21/2022	ADDENDUM #4

BLOOM ELEMENTARY SCHOOL

HVAC UPGRADE

ROCKFORD, ILLINOIS

Sheet Title: FIRST FLOOR DEMOLITION PLAN AREA - I

Proj. No.:	21012.30
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Drawn:	MS
Approved:	MS
Sheet No.:	D2.01

DEMOLITION KEYNOTES

D1	REMOVE EXISTING ACOUSTICAL CEILING TILE SYSTEM AND GRID IN ITS ENTIRETY.
D2	REMOVE EXISTING LIGHT FIXTURES IN ITS ENTIRETY. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D3	REMOVE PORTION OF EXISTING WALL TO ACCOMMODATE NEW WORK. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D4	REMOVE PORTION OF EXISTING WALL TO ACCOMMODATE NEW HOLLOW METAL DOORS.
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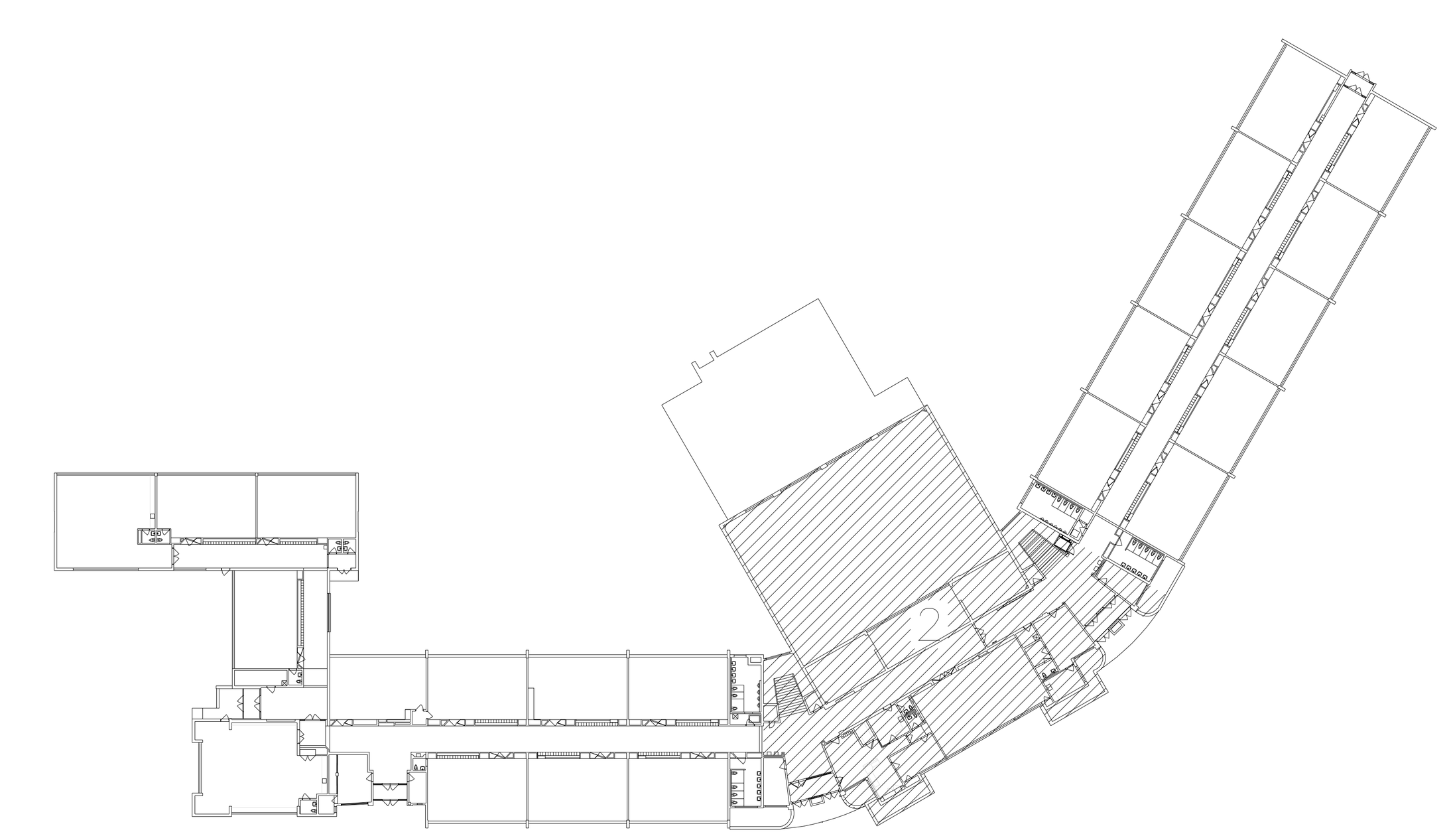
D6	REMOVE PORTION OF EXISTING ROOF SYSTEM, ROOF DECK AND ROOF STRUCTURE TO ACCOMMODATE NEW WORK. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

LOWER LEVEL DEMOLITION PLAN - AREA -2

1/8"= 1-0"



KEY PLAN

NOT TO SCALE

STATE OF ILLINOIS DANIEL G. SAAVEDRA 001-015748 LICENSED ARCHITECT

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ROCKFORD PUBLIC SCHOOLS

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Revisions

No.	Date	
1	03/21/2022	ADDENDUM #1

BLOOM ELEMENTARY SCHOOL
HVAC UPGRADE
ROCKFORD, ILLINOIS

Sheet Title: FIRST FLOOR DEMOLITION PLAN AREA -2

Proj. No.: 21012.30
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Approved: MS
Sheet No.: D2.02

DEMOLITION KEYNOTES

D1	REMOVE EXISTING ACOUSTICAL CEILING TILE SYSTEM AND GRID IN ITS ENTIRETY.
D2	REMOVE EXISTING LIGHT FIXTURES IN ITS ENTIRETY. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
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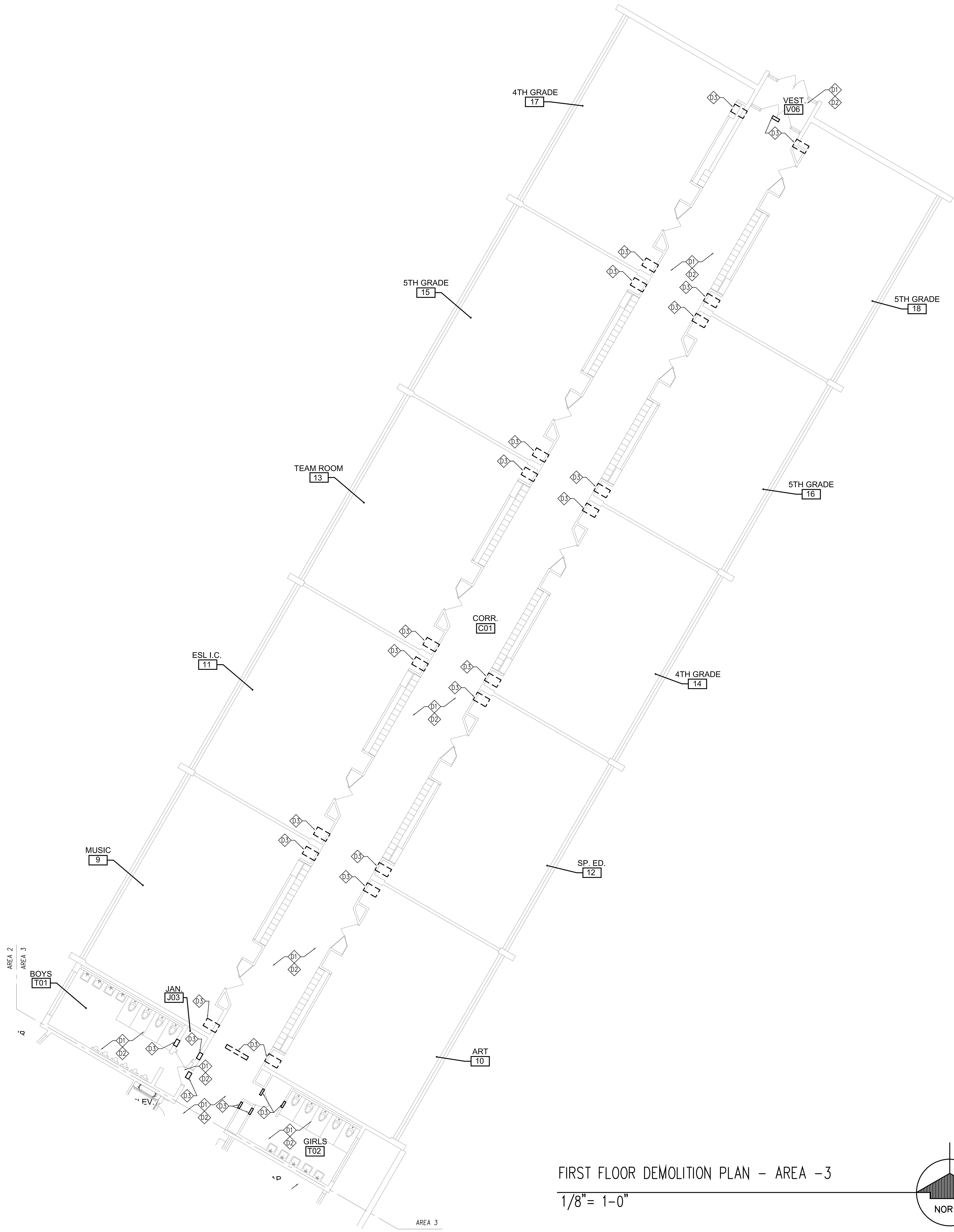
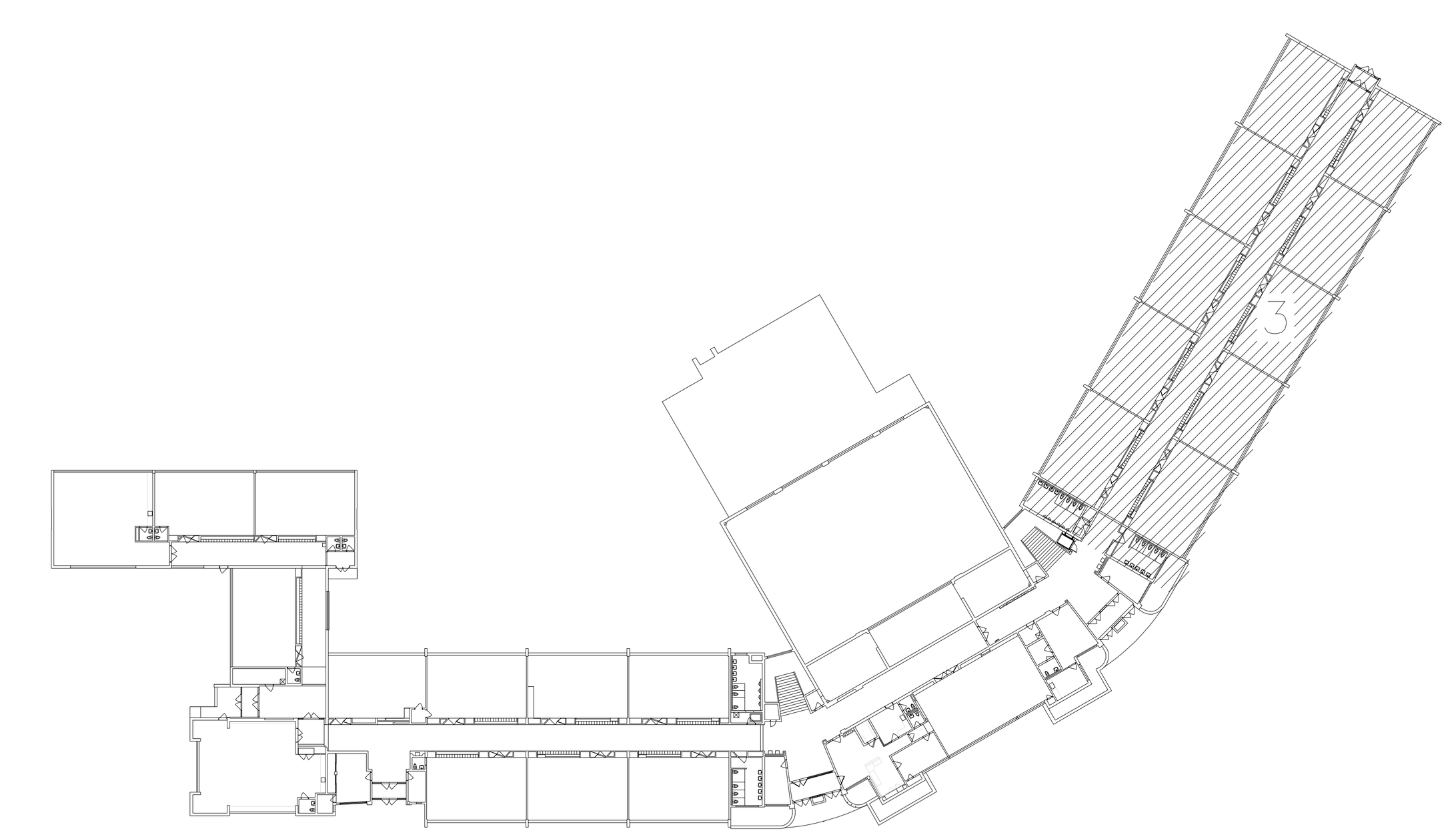
D5	REMOVE EXISTING LOUVERS; REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
D6	REMOVE PORTION OF EXISTING ROOF SYSTEM, ROOF DECK AND ROOF STRUCTURE TO ACCOMMODATE NEW WORK. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.



FIRST FLOOR DEMOLITION PLAN - AREA -3

1/8"= 1-0"

NORTH



KEY PLAN

NOT TO SCALE

STATE OF ILLINOIS
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Revisions

No.	Date	
1	03/21/2022	ADDENDUM #1

BLOOM ELEMENTARY SCHOOL
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Sheet Title:
FIRST FLOOR DEMOLITION PLAN AREA -3

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D2.03