

# Bid Addendum No. 2

November 1, 2024 Valley Central School District 2023 Capital Project – Phase 1 CSArch Project No. 187-2302.01 SED Control No. Varies

This Bid Addendum No. 2 forms part of the Contract Documents and modifies the original bidding documents dated October 18, 2024. Bid Addendum No. 2 consists of (6) cover sheet pages, (6) specification sections, (62) full size 30"x42" drawing sheets, and responses to bidder requests for information.



Architect's Seal

#### **GENERAL INFORMATION**

- 1. Bid Addendum No. 1 was issued to bidders on October 25, 2024.
- 2. Bid Addendum No. 2 was issued to bidders on November 1, 2024.

#### **REVISIONS TO THE PROJECT MANUAL**

- 1. **DELETE** <u>previously revised</u> specification section 000110 Table of Contents. **REPLACE** with the <u>attached revised</u> specification section 000110 Table of Contents.
- 2. **DELETE** <u>original</u> specification section 000115 List of Drawing Sheets. **REPLACE** with the <u>attached revised</u> specification section 000115 List of Drawing Sheets.
- 3. ADD attached new specification section 003110 Construction Project Milestone Schedule for Phase 1.
- 4. **ADD** attached <u>new</u> specification section 011200 Summary Multiple Primes.
- 5. **DELETE** <u>original</u> specification section 015000 Temporary Facilities & Controls. **REPLACE** with the <u>attached</u> <u>revised</u> specification section 015000 Temporary Facilities & Controls.
- 6. **DELETE** <u>original</u> specification section 084113 Aluminum Framed Entrances & Storefronts. **REPLACE** with the attached revised specification section 084113 Aluminum Framed Entrances & Storefronts.
- 7. **DELETE** <u>original</u> specification section 0885113 Aluminum Windows in its entirety.

#### **REVISIONS TO THE CONSTRUCTION DRAWINGS**

VOLUME 01 OF 08 - BEREA ELEMENTARY SCHOOL

- 1. **DELETE** original drawing sheet BES G000. **REPLACE** with attached revised drawing sheet BES G000.
- 2. **DELETE** previously revised drawing sheet BES A111. **REPLACE** with attached revised drawing sheet BES A111.
- 3. **DELETE** original drawing sheet BES A112. **REPLACE** with attached revised drawing sheet BES A112.
- 4. **DELETE** <u>previously revised</u> drawing sheet BES A901. **REPLACE** with <u>attached revised</u> drawing sheet BES A901.
- 5. **ADD** <u>attached new</u> drawing sheet BES AF002.
- 6. **DELETE** original drawing sheet BES M002. **REPLACE** with attached revised drawing sheet BES M002.
- 7. **DELETE** original drawing sheet BES E001. **REPLACE** with attached revised drawing sheet BES E001.



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- 8. **DELETE** original drawing sheet BES E111. **REPLACE** with attached revised drawing sheet BES E111.
- 9. **DELETE** original drawing sheet BES E112. **REPLACE** with attached revised drawing sheet BES E112.

#### VOLUME 02 OF 08 - EAST COLDENHAM ELEMENTARY SCHOOL

- DELETE original drawing sheet ECES G000. REPLACE with attached revised drawing sheet ECES G000.
- 2. **DELETE** <u>previously revised</u> drawing sheet ECES A901. **REPLACE** with <u>attached revised</u> drawing sheet ECES A901.
- 3. ADD attached new drawing sheet ECES AF001.
- 4. **DELETE** original drawing sheet ECES M111. **REPLACE** with attached revised drawing sheet ECES M111.
- 5. **DELETE** original drawing sheet ECES ED111. **REPLACE** with attached revised drawing sheet ECES ED111.
- 6. **DELETE** original drawing sheet ECES E111. **REPLACE** with attached revised drawing sheet ECES E111.

#### VOLUME 03 OF 08 - MONTGOMERY ELEMENTARY SCHOOL

- 1. **DELETE** original drawing sheet MES G000. **REPLACE** with attached revised drawing sheet MES G000.
- 2. **DELETE** <u>previously revised</u> drawing sheet MES A901. **REPLACE** with <u>attached revised</u> drawing sheet MES A901.
- 3. **ADD** attached new drawing sheet MES AF001.
- 4. **DELETE** original drawing sheet MES M111. **REPLACE** with attached revised drawing sheet MES M111.
- 5. **DELETE** original drawing sheet MES E001. **REPLACE** with attached revised drawing sheet MES E001.
- 6. **DELETE** <u>original</u> drawing sheet MES E111. **REPLACE** with <u>attached revised</u> drawing sheet MES E111.

#### VOLUME 04 OF 08 - MAYBROOK ALTERNATIVE LEARNING CENTER

- 1. **DELETE** <u>original</u> drawing sheet MAY G000. **REPLACE** with <u>attached revised</u> drawing sheet MAY G000.
- 2. **DELETE** original drawing sheet MAY A821. **REPLACE** with attached revised drawing sheet MAY A821.
- 3. **DELETE** <u>previously revised</u> drawing sheet MAY A901. **REPLACE** with <u>attached revised</u> drawing sheet MAY A901.
- 4. **ADD** <u>attached new</u> drawing sheet MAY AF001.
- 5. **DELETE** <u>original</u> drawing sheet MAY M111. **REPLACE** with <u>attached revised</u> drawing sheet MAY M111.
- 6. DELETE original drawing sheet MAY E001. REPLACE with attached revised drawing sheet MAY E001.
- 7. **DELETE** original drawing sheet MAY E111. **REPLACE** with attached revised drawing sheet MAY E111.

#### VOLUME 05 OF 08 - VALLEY CENTRAL HIGH SCHOOL

- 1. **DELETE** original drawing sheet VCHS G000. **REPLACE** with attached revised drawing sheet VCHS G000.
- DELETE original drawing sheet VCHS AD111. REPLACE with attached revised drawing sheet VCHS AD111.
- 3. **DELETE** <u>previously revised</u> drawing sheet VCHS A111. **REPLACE** with <u>attached revised</u> drawing sheet VCHS A111.
- 4. **DELETE** <u>previously revised</u> drawing sheet VCHS A901. **REPLACE** with <u>attached revised</u> drawing sheet VCHS A901.



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- 5. **ADD** attached new drawing sheet VCHS AF001.
- 6. **DELETE** original drawing sheet VCHS P001. **REPLACE** with attached revised drawing sheet VCHS P001.
- 7. DELETE original drawing sheet VCHS PD301. REPLACE with attached revised drawing sheet VCHS PD301.
- 8. **DELETE** original drawing sheet VCHS P301. **REPLACE** with attached revised drawing sheet VCHS P301.
- 9. **DELETE** original drawing sheet VCHS M003. **REPLACE** with attached revised drawing sheet VCHS M003.
- 10. **DELETE** original drawing sheet VCHS M005. **REPLACE** with attached revised drawing sheet VCHS M005.
- 11. **DELETE** original drawing sheet VCHS M006. **REPLACE** with attached revised drawing sheet VCHS M006.
- 12. **DELETE** original drawing sheet VCHS MD211. **REPLACE** with attached revised drawing sheet VCHS MD211.
- 13. **DELETE** original drawing sheet VCHS MD212. **REPLACE** with attached revised drawing sheet VCHS MD212.
- 14. **DELETE** original drawing sheet VCHS M211. **REPLACE** with attached revised drawing sheet VCHS M211.
- 15. **DELETE** original drawing sheet VCHS M212. **REPLACE** with attached revised drawing sheet VCHS M212.
- 16. **DELETE** original drawing sheet VCHS M301. **REPLACE** with attached revised drawing sheet VCHS M301.
- 17. **DELETE** original drawing sheet VCHS E001. **REPLACE** with attached revised drawing sheet VCHS E001.
- 18. DELETE original drawing sheet VCHS E002. REPLACE with attached revised drawing sheet VCHS E002.
- 19. **DELETE** original drawing sheet VCHS E111. **REPLACE** with attached revised drawing sheet VCHS E111.
- 20. **DELETE** original drawing sheet VCHS E211. **REPLACE** with attached revised drawing sheet VCHS E211.
- 21. **DELETE** original drawing sheet VCHS E301. **REPLACE** with attached revised drawing sheet VCHS E301.

#### VOLUME 06 OF 08 - VALLEY CENTRAL MIDDLE SCHOOL

- 1. **DELETE** original drawing sheet VCMS G000. **REPLACE** with attached revised drawing sheet VCMS G000.
- 2. **DELETE** original drawing sheet VCMS A901. **REPLACE** with attached revised drawing sheet VCMS A901.
- 3. ADD attached new drawing sheet VCMS AF001.
- 4. **DELETE** original drawing sheet VCMS M111. **REPLACE** with attached revised drawing sheet VCMS M111.
- 5. **DELETE** <u>original</u> drawing sheet VCMS E001. **REPLACE** with <u>attached revised</u> drawing sheet VCMS E001.
- 6. **DELETE** <u>original</u> drawing sheet VCMS E111. **REPLACE** with <u>attached revised</u> drawing sheet VCMS E111.

#### VOLUME 07 OF 08 - WALDEN ELEMENTARY SCHOOL

- 1. **DELETE** original drawing sheet WES G000. **REPLACE** with attached revised drawing sheet WES G000.
- 2. **DELETE** <u>previously revised</u> drawing sheet WES A111. **REPLACE** with <u>attached revised</u> drawing sheet WES A111.
- 3. **DELETE** <u>previously revised</u> drawing sheet WES A901. **REPLACE** with <u>attached revised</u> drawing sheet WES A901.
- 4. **ADD** attached new drawing sheet WES AF001.
- 5. **DELETE** original drawing sheet WES M111. **REPLACE** with attached revised drawing sheet WES M111.
- 6. **DELETE** original drawing sheet WES E001. **REPLACE** with attached revised drawing sheet WES E001.



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7. **DELETE** original drawing sheet WES E111. **REPLACE** with attached revised drawing sheet WES E111.

**VOLUME 08 OF 08 – ADMINISTRATION BUILDING** 

1. N/A

#### RESPONSES TO BIDDER REQUESTS FOR INFORMATION

- 1. MAY A821 Could you clarify where detail 6/A821 is intended to be utilized?
  - a. Response: Detail is not required and will be removed via Bid Addendum #2.
- 2. Specification 084113 lists interior framing to be thermally broken, please confirm as interior framing is typically non-thermal.
  - a. Response: Exterior and interior storefront framing is to be thermally broken.
- 3. Specification 084113 lists ballistics resistance at section 2.2-I, please confirm this is not required in this specification as the basis of design non-rated products do not manufacture bullet resistant materials.
  - a. <u>Response:</u> Ballistic rating is not required for storefront framing. Storefront specification section to be revised in Bid Addendum #2.
- 4. Specification 084113 & 085113 list multiple finishes, please confirm the finishes for each school.
  - a. Response: Owner shall select from manufacturer's full ranges of colors/finishes.
- 5. Please advise if the windborne-debris impact resistance listed in specification 085113 is required for this project.
  - a. <u>Response:</u> Section 085113 to be deleted from specifications in Bid Addendum #2.
- 6. Specification 085113 lists "Class II" anodic finishes, however this finish is not recommended for exterior applications and should be listed as "Class I". Please confirm.
  - a. Response: Section 085113 to be deleted from specifications in Bid Addendum #2.
- 7. Drawing BES A901: Door #V001 is shown on the floor plan as being in frame type "S1", which the elevation on A901 shows to be fire rated per the notes "2" & "5", however Door #V001 is not shown as fire rated on the door schedule. Please advise.
  - a. Response: Clarifications and revisions were made to Storefront S1 and Door V001 in Bid Addendum #1.



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- 8. Drawing BES A901: Please add a "frame type" column to the door schedule as there needs to be a way to determine which similar frame types are desired (i.e. frame 1 vs 2 or frame 3 vs 4).
  - a. <u>Response:</u> Frame head dimensions have been added to the Door Schedule in "Remarks" column. This revisions will be issued with Bid Addendum #2.
- 9. Drawing BES A901: The fire rated doors are shown with door type "N", which is a style door that the basis of design, technical glass products, does not produce. Their style of door is more closely aligned with type "DG". Please advise which door type to include.
  - a. <u>Response:</u> Per the New York State Education Department, fire rated doors cannot contain more than 100 square inches of fire rated glass. Door Type 'N' Elevation to be updated in Bid Addendum #2. Type 'N' will be required in fire rated doors where glazing is proposed.
- 10. Drawing BES A901: Note 5 states to provide "fire protection rated security glazing", does this mean to provide glazing type "FRBA" as listed in specification 088853?
  - a. Response: Storefront elevations and glazing types have been updated in Bid Addendum #1.
- 11. Drawing BES A901: What is the difference between notes "2", "5", and "R"?
  - a. Response: Storefront elevations and glazing types have been updated in Bid Addendum #1.
- 12. Drawing BES A901: Frames "S3" (Doors #122A & 144B) and "S9" (Door #249) are shown without notes "2" / "5" / "R" and have detail markers for non-rated storefront (except at the head), however the doors within these frames are shown as 20 minute or 45 minute rated. Please confirm fire rating.
  - a. <u>Response:</u> Storefront elevations have been updated in Bid Addendum #1. Storefront framing to be fire rated to match rating of glazing scheduled. In other words, if glazing is scheduled to be fire rated, then storefront frame shall match the fire rating of the glazing.
- 13. Drawing BES A901: Transaction window "TW" is shown as having Detail 29 at the head which shows a storefront frame above. Please provide an elevation view of the framing above.
  - a. <u>Response:</u> There is no storefront scheduled above the Transaction Window. Detail 29/A901 to be revised to show Transaction Window head detail in Bid Addendum #2.
- 14. Drawing BES A111: Please provide details for frame "W2" as shown in Rooms #122A / 122C / 122D.
  - a. Response: Doors/frames to be revised to remove sidelight via Bid Addendum #2.
- 15. Drawing ECES A901: All frames are shown with non-rated storefront details, however they also all show either note "2" and/or "5" which relates to fire rated glazing. Please confirm fire rating.



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- a. <u>Response:</u> Storefront elevations have been updated in Bid Addendum #1. Storefront framing to be fire rated to match rating of glazing scheduled. In other words, if glazing is scheduled to be fire rated, then storefront frame shall match the fire rating of the glazing.
- 16. Upon reviewing the drawings, we were unable to locate any signage details. Although there is a specification section for signage, no corresponding information appears on the drawings. Could you please provide a signage schedule to enable accurate pricing?
  - a. Response: Signage types and schedules to be added to all drawing sets in Bid Addendum #2.

**END OF BID ADDENDUM NO. 2** 

#### SECTION 000110 - TABLE OF CONTENTS

VOLUME 01 OF 03 - DIVISION 00 - 02

#### PROCUREMENT AND CONTRACTING REQUIREMENTS

Division 00 -- Procurement and Contracting Requirements

000010 - Certifications Page

000011 - Certifications Page

000012 - Certifications Page

000110 - Table of Contents

000115 - List of Drawing Sheets

001113 - Advertisement for Bids

002113 - Instructions to Bidders

003100.01 - Berea Elementary School Phasing Plans - Phase 1

003100.02 - East Coldenham Elementary School Phasing Plans - Phase 1

003100.03 - Maybrook Alternative Learning Center Phasing Plans - Phase 1

003100.04 - Montgomery Elementary School Phasing Plans - Phase 1

003100.05 - Valley Central High School Phasing Plans - Phase 1

003100.06 - Valley Central Middle School Phasing Plans - Phase 1

# 003110 - Project Construction Milestone Schedule



004101 - Bid Form Contract No. 1-01 - General and Abatement Construction (GAC)

004102 - Bid Form Contract No. 1-02 - Mechanical and Plumbing Construction (MPC)

004103 - Bid Form Contract No. 1-03 - Electrical Construction (EC)

004313 - AIA A310 Bid Bond

004333 - Proposed Products Form

004336 - Proposed Subcontractors Form

004513 - AIA A305 Contractor's Qualifications Statement

004519 - Certificate of Non-Collusion

004520 - Iran Divestment Act Certification

004543 - Corporate Resolutions

005216.01 - AIA A132 Owner/Contractor Agreement, Construction Manager As Advisor

006112 - AIA A312 Payment Bond

006113 - AIA A312 Performance Bond

006114 - AIA C106 Digital Data Licensing Agreement

006276.01 - AIA G732 Application And Certification For Payment, Construction Manager As Advisor

006276.02 - AIA G703 Continuation Sheet

006380 - Demonstration & Training Log

006519 - AIA G706 Contractor's Affidavit Of Payment Of Debts And Claims

006520 - AIA G706A Contractor's Affidavit Of Release Of Liens

006521 - AIA G707 Consent Of Surety To Final Payment

007216.01 - AIA A232 General Conditions Of The Contract For Construction, Construction Manager As Advisor

007343 - Prevailing Rate of Wages

008310 - Submittal Cover

008320 - Request for Information

# **SPECIFICATIONS**

Division 01 -- General Requirements



011400 - Work Restrictions

011410 - NYSED 155.5 Regulations

012100 - Allowances

012200 - Unit Prices

012300 - Alternates

012600 -	Contract	Modification	Procedures
012000	Contract	Modification	1 100000103

012900 - Payment Procedures

012973 - Schedule of Values

013100 - Project Management And Coordination

013150 - Safety And Health

013200 - Construction Progress Documentation

013300 - Submittal Procedures

014000 - Quality Requirements

014100 - Special Inspections And Structural Testing

014200 - References And Definitions

015000 - Temporary Facilities And Controls

016000 - Product Requirements

017300 - Execution

017310 - Cutting And Patching

017400 - Warranties

017700 - Closeout Procedures

017820 - Operations And Maintenance Data

017839 - Project Record Documents

017900 - Demonstration And Training

Division 02 -- Existing Conditions

023313 - Underground Utility Locator Service

024119 - Selective Structural Demolition And Shoring

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Division 03 -- Concrete

033000 - Cast-In-Place Concrete

034500 - Precast Architectural Concrete

Division 04 -- Masonry

040110.01 - Masonry Cleaning

040120.63 - Brick Masonry Repair

040120.64 - Brick Masonry Repointing

042000 - Concrete Unit Masonry

042613 - Masonry Veneer

Division 05 -- Metals

051200 - Structural Steel Framing

055213 - Pipe And Tube Railings

Division 06 -- Wood, Plastics, and Composites

061053 - Miscellaneous Rough Carpentry

061600 - Sheathing

Division 07 -- Thermal and Moisture Protection

072100 - Thermal Insulation

072500 - Weather Barriers

072600 - Vapor Retarders

075323 - Ethylene-Propylene-Diene-Monomer (EPDM) Roofing

077200 - Roof Accessories

078413 - Penetration Firestopping

078446 - Fire-Resistive Joint Systems

079200 - Joint Sealants

Division 08 -- Openings

081113 - Hollow Metal Doors And Frames

081416 - Flush Wood Doors

083343 - Overhead Coiling Smoke Curtains

083453 - Security Doors

081113 - Hollow Metal Doors And Frames

085113 - Aluminum Windows

085653 - Security Windows

087100 - Door Hardware

087113 - Power Door Operators

088000 - Glazing

088813 - Fire-Resistant Glazing

088853 - Security Glazing

089119 - Fixed Louvers

Division 09 -- Finishes

090561.13 - Moisture Vapor Emission Control

092216 - Non-Structural Metal Framing

092900 - Gypsum Board

093013 - Ceramic Tiling

095113 - Acoustical Panel Ceilings

096513 - Resilient Base And Accessories

096519 - Resilient Tile Flooring

096813 - Tile Carpeting

099100 - Painting

Division 10 -- Specialties

101100 - Visual Display Units

101423 - Interior Panel Signage

102123 - Cubicle Curtains And Track

102641 - Bullet Resistant Panels

102800 - Toilet And Custodial Accessories

104416 - Fire Extinguishers And Cabinets

Division 11 -- Equipment

116833 - Tennis Court Equipment

Division 12 -- Furnishings

122413 - Roller Window Shades

123216 - Plastic Laminate-Clad Casework

123661 - Solid Surfacing Materials

124813 - Entrance Floor Mats And Frames

Division 13 -- Special Construction (NOT USED)

Division 14 -- Conveying Equipment (NOT USED)

Division 21 -- Fire Suppression (NOT USED)

Division 22 -- Plumbing

220500 - General Plumbing Requirements

220502 - Plumbing Demolition

220529 - Supports and Sleeves

220553 - Plumbing Identification

220719 - Piping Insulation

221000 - Plumbing Piping

221030 - Plumbing Specialties

221613 - Natural Gas Piping

223500 - DOMESTIC-WATER HEAT EXCHANGERSDomestic Water Heat Exchangers

224200 - Plumbing Fixtures

Division 23 -- Heating, Ventilating, and Air-Conditioning (HVAC)

230500 -	General	Mechanical	Requirements	ς
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- 230502 Mechanical Demolition
- 230513 Common Motor Requirements
- 230515 Variable Frequency Drives
- 230529 Supports and Sleeves
- 230548 Vibration Controls for HVAC
- 230553 Mechanical Identification
- 230593 Testing, Adjusting, and Balancing
- 230713 Duct Insulation
- 230719 Pipe Insulation
- 230800 Commissioning of HVAC Systems
- 230900 Building Automation System
- 230993 Sequence of Operations
- 232113 Hydronic Piping
- 232123 HVAC Pumps
- 232513 Water Treatment for Closed-Loop Hydronic Systems
- 233113 Metal Ductwork
- 233300 Air Duct Accessories
- 233423 Power Ventilators
- 233713 Registers, Grilles and Diffusers
- 235133 Insulated Sectional Chimneys
- 235216 Condensing Boilers
- 236423 Air-Cooled, Scroll Water Chillers
- 237232 Packaged Energy Recovery Ventilators
- 237313 Indoor Air Handling Units
- 237401 Packaged Rooftop Heating and Cooling Units
- 238129 Variable Refrigerant-Flow HVAC Systems

238216 - Ducted Heating Coils

238223 - Unit Ventilators

238236 - Finned-Tube Radiation Heaters

238241 - Unit Heaters

Division 25 -- Integrated Automation (NOT USED)

Division 26 -- Electrical

260500 - General Electrical Requirements

260519 - Low-Voltage Electrical Power Conductors And Cables

260526 - Grounding And Bonding For Electrical Systems

260529 - Hangers And Supports For Electrical Systems

260533 - Raceways And Boxes For Electrical Systems

260534 - Manholes And Handholes

260543 - Underground Ducts And Raceways For Electrical Systems

260544 - Sleeves And Sleeve Seals For Electrical Raceways And Cabling

260553 - Identification For Electrical Systems

260923 - Lighting Control Devices

262416 - Panelboards

262726 - Wiring Devices

262816 - Enclosed Switches And Circuit Breakers

265119 - LED Interior Lighting

265219 - Emergency And Exit Lighting

Division 27 -- Communications (NOT USED)

Division 28 -- Electronic Safety and Security

283100 - Fire Detection And Alarm

Division 31 -- Earthwork

312000 - Excavation and Fill

312319 - Dewatering

312513 - Erosion and Sediment Controls

Division 32 -- Exterior Improvements

321216 - Asphalt Paving

321823 - Running Track Surfacing

321824 - Tennis Court Surfacing

323113 - Chain Link Fences And Gates

329200 - Topsoil and Seeding

Division 33 -- Utilities

334100 - Storm Utility Drainage Piping

Division 34 -- Transportation (NOT USED)

**VOLUME 03 OF 03 - APPENDIX** 

APP 1A - Limited Hazardous Materials Pre-Renovation Survey Report - Berea Elementary School

APP 1B - Limited Hazardous Materials Pre-Renovation Survey Report - East Coldenham Elementary School

APP 1C - Limited Hazardous Materials Pre-Renovation Survey Report - Maybrook Alternative Learning Center (formally Maybrook Elementary School)

APP 1D - Limited Hazardous Materials Pre-Renovation Survey Report - Montgomery Elementary School

APP 1E - Limited Hazardous Materials Pre-Renovation Survey Report - Valley Central High School

APP 1F - Limited Hazardous Materials Pre-Renovation Survey Report - Walden Elementary School

APP 1G - Limited Hazardous Materials Pre-Renovation Survey Report - Valley Central Middle School

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**END OF SECTION** 

SECTION 000115 - LIST OF DRAWING SHEETS

VOLUME 01 OF 08 - BEREA ELEMENTARY SCHOOL (BES)

# **GENERAL DRAWINGS**

BES	G000	COVER & SHEET INDEX
BES	G001	SYMBOLS, ABBREVIATIONS, MISC AND PARTITION TYPES
BES	G111	OVERALL FLOOR PLAN - FIRST FLOOR

# **LIFE SAFETY DRAWINGS**

BES	LS111	LIFE SAFETY PLANS - FIRST FLOOR
RFS	I \$112	SMOKE ZONE PLANS

# **CIVIL DRAWINGS**

BES	C100	KEY PLAN
BES	C130	SITE, GRADING AND ESC PLAN
BES	C530	DETAILS

# ARCHITECTURAL DEMOLITION DRAWINGS

BES	AD111	REMOVALS PLAN - FIRST FLOOR - AREA A
BES	AD121	REMOVALS PLAN - FIRST FLOOR - AREA B
BES	AD811	REFLECTED CEILING DEMO PLAN - FIRST FLOOR AREA A
BES	AD812	REFLECTED CEILING DEMO PLAN - FIRST FLOOR AREAB

# **ARCHITECTURAL DRAWINGS**

A111	ENLARGED FLOOR PLAN - FIRST FLOOR - AREA A
A112	ENLARGED FLOOR PLAN - FIRST FLOOR - AREAB
A201	EXTERIOR ELEVATIONS
A202	EXTERIOR ELEVATIONS
A351	PLAN AND SECTION DETAILS
A601	ENLARGED PLAN AND INTERIOR ELEVATIONS
A602	ENLARGED PLAN AND INTERIOR ELEVATIONS
A651	CASEWORK DETAILS
A811	REFLECTED CEILING PLAN - FIRST FLOOR AREA A
A812	REFLECTED CEILING PLAN - FIRST FLOOR AREAB
A901	DOOR, WINDOW, & STOREFRONT DETAILS
	A112 A201 A202 A351 A601 A602 A651 A811 A812

#### **ARCHITECTURAL DRAWINGS**

#### **ARCHITECTURAL FINISH DRAWINGS**

BES AF001 MATERIAL SCHEDULE

BES AF002 SIGNAGE TYPES AND SCHEDULE

BES AF111 ENLARGED FLOOR FINISHES PLAN - FIRST FLOOR - AREA A
BES AF112 ENLARGED FLOOR FINISHES PLAN - FIRST FLOOR - AREA B

# **FURNITURE DRAWINGS**

BES FE111 FLOOR FURNITURE PLAN - FIRST FLOOR - AREA A

# **PLUMBING GENERAL DRAWINGS**

BES P001 PLUMBING NOTES, SCHEDULE, LEGEND, & DETAILS

# **PLUMBING DEMOLITION DRAWINGS**

BES PD111 PLUMBING DEMOLITION PLAN - PART 1
BES PD112 PLUMBING DEMOLITION PLAN - PART 2

#### PLUMBING DRAWINGS

BES P111 PLUMBING PLAN - PART 1
BES P112 PLUMBING PLAN - PART 2

# **MECHANICAL GENERAL DRAWINGS**

BES M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

BES M002 MECHANICAL SCHEDULES & DETAILS

#### **MECHANICAL DEMOLITON DRAWINGS**

BES MD111 MECHANICAL DEMOLITION PLAN - PART 1
BES MD112 MECHANICAL DEMOLITION PLAN - PART 2

#### **MECHANICAL DRAWINGS**

BES M111 MECHANICAL PLAN - PART 1
BES M112 MECHANICAL PLAN - PART 2

# **ELECTRICAL GENERAL DRAWINGS**

BES E001 ELECTRICAL NOTES, LEGENDS, SCHEDULES & DETAILS

# **ELECTRICAL DEMOLITION DRAWINGS**

BES	ED111	ELECTRICAL DEMOLITION PLAN - PART 1
BES	ED112	ELECTRICAL DEMOLITION PLAN - PART 2

#### **ELECTRICAL DRAWINGS**

BES	E111	ELECTRICAL PLAN - PART 1
BES	E112	ELECTRICAL PLAN - PART 2
BES	E211	LIGHTING PLAN - PART 1
BES	E212	LIGHTING PLAN - PART2

VOLUME 02 OF 08 - EAST COLDENHAM ELEMENTARY SCHOOL (ECES)

#### **GENERAL DRAWINGS**

ECES	G000	COVER & SHEET INDEX
ECES	G001	SYMBOLS, ABBREVIATIONS, MISC, AND PARTITION TYPES
<b>ECES</b>	G111	OVERALL FLOOR PLAN - FIRST FLOOR

# **LIFE SAFETY DRAWINGS**

ECES	LS111	LIFE SAFETY PLAN - FIRST FLOOR
<b>ECES</b>	LS112	SMOKE ZONE PLANS

# **ARCHITECTURAL DEMOLITION DRAWINGS**

ECES AD111 ENLARGED REMOVAL PLAN AND RCP

#### **ARCHITECTURAL DRAWINGS**

ECES	A111	ENLARGED FLOOR PLAN, RCP AND DETAILS
ECES	A201	EXTERIOR ELEVATIONS
ECES	A202	EXTERIOR ELEVATIONS
ECES	A901	DOOR, WINDOW, & STOREFRONT DETAILS

# ARCHITECTURAL FINISH DRAWINGS

ECES AF001 SIGNAGE TYPES AND SCHEDULE



# **MECHANICAL GENERAL DRAWINGS**

ECES M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

# **MECHANICAL DEMOLITION DRAWINGS**

ECES MD111 MECHANICAL DEMOLITION PLAN

# **MECHANICAL DRAWINGS**

ECES M111 MECHANICAL PLAN

# **ELECTRICAL GENERAL DRAWINGS**

ECES E001 ELECTRICAL NOTES, LEGENDS, DETAILS & SCHEDULES

# **ELECTRICAL DEMOLITION DRAWINGS**

ECES ED111 ELECTRICAL DEMOLITION PLAN

#### **ELECTRICAL DRAWINGS**

ECES E111 ELECTRICAL PLAN

VOLUME 03 OF 08 - MONTGOMERY ELEMENTARY SCHOOL (MES)

# **GENERAL DRAWINGS**

MES	G000	COVER & SHEET INDEX
MES	G001	SYMBOLS, ABBREVIATIONS, MISC, AND PARTITION TYPES
MES	G111	OVERALL FLOOR PLAN - FIRST FLOOR

# **LIFE SAFETY DEMOLITION DRAWINGS**

MES	LS111	FIRST FLOOR LIFE SAFETY PLAN
MES	LS112	SMOKE ZONE PLANS

# **ARCHITECTURAL DEMOLITION DRAWINGS**

MES AD111 ENLARGED REMOVAL PLAN - FIRST FLOOR - AREA C

# **ARCHITECTURAL DRAWINGS**

MES	A111	ENLARGED NEW WORK PLAN - FIRST FLOOR - AREA C
MES	A201	EXTERIOR ELEVATIONS
MES	A202	EXTERIOR ELEVATIONS
MES	A811	REFLECTED CEILING PLAN - FIRST FLOOR - AREA C
MES	A901	DOOR, WINDOW, & STOREFRONT DETAILS

LIST OF DRAWING SHEETS 000115 -4

# ARCHITECTURAL FINISH DRAWINGS

MES AF001 SIGNAGE TYPES AND SCHEDULE

MES AF111 MATERIAL SCHEDULE & FLOOR FINISHES PLAN - AREA C

#### **PLUMBING DRAWINGS**

MES P001 PLUMBING NOTES, SCHEDULE, LEGEND & DETAILS

# **PLUMBING DRAWINGS**

MES P111 PLUMBING PLANS

#### **MECHANICAL GENERAL DRAWINGS**

MES M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

#### **MECHANICAL DEMOLITION DRAWINGS**

MES MD111 MECHANICAL DEMOLITION PLAN

#### **MECHANICAL DRAWINGS**

MES M111 MECHANICAL PLAN

#### **ELECTRICAL GENERAL DRAWINGS**

MES E001 ELECTRICAL NOTES, LEGEND, SCHEDULES & DETAILS

# **ELECTRICAL DEMOLITION DRAWINGS**

MES ED111 ELECTRICAL DEMOLITION PLAN

# **ELECTRICAL DRAWINGS**

MES E111 ELECTRICAL PLAN

VOLUME 04 OF 08 - MAYBROOK ALTERNATIVE LEARNING CENTER (MAY)

#### **GENERAL DRAWINGS**

MAY G000 COVER & SHEET INDEX

MAY G001 SYMBOLS, ABBREVIATIONS, MISC, AND PARTITION TYPES

MAY G111 OVERALL FLOOR PLAN - FIRST FLOOR

# **LIFE SAFETY DRAWINGS**

MAY LS111 LIFE SAFETY PLAN - FIRST FLOOR

**CSArch** 

Project No. 187-2302.01

#### LIFE SAFETY DRAWINGS

MAY LS112 SMOKE ZONE PLANS

# **ARCHITECTURAL DEMOLITION DRAWINGS**

MAY AD121 ENLARGED REMOVAL PLAN - FIRST FLOOR - AREA A

MAY AD821 REFLECTED CEILING REMOVAL PLAN - FIRST FLOOR - AREA A

#### **ARCHITECTURAL DRAWINGS**

MAY A121 ENLARGED FLOOR PLAN - FIRST FLOOR - AREA A
MAY A821 REFLECTED CEILING PLAN - FIRST FLOOR - AREA A

MAY A901 DOOR & WINDOW DETAILS

**ARCHITECTURAL FINISH DRAWINGS** 

MAY AF001 SIGNAGE TYPES AND SCHEDULE

MAY AF121 MATERIAL SCHEDULE & FINISH FLOOR PLAN - AREA A

# **FURNITURE DRAWINGS**

MAY FE121 PARTIAL FURNITURE PLAN - FIRST FLOOR - AREA A

#### **MECHANICAL GENERAL DRAWINGS**

MAY M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

#### **MECHANICAL DEMOLITION DRAWINGS**

MAY MD111 MECHANICAL DEMOLITION PLAN

# **MECHANICAL DRAWINGS**

MAY M111 MECHANICAL PLAN

#### **ELECTRICAL GENERAL DRAWINGS**

MAY E001 ELECTRICAL NOTES, LEGENDS, SCHEDULES & DETAILS

#### **ELECTRICAL DEMOLITION DRAWINGS**

MAY ED111 ELECTRICAL DEMOLITION PLAN

#### **ELECTRICAL DRAWINGS**

MAY E111 ELECTRICAL PLAN

VOLUME 05 OF 08 - VALLEY CENTRAL HIGH SCHOOL (VCHS)

LIST OF DRAWING SHEETS

# **GENERAL DRAWINGS**

VCHS	G000	COVER & SHEET INDEX
VCHS	G001	SYMBOLS, ABBREVIATIONS, MISC, AND PARTITION TYPES
VCHS	G101	OVERALL FLOOR PLAN - BASEMENT
VCHS	G111	OVERALL FLOOR PLAN - FIRST FLOOR
VCHS	G121	OVERALL FLOOR PLAN - SECOND FLOOR
VCHS	G401	OVERALL ROOF PLAN

# **LIFE SAFETY DRAWINGS**

VCHS	LS101	BASEMENT LIFE SAFETY PLAN
VCHS	LS111	FIRST FLOOR LIFE SAFETY PLAN
VCHS	LS112	SMOKE ZONE PLANS

# **ARCHITECTURAL DEMOLITION DRAWINGS**

VCHS	AD111	FIRST FLOOR REMOVAL PLAN - AREA A
VCHS	AD112	FIRST FLOOR REMOVAL PLAN - AREA C & D
VCHS	AD401	ROOF REMOVAL PLAN - AREA C & D
VCHS	AD802	REFLECTED CEILING REMOVAL PLAN - AREA C & D

# **ARCHITECTURAL DRAWINGS**

VCHS	A101	BOILER OOM PLANS AND DETAILS
VCHS	A111	ENLARGED VESTIBULE PLAN, SECTION AND DETAILS
VCHS	A112	AREA C & D - FIRST FLOOR NEW WORK PLAN
VCHS	A201	EXTERIOR ELEVATIONS
VCHS	A202	EXTERIOR ELEVATIONS
VCHS	A402	ROOF PLAN - AREA A, C, & D
VCHS	A801	REFLECTED CEILING PLAN AND CEILING DETAIL - AREA A
VCHS	A802	FIRST FLOOR REFLECTED CEILING PLAN - AREA C & D
VCHS	A901	DOOR, WINDOW, & STOREFRONT DETAILS

# **ARCHITECTURAL FINISH DRAWINGS**

VCHS	AF001	MATERIAL SCHEDULE	$\sqrt{1}$
VCHS	AF002	MATERIAL SCHEDULE SIGNAGE TYPES AND SCHEDULE	
VCHS	AF112	AREA C & D - FLOOR FINISHES PLAN	

# **PLUMBING GENERAL DRAWINGS**

VCHS P001 PLUMBING NOTES, SCHEDULE, LEGEND & DETAILS

# **PLUMBING DEMOLITION DRAWINGS**

VCHS PD301 BOILER ROOM PLUMBING DEMOLITION PLAN

# **PLUMBING DRAWINGS**

VCHS P301 PLUMBING PLAN

# **MECHANICAL GENERAL DRAWINGS**

VCHS	M001	MECHANICAL NOTES, LEGEND, SCHEDULE & DETAILS
VCHS	M002	MECHANICAL SCHEDULES
VCHS	M003	MECHANICAL SCHEDULES
VCHS	M004	MECHANICALDETAILS
VCHS	M005	TEMPERATURE CONTROLS NOTES, LEGEND & SCHEMATICS
VCHS	M006	MECHANICAL PIPING DIGRAMS

# **MECHANICAL DEMOLITION DRAWINGS**

VCHS	MD111	MECHANICAL DEMOLITION PLAN
VCHS	MD211	MECHANICAL DEMOLITON PLAN - PART 1
VCHS	MD212	MECHANICAL DEMOLITION PLAN - PART 2
VCHS	MD301	MECHANICAL DEMOLITION PLAN

# **MECHANICAL DRAWINGS**

VCHS	M111	SECURITY VESTIBULE MECHANICAL PLAN
VCHS	M211	MECHANICAL PLAN - PART 1
VCHS	M212	MECHANICAL PLAN - PART 2
VCHS	M301	MECHANICAL PLAN

#### **ELECTRICAL GENERAL DRAWINGS**

VCHS	E001	ELECTRICAL NOTES, LEGEND, DETAILS & SCHEDULES
VCHS	E002	ELECTRICAL PANEL SCHEDULES

# **ELECTRICAL DEMOLITION DRAWINGS**

VCHS	ED111	ELECTRICAL DEMOLITION PLAN
VCHS	ED211	ELECTRICAL DEMOLITION PLAN
VCHS	ED301	ELECTRICAL DEMOLITION PLAN

**CSArch** 

Project No. 187-2302.01

#### **ELECTRICAL DRAWINGS**

VCHS	E111	ELECTRICAL PLAN
VCHS	E211	ELECTRICAL PLAN
VCHS	E301	ELECTRICAL PLAN

VOLUME 06 OF 08 - VALLEY CENTRAL MIDDLE SCHOOL (VCMS)

#### **GENERAL DRAWINGS**

VCMS G000 COVER & SHEET INDEX

VCMS G001 SYMBOLS, ABBREVIATIONS, MISC, AND PARTITION TYPES

VCMS G111 OVERALL FLOOR PLAN - FIRST FLOOR

#### LIFE SAFETY DRAWINGS

VCMS LS101 LIFE SAFETY PLANS
VCMS LS102 SMOKE ZONE PLANS

#### **ARCHITECTURAL DEMOLITION DRAWINGS**

VCMS AD111 ENLARGED REMOVAL PLAN - FIRST FLOOR - AREA A

# **ARCHITECTURAL DRAWINGS**

VCMS A111 ENLARGED FLOOR PLANS AND SECTION - AREA A
VCMS A201 EXTERIOR ELEVATIONS
VCMS A202 EXTERIOR ELEVATIONS
VCMS A811 REFLECTED CEILING PLAN - FIRST FLOOR - AREA A
VCMS A901 DOOR, WINDOW, & STOREFRONT DETAILS

# CARCHITECTURAL FINISH DRAWINGS

VCMS AF001 SIGNAGE TYPES AND SCHEDULE

# 1

# **MECHANICAL GENERAL DRAWINGS**

VCMS M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

#### **MECHANICAL DEMOLITION DRAWINGS**

VCMS MD111 MECHANICAL DEMOLITION PLAN

#### **MECHANICAL DRAWINGS**

VCMS M111 MECHANICAL PLAN

# **MECHANICAL DRAWINGS**

# **ELECTRICAL GENERAL DRAWINGS**

VCMS E001 ELECTRICAL NOTES, LEGENDS, & SCHEDULES

#### **ELECTRICAL DEMOLITION DRAWINGS**

VCMS ED111 ELECTRICAL DEMOLITION PLAN

# **ELECTRICAL DRAWINGS**

VCMS E111 ELECTRICAL PLAN

VOLUME 07 OF 08 - WALDEN ELEMENTARY SCHOOL (WES)

#### **GENERAL DRAWINGS**

WES	G000	COVER & SHEET INDEX
WES	G001	SYMBOLS, ABBREVIATIONS, AND MISC
WES	G111	OVERALL FLOOR PLAN - FIRST FLOOR
WES	G121	OVERALL FLOOR PLAN - SECOND FLOOR

# **LIFE SAFETY DRAWINGS**

WES	LS101	LIFE SAFETY PLANS
WFS	LS102	SMOKE ZONE PLANS

# **ARCHITECTURAL DEMOLITION DRAWINGS**

WES AD111 REMOVAL PLANS - FIRST & SECOND FLOOR

#### STRUCTURAL DRAWINGS

WES S100 STRUCTURAL NOTES, PLANS, AND DETAILS

# **ARCHITECTURAL DRAWINGS**

WES	A111	NEW WORK PLANS - FIRST AND SECOND FLOOR
WES	A601	ELEVATIONS AND SECTIONS
WES	A651	CASEWORK DETAILS
WES	A701	PARTITION TYPES
WES	A702	PARTITION TYPES
WES	A811	REFLECTED CEILING PLANS, DEMO PLANS, AND DETAILS
WES	A901	DOOR, WINDOW, & STOREFRONT DETAILS

# **ARCHITECTURAL DRAWINGS**

ARCHITECTURAL FINISH DRAWINGS

WES AF001 SIGNAGE TYPES AND SCHEDULE

WES AF111 MATERIAL SCHEDULE, FURNITURE, AND FLOOR FINISH PLANS

# **PLUMBING GENERAL DRAWINGS**

WES P001 PLUMBING NOTES, SCHEDULE, LEGEND & DETAILS

# **PLUMBING DRAWINGS**

WES P111 PLUMBING PLANS

# **MECHANICAL GENERAL DRAWINGS**

WES M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

#### **MECHANICAL DEMOLITION DRAWINGS**

WES MD111 MECHANICAL DEMOLITION PLANS

#### **MECHANICAL DRAWINGS**

WES M111 MECHANICAL PLANS

#### **ELECTRICAL GENERAL DRAWINGS**

WES E001 ELECTRICAL NOTES, LEGENDS, SCHEDULES & DETAILS

# **ELECTRICAL DEMOLITION DRAWINGS**

WES ED111 ELECTRICAL DEMOLITION PLANS

# **ELECTRICAL DRAWINGS**

WES E111 ELECTRICAL PLANS

VOLUME 08 OF 08 - ADMINISTRATION BUILDING (ADMIN)

#### **GENERAL DRAWINGS**

ADMIN G000 COVER & SHEET IN

ADMIN G001 SYMBOLS, ABBREVIATIONS, AND MISC.

CSArch

Project No. 187-2302.01

# **ARCHITECTURAL DRAWINGS**

ADMIN A101 OVERALL FLOOR PLAN

# **PLUMBING GENERAL DRAWINGS**

ADMIN P001 PLUMBING NOTES, LEGEND & DETAILS

# **PLUMBING DRAWINGS**

ADMIN P111 PLUMBING PLANS

# **MECHANICAL GENERAL DRAWINGS**

ADMIN M001 MECHANICAL NOTES, LEGEND, SCHEDULES & DETAILS

# **MECHANICAL DRAWINGS**

ADMIN M111 MECHANICAL PLANS

# **ELECTRICAL GENERAL DRAWINGS**

ADMIN E001 ELECTRICAL NOTES, LEGENDS, & SCHEDULES

#### **ELECTRICAL DRAWINGS**

ADMIN E111 ELECTRICAL PLANS

**END OF SECTION** 

Valley Central 2023 Bond phase 1																					
Project Lead: William Devine						Dec-2		Jan-25		Feb-25		Mar-25	0 40 44	Apr-25		lay-25	Jun-25		Jul-25	Aug-25	Sep-25
WBS Task Name	Start	Finish	Duration	RESPONSIBILTY	LOCATION	49 5	51 52	1 2 3	4 5 6	6 7 8	8 9 1	10 11 12	2 13 14	15 16 1	17 18 18	9 20 21	22 23 24	25 26 2	7 28 29 30	31 32 33 3	4 35 36 37 38
1 <u>Mobilization</u>	Mon 02-Dec-24	Mon 02-Dec-24	1			Mo	obilization	1													
Night Shift at schools from Dec-June	Mon 02-Dec-24	Fri 27-Jun-25	150			Nig	ght Shift a	t schools fr	om Dec-	-June											
3 Montgomery Elementary	Mon 30-Jun-25	Mon 30-Jun-25	1																Montgome	ry Elementar	у
4 High School	Mon 02-Dec-24	Mon 02-Dec-24	1			Hig	gh School														
5 Berea Elementary	Mon 02-Dec-24	Mon 02-Dec-24	1			Be	rea Eleme	entary													
6 Maybrook Elementary	Mon 30-Jun-25	Mon 30-Jun-25	1																Maybrook I	Elementary	
7 Walden Elementary	Mon 02-Dec-24	Mon 02-Dec-24	1			Wa	alden Elen	mentary													
8 East Coldenham Elementary	Mon 30-Jun-25	Mon 30-Jun-25	1																East Colder	ham Elemen	tary
9 <u>Work breakdown</u>	Mon 02-Dec-24	Sat 23-Aug-25	190			Wo	ork break	down													
10 Montgomery Elementary	Mon 30-Jun-25	Fri 22-Aug-25	40																Montgome	ry Elementar	у
11 Storefronts/lobby/office	Mon 30-Jun-25	Sat 23-Aug-25	40																Storefronts	/lobby/office	
12 Renovations	Mon 30-Jun-25	Fri 22-Aug-25	40																Renovation	S	
13 Final Cleaning	Mon 25-Aug-25	Wed 27-Aug-25	3																		Final Cleani
14 Substantial completion	Thu 28-Aug-25	Thu 28-Aug-25	1																		Substantial
15 High School	Mon 02-Dec-24	Fri 22-Aug-25	190			Hig	gh School														
16 New Mechanical piping	Mon 02-Dec-24	Fri 22-Aug-25	190			Ne	ew Mecha	nical piping													
17 New Electrical for Mechanical	Mon 02-Dec-24	Fri 22-Aug-25	190			Ne	ew Electric	cal for Mech	anical												
18 Abatement	Sat 21-Dec-24	Fri 27-Dec-24	5				Abate	ement													
19 Boilers	Mon 26-May-25	Fri 22-Aug-25	65														Boilers				
20 Storefronts/lobby/office	Mon 30-Jun-25	Fri 22-Aug-25	40																Storefronts	/lobby/office	
21 Renovations	Mon 30-Jun-25	Fri 22-Aug-25	40																Renovation	S	
22 Final Cleaning	Mon 25-Aug-25	Wed 27-Aug-25	3																		Final Cleani
23 Substantial completion	Thu 28-Aug-25	Thu 28-Aug-25	1																		Substantial
24 Berea Elementary	Mon 02-Dec-24	Fri 22-Aug-25	190			Ве	rea Eleme	entary													
25 New Mechanical piping	Mon 02-Dec-24	Fri 22-Aug-25	190			Ne	w Mecha	nical piping													
26 New Electrical infrastructure	Mon 02-Dec-24	Fri 22-Aug-25	190			Ne	ew Electric	cal infrastru	cture												
27 New plumbing Infrastructure	Mon 02-Dec-24	Fri 22-Aug-25	190			Ne	w plumbi	ng Infrastru	cture												
28 Storefronts/lobby/office/concerete	Mon 30-Jun-25	Fri 22-Aug-25	40																Storefronts	/lobby/office	/concerete
29 Renovations	Mon 30-Jun-25	Fri 22-Aug-25	40																Renovation	S	
30 Final Cleaning	Mon 25-Aug-25	Wed 27-Aug-25	3																		Final Cleani
31 Substantial completion	Thu 28-Aug-25	Thu 28-Aug-25	1																		Substantial
32 Maybrook Elementary	Mon 30-Jun-25	Fri 22-Aug-25	40																Maybrook I	Elementary	
33 New Mechanical	Mon 30-Jun-25	Fri 22-Aug-25	40																New Mecha	anical	
34 New Electrical	Mon 30-Jun-25	Fri 22-Aug-25	40																New Electri	cal	
35 New plumbing	Mon 30-Jun-25	Fri 22-Aug-25	40																New plumb	ing	
36 Storefronts/lobby/office	Mon 30-Jun-25	Fri 22-Aug-25	40																	/lobby/office	
37 Renovations	Mon 30-Jun-25	Fri 22-Aug-25	40																Renovation		
38 Final Cleaning	Mon 25-Aug-25	Wed 27-Aug-25	3																		Final Cleani

39 Substantial completion	Thu 28-Aug-25	Thu 28-Aug-25	1		Substantial com
40 <u>Walden Elementary</u>	Mon 02-Dec-24	Fri 22-Aug-25	190	Walden Elementary	
41 New Mechanical piping	Mon 02-Dec-24	Fri 22-Aug-25	190	New Mechanical piping	
42 New Electrical infrastructure	Mon 02-Dec-24	Fri 22-Aug-25	190	New Electrical infrastructure	
43 New plumbing Infrastructure	Mon 02-Dec-24	Fri 22-Aug-25	190	New plumbing Infrastructure	
44 Storefronts/lobby/office/concerete	Mon 30-Jun-25	Fri 22-Aug-25	40	Storefronts/lobby/	office/concerete
45 Renovations	Mon 30-Jun-25	Fri 22-Aug-25	40	Renovations	
46 Final Cleaning	Mon 25-Aug-25	Wed 27-Aug-25	3		Final Cleaning
47 Substantial completion	Thu 28-Aug-25	Thu 28-Aug-25	1		Substantial com
48 East Coldenham Elementary	Mon 30-Jun-25	Fri 22-Aug-25	40	East Coldenham Ele	ementary
49 New Mechanical	Mon 30-Jun-25	Fri 22-Aug-25	40	New Mechanical	
50 New Electrical	Mon 30-Jun-25	Fri 22-Aug-25	40	New Electrical	
51 New plumbing	Mon 30-Jun-25	Fri 22-Aug-25	40	New plumbing	
52 Storefronts/lobby/office	Mon 30-Jun-25	Fri 22-Aug-25	40	Storefronts/lobby/	office
53 Renovations	Mon 30-Jun-25	Fri 22-Aug-25	40	Renovations	
54 Final Cleaning	Mon 25-Aug-25	Wed 27-Aug-25	3		Final Cleaning
55 Substantial completion	Thu 28-Aug-25	Thu 28-Aug-25	1		Substantial con
56 District office	Mon 30-Jun-25	Fri 22-Aug-25	40	District office	
57 New mechanical/Electric/plumbing	Mon 30-Jun-25	Fri 22-Aug-25	40	New mechanical/El	lectric/plumbing
58 Substancial completion	Mon 25-Aug-25	Mon 25-Aug-25	1		Substancial con
59 <b>Submittals</b>	Mon 02-Dec-24	Fri 24-Jan-25	40	Submittals	
60 Boilers	Mon 02-Dec-24	Fri 27-Dec-24	20	Boilers	
61 Mechanical equipment	Mon 02-Dec-24	Fri 27-Dec-24	20	Mechanical equipment	
62 Storefronts	Mon 16-Dec-24	Fri 10-Jan-25	20	Storefronts	
63 General submittals	Mon 09-Dec-24	Fri 03-Jan-25	20	General submittals	

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#### PART 1 GENERAL

# 1.1 RELATED DOCUMENTS

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

# 1.2 SUMMARY

- A. Section includes:
  - 1. Project information.
  - 2. Work covered by Contract Documents.
  - 3. Construction schedule.
  - 4. Requirements and assignments for each Contract.
  - 5. Owner-furnished products.
  - 6. Access to GC.
  - 7. Coordination with occupants.
  - 8. Work restrictions.
- B. The section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls.
- C. Each Contractor is responsible for reviewing all Drawings and Specifications for every contract to gain a complete understanding and knowledge of the entire Project, to determine how the work of each contract is to interface with every other contract.

# 1.3 DEFINITIONS

- A. Project Identification: Project consists of all labor, materials, equipment, appliances, services, and incidentals necessary for layout, installing, and performing Additions and Alterations at the Valley Central School District as shown on the Contract Drawings and described in the Specifications.
- B. Work starts 2024 and ends summer of 2025. See schedule for more accurate dates.
- C. The work will be constructed under multiple prime contracts. One set of contract documents is issued covering multiple contracts. Each Prime Contract is defined as:
  - CONTRACT 1 GAC-1-01 GENERAL CONSTRUCTION WORK
     Abatement/GC/roofing/ work will be covered in the General Construction Scope and contract.

- 2. CONTRACT 2 MPC-1-02 MECHANICAL AND PLUMBING CONSTRUCTION WORK
- 3. CONTRACT 3 EC-1-03 ELECTRICAL CONSTRUCTION WORK

PART 2 A 6-DAY WORK WEEK IS REQUIRED ON THIS PROJECT WITH HOURS FROM 7AM-3:30PM SCHEDULE AND OR DIRECTED BY THE CONSTRUCTION MANAGER. THERE IS A NIGHT SHIFT AS PER THE SCHEDULE AND PHASING PLANS.

- 2.1 Architect Identification: The Contract Documents were prepared for the Project by CS ARCH ARCHITECTS
  - A. Construction Manager: The Palombo Group has been engaged as Construction Manager for this Project to serve as an advisor to Owner and to aid in administering the Contract for Construction between Owner and Contractor, according to a separate contract between Owner and Construction Manager.
  - B. Comply with the following: Current New York State Building Code and the building standards of the New York State Education Department.

# 2.2 THE CONTRACT

- A. The Project will be constructed under a multiple prime contracting arrangement with the Owner awarding and holding separate Contracts. Each contractor shall furnish all labor, bonds, insurance, material, tools, rigging, equipment, supervision, layout, delivery, trucking, shop drawings, submittals, coordination, etc. necessary to complete the work described in the Divisions of Work of their respective contracts (Including where coordination between primes occurs) and based upon a complete set of Contract Documents.
- B. Each Contractor has been given the opportunity prior to bidding to inspect the entire Project for references to their Contract work and agrees to accept as it exists on the date of the bid opening.
  - 1. It is the Owner's intention to continue to occupy the existing buildings for normal School operations during the Construction process. The Contractors all agree to:
  - 2. Cooperate with the Owner's personnel in maintaining and facilitating access to the school buildings and its facilities by the school staff, Students, Owner's agents, service consultants and the public, throughout the construction process.
  - 3. Keep driveways and entrances serving the occupied School buildings clear and available to the Owner, the Owner's employees, the public, and to emergency vehicles always. Do not obstruct access to, or use these areas for parking, staging of equipment or materials. All access through these existing areas must be coordinated in advance and in accordance with the Owner's usage and occupancy schedule.

- 4. Schedule construction operations to minimize any conflicts or interruptions to the daily school functions. Coordinate any necessary interruptions with the designated project representative.
- 5. All existing Owner-occupied areas of buildings (not turned over to the Project Contractors) need to always remain operational. The contractors are responsible for maintaining all systems, such as but not limited to: fire alarm, clocks, electric, public address system, gas service, heat, security, data, etc.
- 6. Each Contractor shall provide a list of employees, which MUST be cleared by district through the raptor system and updated accordingly prior to any access to the properties.
- 7. Each contractor will provide sign in sheets of their respective manpower to the CM Daily.
- 8. Safety Meetings are required weekly with the sign in sheet being delivered to the CM Representative promptly.

## C. Each Prime Contractor shall:

- 1. Provide field-engineering services, in addition to those provided by the General Work Prime Contract, to install utilities included in the applicable Prime Contract.
- 2. Coordinate to create a construction schedule information to formulate one master schedule for the entire Project by the GC.
- 3. Provide reflective vests and PPE to always be worn by all on-site personnel. Parties that do not abide by this requirement will be escorted off the premises.
- 4. Provide erosion and Sediment Control and dewatering as it relates to any excavation associated with the GC Prime Contract.
- 5. Provide potable drinking water for its own employees.
- 6. Provide access to all concealed systems as required for system maintenance and repair for items installed in their Prime Contract. This specifically talks to access panels needed for future maintenance by the district.
- 7. Provide and maintain material lifting equipment required for the completion of their Contract requirements, and complying with NYS Labor Laws, OSHA Regulations, and other Federal, State, and local laws.
- 8. Provide and maintain additional temporary stairs, ladders, ramps, scaffolding, and platforms required specifically for completion of work of their own Contract, and as further detailed in this section. All work needs to comply with the NYS Labor Laws, OSHA regulations, and other Federal, State, and local laws.
- 9. Provide Fire Prevention materials and equipment for fire protection related to the work of their own Prime Contract. Provide fire extinguishers, fire blankets, and fire watch during all cutting and welding operations. Protect all existing components like smoke detectors, etc.
- Provide any supplemental lighting required to install the work of its own Contract, beyond the minimum OSHA levels provided under the Electrical Work Prime Contract.

- 11. Provide any supplemental heat required to install the work of its own Contract when temp heat is needed outside the timeline of interior finishing work. Temp heat provide by MC and must be electrical sourced.
- 12. Provide traffic control for deliveries, and equipment needed to perform the work of their own Prime Contract. Access must be coordinated with the district building operation schedule.
- 13. Provide protection of its own finished Work, after installation, until accepted by the Owner.
- 14. Provide fire caulking for any penetration related to the work for its own Prime Contract.
- 15. Provide any office and storage trailers required to complete the work of their own Prime Contract. Storage containers must be within the staging area and approved by the district.
- 16. GC to provide for a thorough final cleaning of the entire work areas by a professional cleaning company pre accepted by the district, building (existing), and equipment provided under their other Contract immediately before the final inspection. Cleaning must be accepted by the district and done to their standards. Each Prime Contractor is responsible for daily cleaning of dust and debris generated from the work of their own Contract. Maintain areas in a cleaned condition until the Owner occupies the space. All new floors get three coats of wax by GC prior to turn over.

## 2.3 SUMMARY OF WORK

- A. The work will be constructed under multiple prime contracts. One set of contract documents is issued covering the multiple contracts. Each Prime Contract is defined as:
- B. PHASE 1–2023 CAPITAL IMPROVEMENT PROJECT- WORK CONSISTS OF BUT NOT LIMITED TO THE FOLLOWING:
  - 1. GENERL / ABATEMENT CONTRACTOR Renovations to existing Buildings and abatement.
  - 2. MECHANICAL AND PLUMBING CONTRACTOR -Renovations to existing buildings, New mechanical units throughout multiple buildings. New boilers and associated work at the high school. "Install only" pertains to Trane supplied units only, all other units/equipment supplied and installed by this contractor.
  - 3. ELECTRICAL CONTRACTOR Renovations and Mechanical connections at multiple buildings.

#### 3.2 WORK UNDER SEPARATE CONTRACTS

A. The project will be constructed under a multiple-prime contracting arrangement

- B. One set of documents is issued covering all prime contracts scope of work. Each prime contractor is to review ALL drawings and specifications for complete understanding and knowledge of the work to be performed by all trades. Any questions of responsibility should be discovered Pre award. After award, the CM has the right to dictate responsibility.
- C. The following Contract Documents are specifically included and defined as integral to each Prime Contract.
  - 1. Bidding Requirements
  - 2. Performance and Payment Bonds
  - 3. Conditions of the Contract, including
    - a. General Conditions & Supplementary Conditions
    - b. Insurance Requirements
    - c. NYS Prevailing Wage Rates
- D. Extent of Contract: Unless the Contract Documents contain a more specific description of the work, names and terminology on Drawings and in Specification Sections determine which contract includes a specific element of the Project.
  - Unless otherwise indicated, the Work described in this Section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the Contract Documents.
  - 2. All Concrete Work inside/outside the building footprint shall be provided by the GC, unless specifically assigned to another Contract.
  - 3. Concrete work inside the existing building will be the responsibility of the General Contractor.
  - 4. Provide all cutting, core drilling & patching associated with the Work of its own Prime Contract. All patching is to be performed by mechanics qualified and experienced with the materials and finishes being patched and hired by the responsible Prime Contractor. New openings requiring structural reinforcing including lintels for all trades will be the responsibility of the General construction contract. Coordinate with Drawings and lintel schedule for opening size requirements.
  - 5. Lead Based Paint precautions for the Work of each contract shall be provided by each contract for its own Work. Each Prime Contractor shall provide procedures for OSHA Lead precautions.
  - 6. Each Prime Contractor shall designate a full-time superintendent to supervise the work of the Prime Contractor, who shall always be present on the job site when work is being performed; this person shall be familiar with Project and authorized to conclude matters relating to progress. This person shall also represent their company at weekly contractor meetings.
  - 7. Termination and removal of its temporary facilities shall be provided by each contract for its own Work.

- 8. The Electrical Contractor shall provide temporary power and lighting for all trades.
- 9. Temp Heat will be provided by the Mechanical Contractor when finishes are being applied or as directed by the construction manager. Including operator to ensure uninterrupted service. Electrical contractor to provide temp power to temp mechanical equipment.
- 10. Installation, operation, maintenance, and removal of each temporary facility are usually considered as its own normal construction activity, and costs and use charges associated with each facility.
- 11. Generators, plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
- 12. Each Prime Contractor is to stockpile his debris on a daily basis and place it in the dumpster. Dumpsters will be provided by the General Construction contract for use by the Prime contractors, and recycling materials will be instituted daily. Waste disposal facilities, including collection and legal disposal of its own hazardous, dangerous, unsanitary, or other harmful waste materials will be by the Hazardous Material Abatement sub-Contractor under the GC contract.
- 13. Secure lockup of its own tools, materials, and equipment.
- 14. Safety procedures as dictated by the district, OSHA, and the NYS Department of Labor.
- 15. Labor for daily clean-up.
- 16. General Contractor to include Temp site fence around areas of work and staging areas as directed by the CM. Fence will be removed when work is complete and signed off by the architect. Including staging areas.
- 17. PC to provide temp water line, including insulation for the CM trailer hookup, a. assume 80LF.
- 18. PC to provide sewar connection from CM trailer to septic tank, make custom lid to feed sewer line directly through tank lid. Assume 50LF and include insulation.
- 19. EC to heat trace water and sewer line listed in items #8 and #9 above for Water and sewer connections to CM trailer.

## 3.3 CONTRACT 1 - GENERAL ABATEMENT CONSTRUCTION

- A. The Work of the General Abatement Construction Work Contract includes but is not limited to, the following descriptions:
  - 1. Includes new building construction, renovations, and alterations. This includes, but is not limited to, work shown on the following:
  - 2. Drawings:
    - a. All "T" Title sheets, general notes, code compliance and Phasing Drawings" (General)
    - b. All "A" Drawings (Architectural)
    - c. All "HZ" Drawings (Hazardous Materials Abatement)

- d. All "I" Drawings (Interiors)
- e. All "S" Drawings (Structural)
- f. All "C" Drawings (Civil)
- g. All "U" Drawings (General)

#### 3. Coordination:

- a. Coordinate with the work of all the other contractors.
- b. Each trade will participate in producing coordination drawings. The General, Mechanical/Plumbing and Electrical contractors will overlap their new work and coordinate locations, heights, routes, Etc. to eliminate hits and or obstructions from existing or new work. Each trade will meet once a week to coordinate their drawings. Ductwork and mechanical piping first, plumbing second and electrical third. A full set of coordination drawings must be completed within Five weeks after award of contract.
- c. General Contractor provides a complete coordinated schedule including all trades durations for the span of the project, including weekly updates if necessary.

#### 4. Demolition:

- a. Provide protection for all materials and objects to remain intact.
- b. Removal of masonry walls, doors, and interior partitions as required for new work. General Contractor is responsible for shoring, demolition and protection of areas associated with new work.
- c. Removal of finishes noted on plans including but not limited to flooring, ceilings, and misc. items attached to existing walls to be removed. Review patch to match conditions. Patch openings from removed unit ventilators, window A/C and plumbing pipes a required.
- d. Removal and disposal of miscellaneous equipment including all existing wall mounted specialty items and/or equipment not shown if impacting work to be demolished. Coordinate shutdown (of utilities) with TPG and trades associated with the area of demolition. See demolition plans for additional notes.
- e. All cutting and patching necessary for work of this contract, including layout, sleeves, coring, debris removal, saw cuts of existing slabs, providing lintels, drywall work, plaster work, grouting, painting, ceiling removal and replacement, etc, this trade contractor will be responsible for other trades wall openings (cutting and infill) if structural support is required.
- f. Provide temporary access and continuous exits in and out of all construction areas.
- g. Provide dust protection. Including but not limited to adjacent louvers and air intakes within forty feet of the exterior work area. Include protection of fire alarm head, smoke detectors, duct detectors, etc.
- h. Provide Temporary storage for salvaged materials as indicated on the drawings until reinstallation of such materials.

- i. Removal and disposal of any existing curbing, stairs, bituminous paving, and walks as shown or described on the contract drawings.
- j. Include equipment pads for all trades as needed
- k. Include Abatement as part of this contract-See drawings for scope.
- I. Any demolition associated with the abatement is to be repaired, replaced and or put back to its original state prior to demo by this contractor.

# 5. Temporary Facilities: In Addition to

- a. Provide dust protection as directed by the CM and temporary site/security fencing with mesh for the period of the contract. Install temp walls just prior to the start of new GC work in that area or as directed by the CM
- b. Provide wash out area for construction vehicles designated by the CM.
- c. Provide Portable toilets for all trades. One toilet per five men.
- d. Provide snow removal for contractors staging and work areas if applicable.
- e. Provide and install Project information signs at the Site and inside the buildings as directed by the CM. Signs provided and installed by GC. See specifications for size and materials. See logistics plan for additional signage.
- f. Provide Temporary Facilities indicated as Work of this Contract in Division 1 Section 01 5000, "Temporary Facilities and Controls"

#### 6. New Construction:

- a. The General Construction Work Contract shall perform all necessary cutting, trenching, excavation, backfilling, compaction, and new concrete infills inside the existing building and field required poured in place concrete for all other primes. Coordinate Architectural drawings with M, E and P drawings for existing slab openings for other trades and performed under this contract.
- b. Provide multiple shifts work as needed to complete work as shown on milestone schedule. Multiple shifts during the week and single shift on Saturdays will be required to make up days on the schedule, unless the contractor requests the additional time for other reasons that are acceptable by the district.
- c. General Requirements, including but not limited to, additional items specifically indicated as the Work of this Contract.
- d. Provide a surveyor to layout new exterior and interior, submit to architect for approval.
- e. All concrete slabs on grade outside doors by this trade.
- f. General contractor to supply and install all railings as shown on the contract drawings
- g. General contractor to include all roofing scope in this contract including associated accessories like down spouts, crickets, and MEP openings, setting and roofing in MEP curbs.

- h. General contractor to supply and install all casework as shown on the contract drawings. Field measuring and shop drawings for architect approval will be the responsibility of this trade. This includes owner supplied casework.
- i. GC to include all winter concrete and masonry measures and expenses in this contract.
- j. Include all storefronts, including installation, associated hardware for full functionality as indicated on the contract drawings. Provide all ADA hardware including installation.
- B. The Work of the General Construction Contract includes but is not limited to, the following descriptions.
  - 1. This trade is responsible for always maintaining a secure Site, including but not limited to locking all gates and doors at the end of each day.
  - 2. Provide all temporary fall protection, guardrails, handrails, temporary stairs and ramps as required. Include maintaining these items throughout the project as well as removal when no longer needed.
  - 3. Provide and maintain all site signage as requested by the CM. Example; Gate A-B, Hard hat area, No Smoking, Construction personnel only, Exit signs, Project information sign, Etc...
  - 4. General Construction Contractor shall obtain and pay for any permits, inspections, or certifications from governing authorities having jurisdiction over the work to be performed, or over the finished product to be installed by this Contractor. Project Building Permit is by others. Include in this contract hydrant use permits if necessary.
  - 5. Provide all roofing work, Roof blocking and plywood, including:
    - a. Provide roof penetrations and blocking for mechanical equipment curbs furnished by HVAC contractor. HVAC and PC contractor to coordinate with General Construction Contractor.
    - b. Temporary and final roofing, weather-tight protection for roof shall be by the General Construction Contractor.
    - c. Patching at all removed existing walls. Including paint and finishes
    - d. Patching at all removed existing millwork and casework items.
    - e. Patching at all removed existing and replaced console unit ventilators. Misc. insulation and brick infill at voids by General Contractor. Patch to match the brick/EIFS at the exterior walls and the block at interior walls and where louver openings needed to be modified, or A/c units removed all by the General Work Contractor. Also patch to match existing floor at areas where old UVs are removed and or replaced.
    - f. Patching at all relief grills removed in corridors.
    - g. Patching at all new door openings cut through existing walls.
    - h. Patching at all new walls in construction where existing walls have been removed.

- 6. Provide (unless noted otherwise):
  - a. Provide interior/exterior equipment and housekeeping pads for all Prime Contracts, coordinate as necessary for size and locations.
  - b. Include in base bid to furnish and install the following access doors beyond those already shown on drawings or required for access above ceilings and behind walls:
  - c. Four 18" x 18" fire-rated access doors for gypsum wallboard construction.
  - d. Four 18" x 18" fire-rated access doors for masonry construction.
  - e. Four 12" x 12" Fire Rated access doors for masonry construction.
  - f. Four 8" x 8" non-rated, primed steel, trim less, access doors for gypsum wallboard construction.
  - g. Purchase and turn over the following items to the CM:
    - 1) 1-HP Office Jet Pro 7740 printer 8-1/2" to 11x17"
    - 2) 10 cartridges of each ink color for the above printer
    - 3) 1 Water cooler/heater and 6-five-gallon bottles of water.
    - 4) 1 large box of 16 oz cups for hot liquids
    - 5) (4) 8' plastic folding tables
    - 6) 2 Rolling office chairs with arms
- 7. Provide and install window shades if required per contract drawings.
- 8. Salvage and reinstall ceiling tile as indicated. Replace damaged tile with new at GC contractor's expense even if damaged by others.
- 9. in addition to the contract allowance, provide and install seven boxes of new ceiling tile to match existing as part of base bid.
- 10. Provide engineered shoring plan at any major wall openings for Architect review and or as called out on the drawings.
- 11. All ceiling access doors are installed by the General Contractor.
- 12. All concrete, rebar and forms are provided and installed by the general contractor as shown on the contract drawings.
- 13. General contractor to modify ceilings in classrooms as shown and described in the contract drawings
- 14. Provide and install all Structural steel as per the drawings and or for MEP trades where structural support for their openings are required.
- 15. All interior trench infill requiring concrete will be by this contractor. Coordinate with M, P and E drawings for locations.
- C. GC contractor to excavate for all trades and all work outside the building footprint.
- D. GC contractor includes all storm and wastewater work outside the building.
- E. GC contractor to include all topsoil and seeding at areas disturbed by construction activities.
- F. GC contractor to include all paving/curbs/sidewalks and associated work including line striping.

- G. GC contractor to include all landscaping/plantings/trees as shown on the contract drawings.
- H. This trade to maintain a clean, dust and debris free roadway outside of the site perimeters.
- I. GC contractor to include demolition and replacement of all sidewalks as shown on the drawings.
- J. Provide temporary driveway, parking lot paving and drainage if required.
- K. Areas modified for construction/staging to be placed back to its natural state once construction is complete.
- L. The Work of the General Construction Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. The Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:
  - 1. Division 00 Procurement and Contracting Requirement, all Sections.
  - 2. Division 1 General Requirements, all Sections, including Temporary Facilities indicated.
  - 3. Division 2 Selective Structure Demolition
  - 4. Division 3 Concrete, all Sections.
  - 5. Division 4 Masonry, all Sections.
  - 6. Division 5 Metals, all Sections.
  - 7. Division 6 Woods, Plastics and CompoGCs, all Sections.
  - 8. Division 7 Thermal and Moisture Protection, all Sections
  - 9. Division 8 Openings, all Sections
  - 10. Division 9 Finishes, all Sections.
  - 11. Division 10 Specialties, all Sections
  - 12. Division 11 Equipment, all Sections, all Sections
  - 13. Division 12 Furnishings, all Sections
  - 14. Division 14 Conveying equipment
  - 15. Division 19 Section 193000—Theatrical Stage Rigging and curtains
  - 16. Division 31 Earthwork all sections
  - 17. Division 32 Exterior Improvements all sections

## 3.4 CONTRACT 2 – MECHANICAL & PLUMBING CONTRACT

- A. \*See Plumbing in separate sections of this summery of work but to be included with mechanical scope
- B. Work of this Contract includes, but is not limited to, the following descriptions:

- 1. New mechanical units install, piping, connections, and startup. Demolition and removal of old equipment and associated hardware, valves, piping, ductwork, balancing, etc...
- 2. Includes Water Distribution Service, plumbing fixtures and other systems traditionally recognized as Plumbing work. This includes but is not limited to, all work shown on the "P" as it relates to your scope of work, and applicable information shown on the contract drawings.
- 3. All "Title sheets, general notes, code compliance and Phasing Drawings" (General)
  - a. All "T" Drawings Title sheets, general notes, code compliance and Phasing Drawings" (General)
  - b. All "A" Drawings (Architectural) For coordination
  - c. All "H" Drawings (Mechanical)
  - d. All "P" Drawings (Plumbing)
  - e. All "S" Drawings (Structural) For coordination
  - f. All "U" Drawings (General) Temp Construction
- 4. All personnel on site shall always have a photo ID displayed where visible. Those without will be removed at once. If the same individual fails to have the ID a second time they will be removed f and not be allowed back. All personnel will be subject to the raptor system check and cleared before entering the property.
- C. Work of this Contract includes, but is not limited to, the following descriptions:
  - Includes HVAC Equipment install, Piping, ductwork, control systems, plus other
    construction operations traditionally recognized as heating, ventilating and
    cooling work. This includes, but is not limited to, all work shown on the drawings,
    and applicable information shown on the architectural and electrical drawings,
    unless noted otherwise. It also includes Administrative and coordination
    responsibilities.
  - 2. Mechanical units only provided by Trane and installed by this trade. Coordination between Trane and this contractor is required. See list of equipment provided by addendum.
  - 3. Controls supplied by others but coordinated by this contractor.
  - 4. Coordination:
  - 5. a) Coordination with the work of all the other contractors and suppliers.
  - 6. b) Each trade will participate in producing coordination drawings. The
  - 7. Mechanical/Plumbing and electrical contractors will overlap their new work and coordinate locations, heights, routes, Etc. to eliminate hits and or obstructions from existing or new work. Each trade will meet once a week to coordinate their drawings. Ductwork and mechanical piping first, plumbing second and electrical third. A full set of coordination drawings must be completed within four weeks after the award of contract.
  - 8. Demolition:

- 9. Provide demolition of all HVAC and Plumbing equipment and piping as shown and as required at the existing building. Salvage equipment for reinstallation as indicated on the drawings if applicable.
- 10. Include All cutting and patching necessary for work of this contract, including layout, sleeves, coring, debris removal, saw cuts, drywall work, plaster work, grouting, painting, etc. GC to patch Floors, walls, louvers, Etc.. at the locations needing finish work.
- 11. Temporary Facilities:
- 12. Provide Temporary Facilities indicated as Work of this Contract in Division 1 "Temporary Facilities and Controls"
- 13. Include protecting all air intakes by mechanical equipment with temporary filters to help mitigate dust control.
- 14. This contractor will be responsible for receiving and storing mechanical units until the time of installation. Storage sources will be the responsibility of this contractor.
- 15. This contractor will be responsible for coordinating with TRANE in conjunction with the supply of the mechanical units. Coordination will include what is needed to properly install the mechanical units.

## 16. Construction:

- a) The General Construction Contractor is to provide rough openings in walls that require structural support including lintels. Submit to the Construction Manager the name and qualification of the subcontractor performing the installation prior to starting the work.
- b. b) The General Construction Contractor shall perform all necessary trenching and excavation, backfilling, compaction and new poured in place concrete for all trades
- c. c) All low voltage for HVAC equipment by this trade except for mechanical control (BMS).
- d. d) Provide and install all controls (outside of the BMS) components into air and hydronic systems as required maintaining the integrity of the system per spec and programmed based on districts existing system:
- e. Install motor actuated dampers.
- f. Install airflow measuring stations.
- g. Install airside temperature and pressure sensors.
- h. Install hydronic control valves.
- i. Install hydronic temperature and pressure sensor wells
- j. Provide TAB and participate in commissioning work of the EMCS as required for controls of the work of this contract.
- k. Provide all ductwork as indicated on the drawings
- I. Lifts and scaffold for means and methods of installation of work under this trade is the responsibility of the trade.

- m. All exposed duct to be painted by this trade if require by the contract documents.
- 17. a) Provide and install new RTUs and associated piping hangers and duct work.
  - a. b) Provide and install Hydronic and refrigerant piping and pumps
  - b. c) Provide and install new exhaust fans and ductwork as shown.
  - c. d) Install Air Handling Units and Roof top units if shown on the schedule
  - d. e) Install all equipment as scheduled on drawings
  - e. f) Provide and install new unit heaters, piping controls.
  - f. Provide contractor filters, final replacement filters and final duct cleaning.
- 18. Provide and install all insulation, painting and labeling of new and modified piping, ductwork and equipment as required.
- 19. Provide all testing, adjusting and balancing of all new and existing modified HVAC systems.
- 20. All fees required for inspections and permits. Building permit by owner
- 21. Provide support framing for HVAC equipment, i.e. mechanical equipment curbs, dunnage.
- 22. Furnish access doors for HVAC access (to be installed by GC)
- 23. Provide firestopping and sealing at all HVAC penetrations
- 24. Furnish motor controllers/disconnects to Electrical Contract for installation and wiring. MC to mount disconnects.
- 25. Provide the necessary curbs and layout for all roofing penetrations to the General Work Contractor.
- 26. Provide and video owner training / commissioning of equipment, more than once if needed.
- 27. Provide replacement of all new unit filters at start up.
- 28. Provide Grilles as shown.
- 29. Provide and install all condensate drains and pumps for mechanical equipment
- 30. Install new filters at substantial completion.
- 31. Controls:
  - a. BMS Controls By others see controls language by addendum
- D. The Work of the Mechanical / Plumbing Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. The Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:
  - 1. Division 00 Procurement and Contracting Requirement, all Sections.
  - 2. Division 01 General Requirements all Sections, including Temporary Facilities indicated
  - 3. Division 02 Demolition as required for the Work of this Contract
  - 4. Division 04 Concrete as required for this contract
  - 5. Division 05 Metals as required for the Work of this Contract

- 6. Division 07 Thermal and moisture protection
- 7. Section 079200 Joint Sealants
- 8. Section 07 8400 Firestopping, as required for the Work of this Contract
- 9. Division 22 Plumbing, all sections
- 10. Division 23 HVAC, all Sections.
- 11. Division 26 Electrical, As required for the work of this Contract

#### 3.5 CONTRACT 3 - ELECTRICAL WORK CONTRACT

- A. Work of this Contract includes, but is not limited to, the following descriptions:
  - 1. Includes Electrical Distribution Service, Lighting, CATV systems, Communications, Fire Alarm, Intercom Systems, Security Systems, Emergency Lighting, and other systems traditionally recognized as Electrical work. This includes but is not limited to, all work shown on the "E" drawings as it relates to your scope of work, and applicable information shown on the
  - 2. All "T" & "U" Drawings "Title sheets, general notes, code compliance and Phasing Drawings" (General)
  - 3. All "A" Drawings (Architectural) As required for the work of this contract
  - 4. All "H" Drawings (Mechanical) As required for the work of this contract
  - 5. All "P" Drawings (Plumbing) As required for the work of this contract
  - 6. All "E" Drawings (Electrical)
  - 7. Coordination:
  - 8. Coordination with the work of all the other contractors.
  - 9. Each trade will participate in producing coordination drawings. The
    - a. Mechanical/Plumbing and electrical contractors will overlap their work and coordinate locations, heights, routes, Etc. to eliminate hits and or obstructions from existing or new work. Each trade will meet once a week to coordinate their drawings. Ductwork and mechanical piping first, plumbing second and electrical third. A full set of coordination drawings must be completed within four weeks after the award of contract.
  - 10. Electrical contractor to layout the work of its scope of work when the general contractor is to cut openings requiring structural support and or slab openings.
  - 11. Any devices not to code that are not scheduled to be replaced or removed will be fixed to meet the NYS building code. This includes but not limited to, adding covers to exposed junction boxes, any exposed wired to be properly concealed, conduit not mounted and affixed to the wall to be mounted properly, Etc..
  - 12. Demolition:
  - 13. Removal of items as shown and/or required.
  - 14. Removal and disconnections of electrical devices in walls, ceilings and
  - 15. Floors scheduled to be removed in the building.
  - 16. Coordinate with TPG, the General, Plumbing and HVAC Work Contractor for necessary shutdowns and disconnects.

- 17. Remove all and any unused devices in the boiler room even if not scheduled to be removed per the direction of the architect.
- 18. Remove and dispose all electrical devices/lighting as shown on the contract drawings.
- 19. Temporary Facilities: in addition to
- 20. Provide Temporary Facilities indicated as Work of this Contract is
- 21. Division 1 Section 01 5000, "Temporary Facilities and Controls"
- 22. Provide night/day security camera system with DVR and monitor for the purpose of the construction staging/yard security during the construction schedule only. System will be equipped with local and remote access. System will be set up in the CM trailer.
- 23. Provide power connection and disconnect to CM trailer.
- 24. Install heat trace to water supply and sewer piping associated with the CM trailer.
- 25. Provide temporary lighting (as required) for the construction of staging/yard/work areas.
- 26. Provide temp and permanent power outlets, panels and connections for other trades tools and equipment. No limit to how many temp services or voltage. Include abatement sub-contractors connections and disconnects
- 27. Provide and disconnect power to the abatement subcontractors temp panel.
- 28. Provide Generator for use to power the building while power is shut down. Include fuel and manpower to operate the generator.
- 29. Construction:
- 30. The General Construction Work Contract shall provide all openings in walls, floors, and roofs for all other Prime Contractors, that require lintels, and structural framing only. All other openings required for the work of this contract, will be the responsibility of this trade.
- 31. The General Construction Work Contract shall perform all necessary slab openings, excavation, backfilling, compaction, poured in place concrete infill inside the building and field required concrete for all other primes.
- 32. Provide ALL power wiring to ALL HVAC equipment. (Install motor controllers/disconnects supplied by MP Contract) including temp heat units
- 33. Provide power to all ADA hardware and electric hardware shown in door hardware schedule. Provide control wiring and connection for electrified door hardware,
- 34. Provide all interior and exterior lighting including lighting control.
- 35. Provide all fire alarms, networking systems, WAP and camera wiring.
- 36. Provide public address systems, including full installation and training.
- 37. Provide all cutting and patching required installing all electrical fixtures, devices, wire and conduit.
- 38. Provide all fees required for inspections and permits other than owner supplied special inspections.
- 39. Provide support framing for Electrical equipment and conduits.
- 40. Provide a new outlet in the ceiling of each new unit for condensate pump

- 41. Furnish access doors for electrical access (to be installed by GC)
- 42. Provide firestopping and sealing of all electrical penetrations
- 43. Provide a video of owner training and repeat if necessary
- 44. Provide and maintain a temporary electric service, including lighting and power, Maximum of 1 trailer per Prime Contractor. Each trailer to have a 100 amp, 240 Volt single-phase connections. Assume a diversified peak connected load factor of 12KW per trailer.
- 45. Provide and install heat trace for all water lines (sewer and water supply) on CM Construction Trailer.
- 46. All underground electrical utility work is the responsibility of this contractor.
- 47. This trade is responsible for all communications and coordination with utility companies.
- 48. Relocate existing exterior wall mounted devices from existing exterior wall that interfere with new storefronts to the new exterior walls
- 49. Provide all work associated with the storefronts, including low voltage.
- 50. General Requirements, including but not limited to, additional items specifically indicated as the Work of this Contract.
- B. The Work of the Electrical Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. The Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:
  - 1. Division 00 Procurement and Contracting Requirement, all Sections.
  - 2. Division 1 General Requirements all Sections, including Temporary Facilities indicated
  - 3. Division 2 Demolition
  - 4. Division 7 078400- firestopping 079200 joint sealants
  - 5. Division 8 Section 08 71 00, Door Hardware (as it relates to this contract for power connections to equipment)
  - 6. Division 12 Telescoping bleachers
  - 7. Division 14 Electric traction elevators
  - 8. Division 19 Theatrical Section 191000 Performance Sound System and Section 192000 Theatrical Lighting Systems
  - 9. Division 22 All sections (as relates to this contract for power connections to equipment)
  - 10. Division 23 All sections (as relates to this contract for power connections to equipment)
  - 11. Division 26 Electrical All Sections.
  - 12. Division 27 Communications installation (as relates to this contract) All Sections
  - 13. Division 28 Electronic safety and security (as relates to this contract) All Sections

## 3.6 CONTRACT 2 - PLUMBING / MECHANICAL WORK

- A. \*See Mechanical in separate sections of this summery of work but to be included with Plumbing scope
- B. Work of this Contract includes, but is not limited to, the following descriptions:
  - 1. Includes Water Distribution Service, plumbing fixtures and other systems traditionally recognized as Plumbing work. This includes but is not limited to, all work shown on the "P" as it relates to your scope of work, and applicable information shown on the contract drawings.
  - 2. All "T" and "U" Drawings "Title sheets, general notes, code compliance and Phasing Drawings" (General)
  - 3. All "A" Drawings (Architectural) As required for the work of this contract
  - 4. All "H" Drawings (Mechanical) As required for the work of this contract
  - 5. All "P" Drawings (Plumbing)
  - 6. All "E" Drawings (Electrical) As required for the work of this contract
  - 7. Coordination:
  - 8. Coordination with the work of all the other contractors.
  - 9. Each trade will participate in producing coordination drawings. The
  - 10. Mechanical, Plumbing and electrical contractors will overlap their new work and coordinate locations, heights, routes, Etc. to eliminate hits and or obstructions from existing or new work. Each trade will meet once a week to coordinate their drawings. Ductwork and mechanical piping first, plumbing second and electrical third. A full set of coordination drawings must be completed within four weeks after award of contract.
  - 11. Plumbing contractor to layout the work of its scope of work where the general contractor is to cut openings requiring structural support and or slab openings.
  - 12. Demolition:
    - a. Removal of items as shown and/or required.
    - b. Removal and disconnections of plumbing fixtures
  - 13. scheduled to be removed
    - a. Coordinate with TPG, the General, Electrical for necessary shutdowns and disconnects.
    - b. layout, sleeves, coring, debris removal, drywall work, plaster work, grouting, painting, ceiling removal and replacement, etc
    - C.
  - 14. Temporary Facilities:
    - a. Provide Temporary Facilities indicated as Work of this Contract I Division 1 Section 01 5000, "Temporary Facilities and Controls"
    - b. Provide water connection to CM trailer.
    - c. Provide temp hose bibs to construction GC for use of all trades.

d. Provide backflow preventer and hydrant key for the connection and use to existing fire hydrant

#### 15. Construction:

- a. The General Construction Work Contract shall provide all openings in walls, floors, and roofs for all other Prime Contractors, that require lintels, and structural framing only. All other openings required for the work of this contract will be the responsibility of this trade. Slab openings as shown on the contract drawings will be by the GC but layout is by Plumbing contractor.
- b. The General Construction Work Contract shall perform all necessary Slab openings, trenching and excavation, backfilling, compaction, slab concrete infills, and field required poured in place concrete for all other primes.
- c. Provide all fees required for inspections and permits other than owner supplied special inspections. Building permit by owner.
- d. Provide all fixtures and associated equipment including carriers if required
- e. Provide firestopping and sealing of all electrical penetrations
- f. Provide videoed owner training on all new equipment. Record training and submit with closeout documents
- g. All underground utility work is the responsibility of this contractor.
- h. This trade responsible for all communications and coordination with utility companies.
- i. Provide isolation valves for all new building to old building existing piping that requires tie ins
- j. Drain plumbing system for new connections and reinstall when complete.
- k. General Requirements, including but not limited to, additional items specifically indicated as the Work of this Contract.
- C. The Work of the Plumbing Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. This Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:
  - 1. Division 00 Procurement and Contracting Requirement, all Sections.
  - 2. Division 1 General Requirements all Sections, including Temporary Facilities indicated
  - 3. Division 2 Demolition
  - 4. Division 7 Section 07 84 00, Penetration Firestopping and 07 92 00, Joint Sealants, as required for the Work of this Contract.
  - 5. Division 10 Specialties as it relates to this contract
  - 6. Division 12 Manufactured wood casework Countertops
  - 7. Division 22 Plumbing
  - 8. Division 23 HVAC as relates to this contract

9. Division 33 – Utilities - as relates to this contract

## 3.7 WORK SEQUENCE

- A. The Work will be conducted to provide the least possible interference to the activities of the Owner's personnel.
- B. Work cannot be performed in occupied areas. Work shall be scheduled off-hours, vacations, and weekends for occupied areas if applicable. A Construction Manager Superintendent must be always on site when work is being performed. If a contractor fails to maintain the progress as indicated by the milestone schedule by no other fault but its own and requires overtime to complete the work; the contractor shall make arrangements with the Construction Manager 48 hours in advance and pay for a Construction Manager's superintendent at \$150.00 per hour. In the event that the cause for delay is multi-contract, then the costs shall be distributed evenly among contracts. Advise the Construction Manager 48 hours prior to commencing work inside the building. Regardless of schedule and delay, if a contractor wants to work overtime and weekends, the contractor shall make arrangements with the Construction Manager 48 hours in advance and pay for a Construction Manager's superintendent at \$150.00 per hour.
- C. Coordination of any utility and/or power interruption must be done with the Construction Manager. Shutdowns must occur during off-hours and on days when the building is not occupied by the owner.
- D. Construction access to the site shall be limited to those designated for contractor's personnel, equipment and deliveries by the Owner. Contractors' staging, parking and storage shall be coordinated by the Construction Manager.
- E. Each Contractor shall inspect the site and review the AHERA report on file for the presence of asbestos. Unless otherwise noted, there will be asbestos containing material in place that will require work to take place in the vicinity of, around and/or next to. Each prime contractor that will be working above ceilings, demolishing, in crawl spaces, boiler rooms and all other areas that may contain asbestos per the AHERA report, shall employ "Allied Trades: certified/licensed tradesman as part of the on site workforce".

## 3.8 OCCUPANCY REQUIREMENTS

- A. The GAC Work Contractor shall provide Outdoor air quality management as specified by the Department of Labor and OSHA during construction
  - 1. Provide an exhaust air system for the project indoor areas that could produce fumes, VOC's off-gasses, gasses, dusts, mists, or other emissions.
  - 2. Exhaust air system for the project areas that could produce emissions listed in Paragraph 1 shall be utilized.

- 3. Provide Water for dust control.
- B. Quality assurance:
  - 1. Before start of work, submit a design for the exhaust air system. Do not begin work until approval of the Owner is obtained.
  - 2. The number of machines required.
  - 3. Location of the machines in the workspace.
- 3.9 End Of Contractor Scopes

## 3.10 PROJECT MILESTONE SCHEDULE

- A. See the milestone schedule to be provided by Addenda.
- B. All Prime Contractors are required to submit a schedule based on the milestone dates to the Construction Manager for review and comment no later than 10 days after a Notice to Proceed for the work is issued.
- C. If required, Night shift work at the interior of existing building will take place during the weeknights.

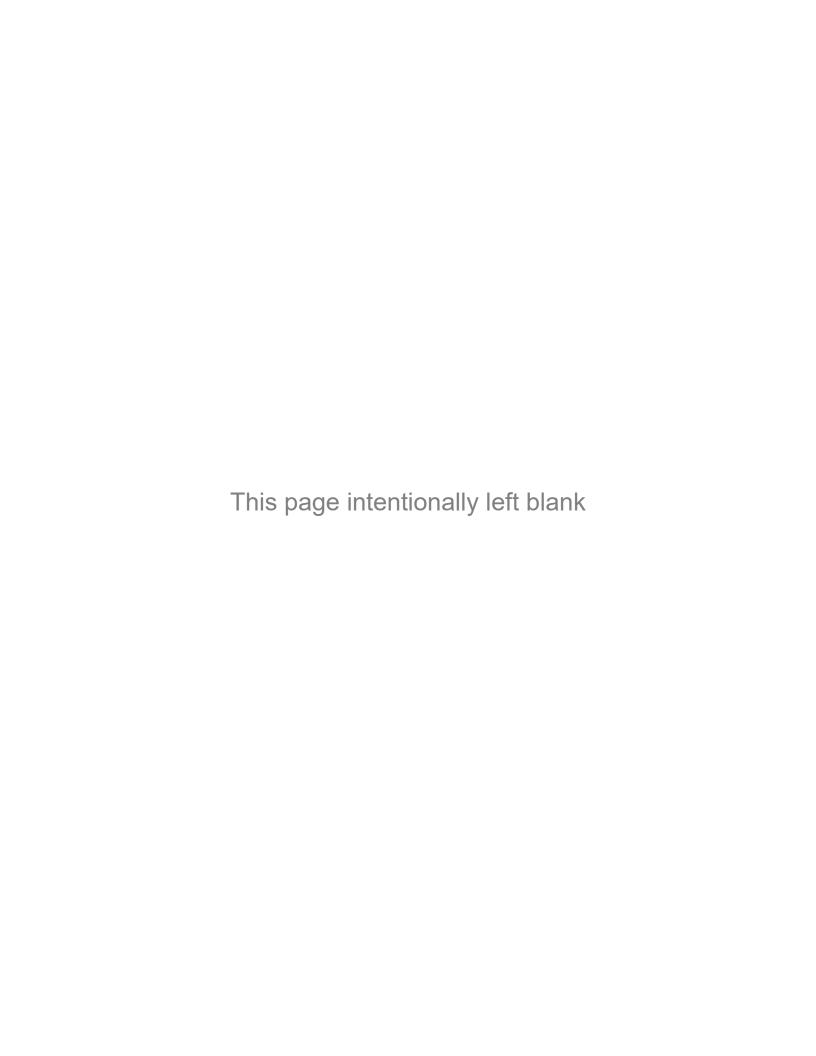
## 3.11 ALLOWANCES

A. See Specification Section 01 2100.

## 3.12 ALTERNATES

A. The Contractor shall state where requested on the Bid Form the amount to be added to or deducted from the base bid for the alternates described in Section 012300 - Alternates.

**END OF SECTION** 



#### SECTION 015000 - TEMPORARY FACILITIES & CONTROLS

#### PART 1 GENERAL

## 1.1 REFERENCE STANDARDS

- A. NFPA 10 Standard for Portable Fire Extinguishers; 2022.
- B. NFPA 241 Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).
- C. NFPA 701 Standard Methods of Fire Tests for Flame Propagation of Textiles and Films; 2019.

#### 1.2 SUMMARY

- 1.3 This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection.
- 1.4 Temporary utilities include, but are not limited to, the following:
  - A. Water service and distribution.
  - B. Temporary electric power and light.
  - C. Temporary heat.
  - D. Ventilation and Humidity Control
  - E. Telephone service.
  - F. Sanitary facilities, including drinking water.
  - G. Storm and sanitary sewer.
- 1.5 Support facilities include, but are not limited to, the following:
  - A. Field offices and storage containers.
  - B. Temporary roads and paving.
  - C. Dewatering facilities and drains.
  - D. Temporary partitions and enclosures.
  - E. Hoists and temporary elevator use.

- F. Temporary project identification sign and project signage.
- G. Waste disposal services and dumpsters.
- H. Construction aids and miscellaneous services and facilities.
- 1.6 Security and protection facilities include, but are not limited to, the following:
  - A. Temporary fire protection.
  - B. Barricades, warning signs, and lights.
  - C. Environmental protection.
  - D. Tree and plant protection.
  - E. Security enclosure and lockup.
  - F. Temporary enclosures.
  - G. Temporary partitions.
  - H. Sidewalk Bridge for maintaining legal exits.
  - I. Enclosure fence for the work site.
- 1.7 INFORMATIONAL SUBMITTALS
- 1.8 Temporary Utilities: Each prime contractor shall submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- 1.9 Implementation and Termination Schedule: Within 15 days of the date established for submittal of the Contractor's Construction Schedule, each prime contractor shall submit a schedule indicating implementation and termination of each temporary utility for which the Contractor is responsible.
- 1.10 Site Plan By General contractor: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- 1.11 Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent
- 1.12 Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

- 1.13 Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage, including delivery, handling, and storage provisions for materials subject to water absorption or water damage, discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water damaged Work.
  - A. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
  - B. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
  - C. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
- 1.14 Dust-Control: Submit coordination drawing and narrative that indicates the dust-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
  - A. Locations of dust-control partitions at each phase of the work.
  - B. Location of proposed air filtration system discharge.
  - C. Other dust-control measures.
  - D. Waste management plan.
- 1.15 Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.
- 1.16 DEFINITIONS
- 1.17 Temporary Enclosure: As determined by Architect, temporary roofing is complete, insulated, all exterior wall openings are closed with temporary closures.
- 1.18 Permanent Enclosure: As determined by Architect, permanent roofing is complete, insulated, and weather tight; exterior walls are insulated and weather tight; and all openings are closed with permanent construction or substantial temporary closures.

- 1.19 Temporary Facilities: Construction, fixtures, fittings, and other built items required to accomplish the work, but which are not incorporated into the finished work.
- 1.20 Temporary Utilities: A type of temporary facility, primary sources of electric power, water, natural gas supply, etc., obtained from public utilities, other main distribution systems, or temporary sources constructed for the project, but not including the fixtures and equipment served.
- 1.21 Temporary Services: Activities required during construction, which do not directly accomplish the work.
- 1.22 QUALITY ASSURANCE
- 1.23 Regulations: The contractor shall comply with industry standards and with applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
  - A. Building code requirements.
  - B. Health and safety regulations.
  - C. Utility company regulations.
  - D. Police, fire department and rescue squad rules.
  - E. Environmental protection regulations.
- 1.24 Standards: The Contractor shall comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
- 1.25 Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with the normal application of trade regulations and union jurisdictions.
- 1.26 Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- 1.27 USE CHARGES

- 1.28 General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect, testing agencies, and authorities having jurisdiction. These utilities may not be available, refer to Summery of work for scope.
  - A. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
  - B. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
  - C. Gas Service from Existing System: Gas Service from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- 1.29 Cost or use charges for temporary facilities are not chargeable to the Owner or the Architect. The Architect will not accept a prime contractor's cost or use charges for temporary services or facilities as a basis of claim for an adjustment in the Contract Sum or the Contract Time.
- 1.30 Other entities using temporary services and facilities include, but are not limited to, the following:
  - A. Other nonprime contractors.
  - B. The Owner's work forces.
  - C. Occupants of the Project.
  - D. The Architect.
  - E. Testing agencies.
  - F. Personnel of government agencies.
- 1.31 DIVISION OF RESPONSIBILITIES

- 1.32 General: These Specifications assign each prime contractor specific responsibilities for certain temporary facilities used by other prime contractors and other entities at the site. The Contractor for Site work is responsible for providing temporary facilities and controls that are not normal construction activities of other prime contractors and are not specifically assigned otherwise by the Architect.
- 1.33 EACH PRIME CONTRACTOR is responsible for the following:
  - A. Installation, operation, maintenance, and removal of each temporary facility usually considered as its own normal construction activity, as well as the costs and use charges associated with each facility.
  - B. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
  - C. Its own field office, complete with necessary furniture, utilities, and telephone service.
  - D. Its own storage containers for tools and storage of materials not incorporated into the building construction.
  - E. Dewatering for their own construction operations.
  - F. Collection and disposal of its own hazardous, dangerous, unsanitary, or other harmful waste material.
  - G. Collection of its waste material and transporting to a dumpster.
  - H. Secure lockup of its own tools, materials, and equipment.
  - I. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.
- 1.34 The Contractor for General Construction is responsible for the following:
  - A. Barricades, warning signs, and lights related to the building work.
  - B. Temporary toilets, including disposable supplies for general and MEP trades
  - C. Temporary wash facilities, including disposable supplies
  - D. Temporary partitions indicated on drawings or specifically called for in specifications, required for project phasing or necessary to perform the work.
  - E. General disposal of wastes for all prime contracts from the new and renovated building areas including costs for dumpsters.
  - F. Security enclosure and lockup at General and MEP work areas only.

- G. Project directional signage and safety signage at areas of general and MEP work.
- H. Project description sign
- I. Creating a controlled access zone
- J. Providing overhead protection at all entry doors withing 30 feet of demo operations.
- K. 8' High Temp Fence with privacy screen at areas of work performed
- L. Snow and ice removal from all site construction areas.
- M. Barricades, DOT signs, site signs, Construction signs for civil work
- N. Providing labor for street work, coordination and deliveries. Provide signs and flags as required.
- O. Water for Dust Control
- P. Temporary toilets for The Site Contractors workers and CM only.
- Q. Security for Site work areas only
- R. Construction signage at Site work areas only
- S. Cold weather concrete procedures
- T. General disposal of wastes for Contractors work areas including costs for dumpsters.
- U. Provide the installation and removal of a 4'x8' Palombo Group sign on two 4"x4" posts. Sign provided by the Palombo group. Location chosen by the Palombo Group.
- 1.35 The Contractor for Electrical Construction is responsible for the following:
  - A. Temporary lighting in accessible areas.
  - B. Electric Power Service: Provide temp power to all trades for inside and outside work
  - C. Provide temp power to CM trailer from existing maintenance building
  - D. The connection and disconnection of the abatement contractors power panels.
  - E. CM trailer heat trace on all water and sewer lines, see summery of work for lengths.
- 1.36 The Contractor for Plumbing Construction is responsible for the following:
  - A. Include Temp Hose bibs where required by the other trades
  - B. Include Plumbing contractor to include 5 additional isolation valves up to 2" to be installed at the direction of the CM

- C. Provide water and sewer to CM trailer, see summery of work for better description.
- 1.37 The Contractor for Mechanical Construction is responsible for the following:
  - A. 2. Include Temp Heat in interior areas where work is performed by other trades.

## **PART 2 PRODUCTS**

- 2.1 MATERIALS
- 2.2 General: Each prime contractor shall provide new materials. If acceptable to the Architect, undamaged, previously used materials in serviceable condition may be used. Provide materials suitable for use intended.
- 2.3 Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry."
  - A. For job-built sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding. Metal is an option as well.
  - B. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch- thick exterior plywood.
- 2.4 Gypsum Wallboard: Provide 5/8 type x gypsum wallboard on interior walls of temporary offices or temporary partitions.
- 2.5 Roofing Materials: Provide UL Class A standard-weight asphalt shingles or UL Class C mineral-surfaced roll roofing on roofs of job-built temporary offices, shops, and sheds.
- 2.6 Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- 2.7 Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.
- 2.8 Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches.
- 2.9 Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

- 2.10 Water: Provide potable water approved by local health authorities.
- 2.11 Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized-steel, chain-link fabric fencing; minimum 8 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide galvanized-steel bases for supporting posts.
- 2.12 Open-Mesh Fencing: Provide 0.12-inch- thick, galvanized 2-inch chain link fabric fencing 6 feet high and galvanized steel pipe posts, 1-1/2 inches I.D. for line posts and 2-1/2 inches I.D. for corner posts.
- 2.13 EQUIPMENT
- 2.14 General: Each prime contractor shall provide new equipment. If acceptable to the Architect, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- 2.15 Water Hoses: Provide 3/4-inch heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- 2.16 Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- 2.17 Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- 2.18 Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- 2.19 Heating and ventilating units: Provide temporary heating and ventilating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.

- A. Air Filtration Units: HEPA primary and secondary filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.
- 2.20 Temporary Toilet Units: General Contractor for all trades at all buildings shall provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material. One unit per ten workers on site. Provide one separate toilet unit for the use of women on site. Provide separate handicap temp toilet to be locked and used separate for construction manager.
- 2.21 Fire Extinguishers: Each prime contractor will provide hand-carried, portable, UL-rated; Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
  - A. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- 2.22 TEMPORARY SUPPORT FACILITIES
- 2.23 Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- 2.24 Temporary Field Offices: Each prime contractor shall provide its own prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- 2.25 General contractor to provide labor to clean and dispose of garbage from construction managers trailer once a week.
- 2.26 Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
  - A. Store combustible materials apart from building.
- 2.27 TEMPORARY UTILITIES
- 2.28 Telephone Service: Each contractor is responsible for his or her own telephone service.
  - A. Provide at least one telephone at each site with answering machine.

DISPLAY CONSTRUCTION-RELATED PHONE NUMBERS AT EACH PHONE.

FIRE EMERGENCY NUMBER.

RESCUE EMERGENCY NUMBER.

PHYSICIAN.

PRIME CONTRACTORS' HOME OFFICES.

OWNER'S REPRESENTATIVE.

ARCHITECT'S REPRESENTATIVE.

PART 3 EXECUTION

- 10.1 INSTALLATION
- 10.2 Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- 10.3 Each prime contractor shall provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- 10.4 TEMPORARY UTILITY INSTALLATION
- 10.5 Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- 10.6 The contractor shall provide each facility ready for use when needed to avoid delay.

  Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- 10.7 Drinking-Water Facilities: Each Contractor shall provide containerized, tap-dispenser, drinking-water units, including paper cup supply.

# 10.8 Temporary Lighting:

- A. The Electrical Contractor will install and operate temporary lighting that will fulfill security and protection requirements without operating the entire electrical system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.
- B. Operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.

SECURITY LIGHTING FOR BUILDING EXTERIORS SHALL BE CONTINUOUSLY OPERATIONAL AND MAINTAINED.

- A. Temporary lighting shall be maintained in accordance with OSHA standards for power and foot candle levels in all areas while workers occupy the space
- B. The Electrical Contractor will provide temporary lighting in the areas of renovation where the existing fixtures have been removed and the new lighting has not been installed
- 11.2 Temporary Telephones: Each prime contractor will provide temporary telephone service with answering machine throughout the construction period for all personnel engaged in construction activities. Install telephone on a separate line for each temporary office.
  - A. Separate Telephone Lines: Provide additional telephone lines for the following:

WHERE AN OFFICE HAS MORE THAN 2 OCCUPANTS, INSTALL A TELEPHONE FOR EACH ADDITIONAL OCCUPANT OR PAIR OF OCCUPANTS.

PROVIDE A DEDICATED TELEPHONE LINE FOR A FAX MACHINE IN EACH PRIME CONTRACTOR'S FIELD OFFICE.

AT EACH TELEPHONE, POST A LIST OF IMPORTANT TELEPHONE NUMBERS.

- 14.1 Isolation of Work Areas: Prevent dust, fumes, and odors from entering outside our work areas.
  - A. Each Contractor will perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- 14.2 SUPPORT FACILITIES INSTALLATION

- 14.3 Each prime contractor will locate field offices, storage trailers, sanitary facilities, and other temporary construction and support facilities for easy access.
  - A. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
  - B. Refer to the phasing plans for locations of storage trailers
  - C. Electrical contractor to provide power and to the construction manager's trailer as well as heat trace to trailers water supply and sewer discharge.
- 14.4 Storage trailers/ containers: If required, each prime contractor will install storage containers equipped to accommodate materials and equipment involved. Storage trailers are to be located at each site in the designated staging areas located on the phasing plans.
- 14.5 Dewatering Facilities and Drains: Each Contractor will comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
  - A. The General Contractor will remove snow and ice as required to minimize accumulations.
- 14.6 Each Prime contractor will provide waste-collection containers in sizes adequate to handle waste from construction operations for their own work to be performed
  - A. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.
- 14.7 Temporary Lifts and Hoists: Each prime contractor will provide facilities for hoisting materials and employees.
- 14.8 SECURITY AND PROTECTION FACILITIES INSTALLATION
- 14.9 Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Architect.

- 14.10 Protection of Existing Facilities: Each contractor will protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- 14.11 Environmental Protection: Each contractor will provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.. Avoid using tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.
  - A. Comply with work restrictions specified in Division 01 Section "Summary."
- 14.12 Stormwater Control: The General Contractor will comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- 14.13 Tree and Plant Protection: The General Contractor will install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- 14.14 Enclosure Fence: The General Contractor for its own work, when excavation begins will install an enclosure fence with lockable entrance gates. Install in a manner that will prevent the public and animals from easily entering the site, except by the entrance gates.
  - A. Provide open-mesh, 8' high chain link fence with posts.
  - B. Extent of Fence: As required to enclose entire excavation.
  - C. Provide min. 2 double swing access gates and man gates at each staging area. Each gate is to have a chain and padlock.
  - D. Provide (2) keys for each lock to the Construction Manager.
  - E. Remove fence upon completion of all exterior activities or sooner if directed by Construction Manager.
  - F. Creating a controlled access zone around demo area.
  - G. Providing overhead protection at all entry doors withing 30 feet of demo operations.

- 14.15 Barricades, Warning Signs, and Lights: The General Contractor will comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- 14.16 Temporary Signs: The General Contractor for their own work areas will prepare signs to provide directional information to construction personnel and visitors for each site. Unauthorized signs are not permitted.
  - A. For construction traffic control/flow at entrances/exits, as designated by the Owner.
  - B. For warning signs as required
  - C. Per OSHA standards as necessary
  - D. For trailer identification
  - E. For "No Smoking" safe work site at multiple locations.
  - F. Project Information sign as designed by the architect.
- 14.17 Temporary Egress: The General Contractor for their own work will maintain temporary egress from the site as indicated and as required by authorities having jurisdiction.
- 14.18 Temporary Enclosures: Each prime contractor will provide temporary enclosure for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
  - A. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 sq. ft. or less with plywood or similar materials.
  - B. Where temporary wood or plywood enclosure exceeds 100 sq. ft. in area, use UL labeled, fire-retardant-treated material for framing and main sheathing.
- 14.19 Temporary Fire Protection: Each prime contractor until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10, "Standard for Portable Fire Extinguishers," and NFPA 241, "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
  - A. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
  - B. Store combustible materials in containers in fire-safe locations.

- C. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
- D. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- 14.20 Security Enclosure and Lockup: The General Contractor will install substantial temporary enclosure of partially completed areas of construction. Provide temporary doors and locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
  - A. Storage: Each prime contractor is responsible for their materials and equipment to be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- 14.21 MOISTURE AND MOLD CONTROL
- 14.22 Contractor's Moisture-Protection Plan: Each Contractor is to avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- 14.23 Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
  - A. Protect porous materials from water damage.
  - B. Protect stored and installed material from flowing or standing water.
  - C. Keep porous and organic materials from coming into prolonged contact with concrete.
  - D. Remove standing water from decks.
  - E. Keep deck openings covered or dammed.
- 14.24 Partially Enclosed Construction Phase: After installation of weather barriers but before Permanent Enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
  - A. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
  - B. Keep interior spaces reasonably clean and protected from water damage.
  - C. Periodically collect and remove waste containing cellulose or other organic matter.

- D. Discard or replace water-damaged material.
- E. Do not install material that is wet.
- F. Discard, replace or clean stored or installed material that begins to grow mold.
- G. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- 14.25 OPERATION, TERMINATION, AND REMOVAL
- 14.26 Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- 14.27 Maintenance: Maintain facilities and good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
  - A. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
  - B. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- 14.28 Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- 14.29 Termination and Removal: Unless the Architect requests that it be maintained longer each prime contractor will remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - A. Materials and facilities that constitute temporary facilities are the property of each prime contractor.
  - B. At Substantial Completion, Each prime contractor will be responsible to clean and renovate permanent facilities related to the work of their contact and used during the construction period including, but not limited to, the following:

REPLACE AIR FILTERS AND CLEAN INSIDE OF DUCTWORK AND HOUSINGS.

REPLACE SIGNIFICANTLY WORN PARTS AND PARTS SUBJECT TO UNUSUAL OPERATING CONDITIONS.

REPLACE LAMPS BURNED OUT OR NOTICEABLY DIMMED BY HOURS OF USE.

**END OF SECTION** 

#### SECTION 084113 - ALUMINUM FRAMED ENTRANCES AND STOREFRONTS

#### PART 1 GENERAL

#### 1.1 SUMMARY

#### A. Section Includes:

- 1. Aluminum-framed storefront systems.
- 2. Aluminum-framed entrance door systems.

#### 1.2 ALLOWANCES

### 1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For aluminum-framed entrances and storefronts. Include plans, elevations, sections, full-size details, and attachments to other work.
  - Include details of provisions for assembly expansion and contraction and for draining moisture occurring within the assembly to the exterior.
  - 2. Include full-size isometric details of each type of vertical-to-horizontal intersection of aluminum-framed entrances and storefronts, showing the following:
    - a. Joinery, including concealed welds.
    - b. Anchorage.
    - c. Expansion provisions.
    - d. Glazing.
    - e. Flashing and drainage.
  - 3. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
  - 4. Include point-to-point wiring diagrams showing the following:
    - a. Power requirements for each electrically operated door hardware.
    - b. Location and types of switches, signal device, conduit sizes, and number and size of wires.

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- C. Samples for Verification: For each type of exposed finish required, in manufacturer's standard sizes.
- D. Fabrication Sample: Of each vertical-to-horizontal intersection of assemblies, made from 12-inch lengths of full-size components and showing details of the following:
  - 1. Joinery, including concealed welds.
  - 2. Anchorage.
  - 3. Expansion provisions.
  - 4. Glazing.
  - 5. Flashing and drainage.
- E. Delegated Design Submittal: For aluminum-framed entrances and storefronts including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data:
  - 1. For Installer.
  - 2. For professional engineer's experience with providing delegated design engineering services of the kind indicated, including documentation that engineer is licensed in the state in which Project is located.
- B. Product Test Reports: For aluminum-framed entrances and storefronts, for tests performed by manufacturer and witnessed by a qualified testing agency.
- C. Sample Warranties: For special warranties.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For aluminum-framed entrances and storefronts to include in maintenance manuals.
- B. Maintenance Data for Structural Sealant: For structural-sealant-glazed storefront to include in maintenance manuals. Include ASTM C1401 recommendations for post-installation-phase quality-control program.

#### 1.7 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer and that employs a qualified glazing contractor for this Project who is certified under the North American Contractor Certification Program (NACC) for Architectural Glass & Metal (AG&M) contractors.

- B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
  - Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.
- C. Structural-Sealant Glazing: Comply with ASTM C1401 for design and installation of entrances and storefronts systems that include structural glazing.

#### 1.8 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace components of aluminum-framed entrances and storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures, including, but not limited to, excessive deflection.
    - b. Noise or vibration created by wind and thermal and structural movements.
    - c. Water penetration through fixed glazing and framing areas.
    - d. Failure of operating components.
  - 2. Warranty Period: Two years from date of Substantial Completion.
- B. Special Finish Warranty, Factory-Applied Finishes: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Delta E units when tested in accordance with ASTM D2244.
    - b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Warranty Period: 10 years from date of Substantial Completion.
- C. Special Finish Warranty, Anodized Finishes: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of anodized finishes within specified warranty period.
  - 1. Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Delta E units when tested in accordance with ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D 4214.
    - c. Cracking, peeling, or chipping.

2. Warranty Period: 10 years from date of Substantial Completion.

#### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

A. Source Limitations: Obtain all components of aluminum-framed entrance and storefront system, including framing and accessories, from single manufacturer.

## 2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design aluminum-framed entrances and storefronts.
- B. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed entrances and storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.
  - 1. Aluminum-framed entrances and storefronts shall withstand movements of supporting structure, including, but not limited to, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
  - 2. Failure also includes the following:
    - a. Thermal stresses transferring to building structure.
    - b. Glass breakage.
    - c. Noise or vibration created by wind and thermal and structural movements.
    - d. Loosening or weakening of fasteners, attachments, and other components.
    - e. Failure of operating units.

#### C. Structural Loads:

- 1. Wind Loads: As indicated on Drawings.
- D. Deflection of Framing Members Supporting Glass: At design wind load, as follows:
  - 1. Deflection Normal to Wall Plane: Limited to 1/175 of clear span for spans of up to 13 feet 6 inches and to 1/240 of clear span plus 1/4 inch for spans greater than 13 feet 6 inches.
  - 2. Deflection Parallel to Glazing Plane: Limited to amount not exceeding that which reduces glazing bite to less than 75 percent of design dimension and that which reduces edge clearance between framing members and glazing or other fixed components to less than 1/8 inch.
- E. Structural: Test in accordance with ASTM E330/E330M as follows:

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- 1. When tested at positive and negative wind-load design pressures, storefront assemblies, including entrance doors, do not evidence deflection exceeding specified limits.
- 2. When tested at 150 percent of positive and negative wind-load design pressures, storefront assemblies, including entrance doors and anchorage, do not evidence material failures, structural distress, or permanent deformation of main framing members exceeding 0.2 percent of span.
- F. Water Penetration under Static Pressure: Test in accordance with ASTM E331 as follows:
  - 1. No evidence of water penetration through fixed glazing and framing areas, including entrance doors, when tested in accordance with a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure.
- G. Water Penetration under Dynamic Pressure: Test in accordance with AAMA 501.1 as follows:
  - 1. No evidence of water penetration through fixed glazing and framing areas when tested at dynamic pressure equal to 20 percent of positive wind-load design pressure.
  - 2. Maximum Water Leakage: No uncontrolled water penetrating assemblies or water appearing on assemblies' normally exposed interior surfaces from sources other than condensation. Water leakage does not include water controlled by flashing and gutters, or water that is drained to exterior.
- H. Energy Performance: Certified and labeled by manufacturer for energy performance as follows:
  - 1. Air Leakage:
    - a. Fixed Glazing and Framing Areas: Air leakage for the system of not more than 0.06 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft. when tested in accordance with ASTM E283.
    - b. Entrance Doors: Air leakage of not more than [1.0 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft.

# I. Ballistics Resistance, UL 752: Level 8 when tested in accordance with UL 752.

- J. Thermal Movements: Allow for thermal movements resulting from ambient and surface temperature changes.
  - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
  - 2. Thermal Cycling: No buckling; stress on glass; sealant failure; excess stress on framing, anchors, and fasteners; or reduction of performance when tested in accordance with AAMA 501.5.
- K. Structural-Sealant Joints:
  - 1. Designed to carry gravity loads of glazing.

- L. Structural Sealant: ASTM C1184. Capable of withstanding tensile and shear stresses imposed by structural-sealant-glazed, aluminum-framed entrances and storefronts without failing adhesively or cohesively. When tested for preconstruction adhesion and compatibility, cohesive failure of sealant shall occur before adhesive failure.
  - 1. Adhesive failure occurs when sealant pulls away from substrate cleanly, leaving no sealant material behind.
  - 2. Cohesive failure occurs when sealant breaks or tears within itself but does not separate from each substrate, because sealant-to-substrate bond strength exceeds sealant's internal strength.

#### 2.3 NON-RATED STOREFRONT SYSTEMS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Kawneer, An Arconic Company, or comparable product by one of the following:
  - 1. EFCO, LLC.
  - 2. Oldcastle Infrastructure, Inc.
  - 3. TRACO.
  - 4. Vistawall Architectural Products
  - 5. YKK AP America, Inc.
- B. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.
- C. Framing System Basis-of-Design:
  - 1. Exterior Applications: Kawneer Trifab 451UT Framing System
    - a. Framing Construction: Thermally broken.
    - b. Glazing System: Retained mechanically with gaskets on four sides.
    - c. Glazing Plane: Center
    - d. Finish: Clear anodic finish, Color anodic finish, baked-enamel, or powder-coat finish.
    - e. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
    - f. Steel Reinforcement: As required by manufacturer.
- D. Security Booth/Room Applications: Kawneer Trifab VersaGlaze 601T Framing System
  - a. Framing Construction: Thermally broken.
  - b. Glazing System: Retained mechanically with gaskets on four sides.
  - c. Glazing Plane: Front or Center.
  - d. Finish: Clear anodic finish, Color anodic finish, baked-enamel, or powder-coat finish.
  - e. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
  - f. Steel Reinforcement: As required by manufacturer.

- 2. All Other Interior Applications: Kawneer Trifab VersaGlaze 451T Framing System
  - a. Framing Construction: Thermally broken.
  - b. Glazing System: Retained mechanically with gaskets on four sides.
  - c. Glazing Plane: Front, Back, or Center.
  - d. Finish: Clear anodic finish, Color anodic finish, baked-enamel, or powder-coat finish.
  - e. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
  - f. Steel Reinforcement: As required by manufacturer.
  - g. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.
  - h. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

#### 2.4 NON-RATED ENTRANCE DOOR SYSTEMS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Kawneer, An Arconic Company, or comparable product by one of the following:
  - 1. EFCO, LLC.
  - 2. Oldcastle Infrastructure, Inc.
  - 3. TRACO.
  - 4. Vistawall Architectural Products.
  - 5. YKK AP America, Inc.
- B. Entrance Doors: Manufacturer's standard glazed entrance doors for manual-swing or automatic operation.
  - 1. Door Construction: 1-3/4-inch overall thickness, with minimum 0.125-inch thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brackets that are deeply penetrated and fillet welded or that incorporate concealed tie rods.
    - Thermal Construction: High-performance plastic connectors separate aluminum members exposed to the exterior from members exposed to the interior.
- C. Door Design: Wide stile; 5-inch nominal width.
- D. Glazing Stops and Gaskets: Snap-on, extruded-aluminum stops and preformed gaskets.
- 2.5 Finish: Match adjacent storefront framing finish.
- 2.6 FIRE-RATED STOREFRONT SYSTEMS

- 2.7 Basis-of-Design Product: Subject to compliance with requirements, provide Technical Glass Products (TPG), or comparable product by one of the following:
  - 1. EFCO, LLC.
  - 2. Kawneer, An Arconic Company.
  - 3. Oldcastle Infrastructure, Inc.
  - 4. Safti First, Safety And Fire Technology Inc.
  - 5. TRACO.
  - 6. Vistawall Architectural Products.
  - 7. YKK AP America, Inc.
  - B. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.
    - 1. Framing System Basis-of-Design:
      - a. Interior Fire-Rated Applications (Stairways): Technical Glass Products (TGP) Fireframes Designer Series.
  - C. Steel Framing System including doors and storefronts with fire-rating as indicated on drawings.
    - 1. Frame: Steel profiled formed tubing.
    - 2. Fasteners: As recommended by manufacturer
    - 3. Glazing Accessories: calcium silicate setting blocks.
  - D. Fire-Rated Storefront Assemblies: Assemblies complying with NFPA 80 that are classified and labeled by UL, for fire ratings indicated, based on testing according to NFPA 257. Assemblies must be factory-welded or come complete with factory-installed mechanical joints and must not require job site fabrication.
  - E. Fire Rating Requirements: Capable of providing fire-rating as indicated on drawings.
  - F. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.
  - G. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

#### 2.8 FIRE-RATED ENTRANCE DOOR SYSTEMS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Technical Glass Products (TPG), or comparable product by one of the following:
  - 1. EFCO, LLC.
  - 2. Kawneer, An Arconic Company.
  - 3. Oldcastle Infrastructure, Inc.
  - 4. Safti First, Safety And Fire Technology Inc.
  - 5. TRACO.

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- 6. Vistawall Architectural Products.
- 7. YKK AP America, Inc.
- B. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are classified and labeled by UL, for fire ratings indicated, based on testing according to NFPA 252. Assemblies must be factory-welded or come complete with factory-installed mechanical joints and must not require job site fabrication.
- C. Fire Rating Requirements: Capable of providing a fire-rating as indicated on drawings.
  - 1. When glazed with fire-rated glazing products, doors meet the maximum transmitted temperature rise of not more than 450 degrees Fahrenheit at the end of 30 minutes of the standard fire test exposure.

#### 2.9 ENTRANCE DOOR HARDWARE

- A. Entrance Door Hardware: Refer to Section 087100 "Door Hardware."
- B. Fire Rated Hardware: Shall be provided by manufacturer to meet fire-rating as indicated on drawings.

#### 2.10 GLAZING

- A. Glazing: Comply with Section 088000 "Glazing."
- B. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.
- C. Glazing Sealants: As recommended by manufacturer.
- D. Structural Glazing Sealants: ASTM C1184 chemically curing silicone formulation that is compatible with system components with which it comes in contact; specifically formulated and tested for use as structural sealant and approved by structural-sealant manufacturer for use in storefront system indicated.
  - 1. Color: As selected by Architect from manufacturer's full range of colors.
- E. Weatherseal Sealants: ASTM C920 for Type S; Grade NS; Class 25; Uses NT, G, A, and O; chemically curing silicone formulation that is compatible with structural sealant and other system components with which it comes in contact; recommended by structural-sealant, weatherseal-sealant, and structural-sealant-glazed storefront manufacturers for this use.
  - 1. Color: Match structural sealant.

#### 2.11 MATERIALS

- A. Sheet and Plate: ASTM B209.
- B. Extruded Bars, Rods, Profiles, and Tubes: ASTM B221.

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- C. Structural Profiles: ASTM B308/B308M.
- D. Steel Reinforcement:
  - 1. Structural Shapes, Plates, and Bars: ASTM A36/A36M.
  - 2. Cold-Rolled Sheet and Strip: ASTM A1008/A1008M.
  - 3. Hot-Rolled Sheet and Strip: ASTM A1011/A1011M.
- E. Steel Reinforcement Primer: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods in accordance with recommendations in SSPC-SP COM, and prepare surfaces in accordance with applicable SSPC standard.

#### 2.12 ACCESSORIES

- A. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.
  - 1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
  - 2. Reinforce members as required to receive fastener threads.
- B. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.
  - Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A123/A123M or ASTM A153/A153M requirements.
- C. Concealed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.
- D. Bituminous Paint: Cold-applied asphalt-mastic paint containing no asbestos, formulated for 30-mil thickness per coat.
- E. Rigid PVC filler.

## 2.13 FABRICATION

- A. Form or extrude aluminum shapes before finishing.
- B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
- C. Fabricate components that, when assembled, have the following characteristics:
  - 1. Profiles that are sharp, straight, and free of defects or deformations.

- 2. Accurately fitted joints with ends coped or mitered.
- 3. Physical and thermal isolation of glazing from framing members.
- 4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
- 5. Provisions for field replacement of glazing from interior.
- 6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
- D. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.
- E. Structural-Sealant-Glazed Framing Members: Include accommodations for using temporary support device to retain glazing in place while structural sealant cures.
- F. Storefront Framing: Fabricate components for assembly using screw-spline system.
- G. Entrance Door Frames: Reinforce as required to support loads imposed by door operation and for installing entrance door hardware.
  - 1. At interior and exterior doors, provide compression weather stripping at fixed stops.
- H. Entrance Doors: Reinforce doors as required for installing entrance door hardware.
  - 1. At pairs of exterior doors, provide sliding-type weather stripping retained in adjustable strip and mortised into door edge.
  - 2. At exterior doors, provide weather sweeps applied to door bottoms.
- I. Entrance Door Hardware Installation: Factory install entrance door hardware to the greatest extent possible. Cut, drill, and tap for factory-installed entrance door hardware before applying finishes.
- J. After fabrication, clearly mark components to identify their locations in Project in accordance with Shop Drawings.

#### 2.14 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm thicker.
  - 1. Color: As selected by Architect from full range of industry colors and color densities.
- B. Color Anodic Finish: AAMA 611, AA-M12C22A44, Class I, 0.018 mm thicker.
  - 1. Color: As selected by Architect from full range of industry colors and color densities.
- C. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
  - 1. Color and Gloss: As selected by Architect from manufacturer's full range.

#### 2.15 SOURCE QUALITY CONTROL

A. Structural Sealant: Perform quality-control procedures complying with ASTM C1401 recommendations, including, but not limited to, assembly material qualification procedures, sealant testing, and assembly fabrication reviews and checks.

#### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION, GENERAL

- A. Comply with manufacturer's written instructions.
- B. Do not install damaged components.
- C. Fit joints to produce hairline joints free of burrs and distortion.
- D. Rigidly secure nonmovement joints.
- E. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
- F. Seal perimeter and other joints watertight unless otherwise indicated.
- G. Metal Protection:
  - 1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
  - 2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- H. Set continuous sill members and flashing in full sealant bed, as specified in Section 079200 "Joint Sealants," to produce weathertight installation.
- I. Install joint filler behind sealant as recommended by sealant manufacturer.
- J. Install components plumb and true in alignment with established lines and grades.

#### 3.3 INSTALLATION OF GLAZING

A. Install glazing as specified in Section 088000 "Glazing."

#### 3.4 INSTALLATION OF STRUCTURAL GLAZING

- A. Prepare surfaces that will contact structural sealant in accordance with sealant manufacturer's written instructions, to ensure compatibility and adhesion. Preparation includes, but is not limited to, cleaning and priming surfaces.
- B. Set glazing into framing in accordance with sealant manufacturer and framing manufacturer's written instructions and standard practice. Use a spacer or backer as recommended by manufacturer.
- C. Set glazing with proper orientation so that coatings face exterior or interior as specified.
- D. Hold glazing in place using temporary retainers of type and spacing recommended by manufacturer, until structural sealant joint has cured.
- E. Apply structural sealant to completely fill cavity, in accordance with sealant manufacturer and framing manufacturer's written instructions and in compliance with local codes.
- F. Apply structural sealant at temperatures indicated by sealant manufacturer for type of sealant.
- G. Allow structural sealant to cure in accordance with manufacturer's written instructions.
- H. Clean and protect glass as indicated in Section 088000 "Glazing."

### 3.5 INSTALLATION OF WEATHERSEAL SEALANT

- A. After structural sealant has completely cured, remove temporary retainers and insert backer rod between lites of glass as recommended by sealant manufacturer.
- B. Install weatherseal sealant to completely fill cavity, in accordance with sealant manufacturer's written instructions, to produce weatherproof joints.

#### 3.6 INSTALLATION OF ALUMINUM-FRAMED ENTRANCE DOORS

- A. Install entrance doors to produce smooth operation and tight fit at contact points.
  - 1. Exterior Doors: Install to produce weathertight enclosure and tight fit at weather stripping.
  - 2. Field-Installed Entrance Door Hardware: Install surface-mounted entrance door hardware in accordance with entrance door hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.

### 3.7 ERECTION TOLERANCES

Project No. 187-2302.01

- A. Install aluminum-framed entrances and storefronts to comply with the following maximum tolerances:
  - 1. Plumb: 1/8 inch in 10 feet; 1/4 inch in 40 feet.
  - 2. Level: 1/8 inch in 20 feet; 1/4 inch in 40 feet.
  - 3. Alignment:
    - a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2 inch wide, limit offset from true alignment to 1/16 inch.
    - b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch wide, limit offset from true alignment to 1/8 inch.
    - c. Where surfaces are separated by reveal or protruding element of 1 inch wide or more, limit offset from true alignment to 1/4 inch.
  - 4. Location: Limit variation from plane to 1/8 inch in 12 feet; 1/2 inch over total length.

**END OF SECTION** 

# VALLEY CENTRAL SCHOOL DISTRIC BEREA ELEMENTARY SCHOOL 2023 CAPITAL PROJECT - PHASE 1

10/18/24 **ISSUED FOR BID:** 

CSARCH - ARCHITECTS

BLAKE ENGINEERING, PLLC - M.E.P. ENGINEERS PASSERO ASSOCIATES - SITE/CIVIL AND STRUCTURAL ENGINEERS AECC ENVIRONMENTAL CONSULTING - HAZARDOUS MATERIALS DESIGNERS

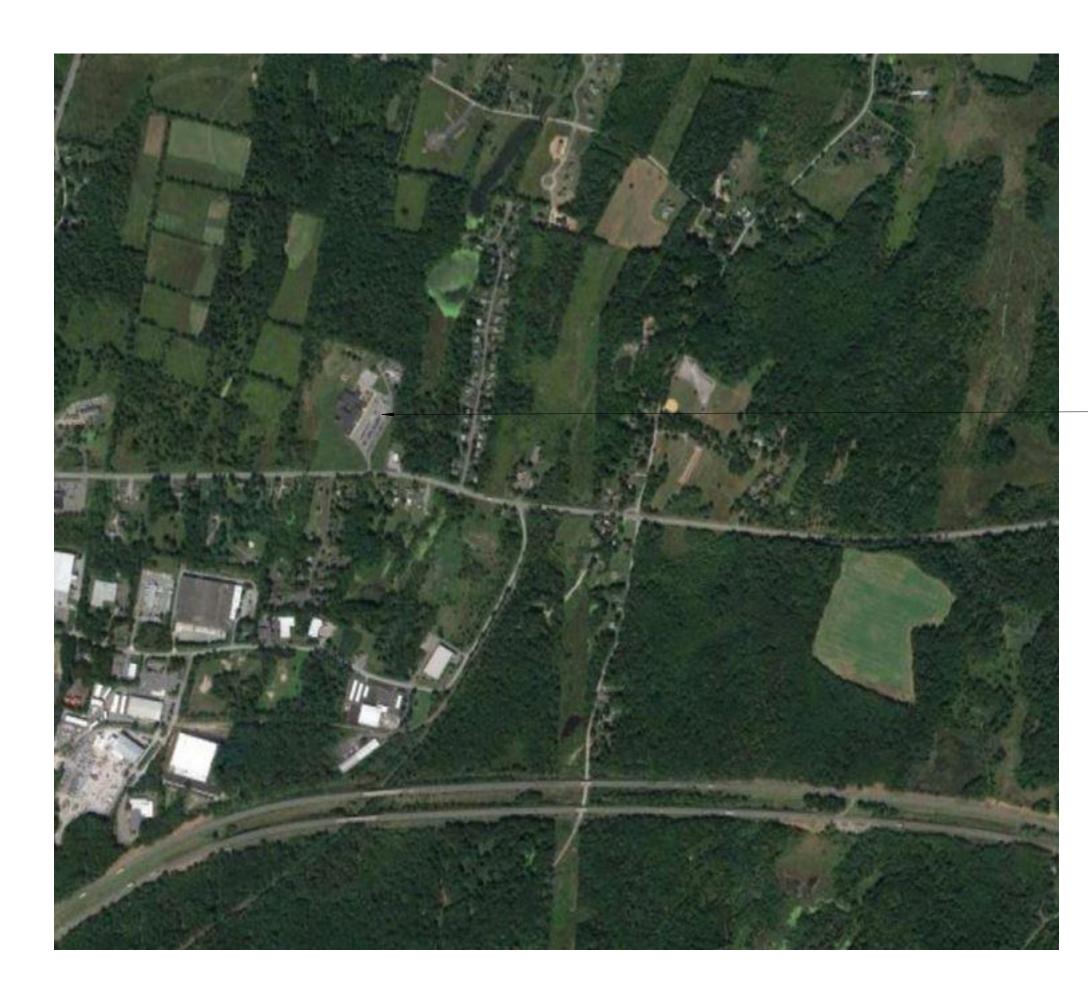
# STATE EDUCATION DEPARTMENT PROJECT CONTROL NUMBER:

2023 CAPITAL PROJECT - PHASE 1

44-13-01-06-0-017-014

THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT.

CSArch PROJECT NO. 187-2302.01



Berea Elementary School

**DRAWING LIST** 

**GENERAL DRAWINGS** 

COVER & SHEET INDEX

SYMBOLS, ABBREVIATIONS, MISC, AND PARTITION TYPES

LIFE SAFETY PLANS - FIRST FLOOR

SITE, GRADING AND ESC PLAN

REMOVALS PLAN - FIRST FLOOR - AREA A

REMOVALS PLAN - FIRST FLOOR - AREA B

REFLECTED CEILING DEMO PLAN - FIRST FLOOR AREA A

REFLECTED CEILING DEMO PLAN - FIRST FLOOR AREA B

ENLARGED FLOOR PLAN - FIRST FLOOR - AREA A

ENLARGED FLOOR PLAN - FIRST FLOOR - AREAB

ENLARGED PLAN AND INTERIOR ELEVATIONS

ENLARGED PLAN AND INTERIOR ELEVATIONS

REFLECTED CEILING PLAN - FIRST FLOOR AREA A REFLECTED CEILING PLAN - FIRST FLOOR AREA B

ÊNLARGED FLOOR FINISHES PLAN - FIRST FLOOR - AREA A ENLARGED FLOOR FINISHES PLAN - FIRST FLOOR - AREA B

DOOR, WINDOW, & STOREFRONT DETAILS

OVERALL FLOOR PLAN - FIRST FLOOR PLUMBING DEMOLITION DRAWINGS

KEY PLAN

**ARCHITECTURAL DRAWINGS** 

ARCHITECTURAL DEMOLITION DRAWINGS

**EXTERIOR ELEVATIONS** 

**EXTERIOR ELEVATIONS** 

CASEWORK DETAILS

ARCHITECTURAL FINISH DRAWINGS

BES AFOO1 MATERIAL SCHEDULE

PLAN AND SECTION DETAILS

**CIVIL DRAWINGS** 

SMOKE ZONE PLANS PLUMBING DRAWINGS

PLUMBING PLAN - PART 1 PLUMBING PLAN - PART 2

**PLUMBING GENERAL DRAWINGS** 

**MECHANICAL GENERAL DRAWINGS** MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

BES P001 PLUMBING NOTES, SCHEDULE, LEGEND, & DETAILS

BES PD111 PLUMBING DEMOLITION PLAN - PART 1 BES PD112 PLUMBING DEMOLITION PLAN - PART 2

**MECHANICAL DEMOLITON DRAWINGS** 

BES M002 MECHANICAL SCHEDULES & DETAILS

BES MD111 MECHANICAL DEMOLITION PLAN - PART 1 BES MD112 MECHANICAL DEMOLITION PLAN - PART 2

**MECHANICAL DRAWINGS** MECHANICAL PLAN - PART 1

BES M112 MECHANICAL PLAN - PART 2

**ELECTRICAL GENERAL DRAWINGS** BES E001 ELECTRICAL NOTES, LEGENDS, SCHEDULES & DETAILS

**ELECTRICAL DEMOLITION DRAWINGS** 

BES ED111 ELECTRICAL DEMOLITION PLAN - PART 1

BES ED112 ELECTRICAL DEMOLITION PLAN - PART 2

**ELECTRICAL DRAWINGS** 

ELECTRICAL PLAN - PART 1 ELECTRICAL PLAN - PART 2 LIGHTING PLAN - PART 1

LIGHTING PLAN - PART2

FURNITURE DRAWINGS

BES FE111 FLOOR FURNITURE PLAN - FIRST FLOOR - AREA A

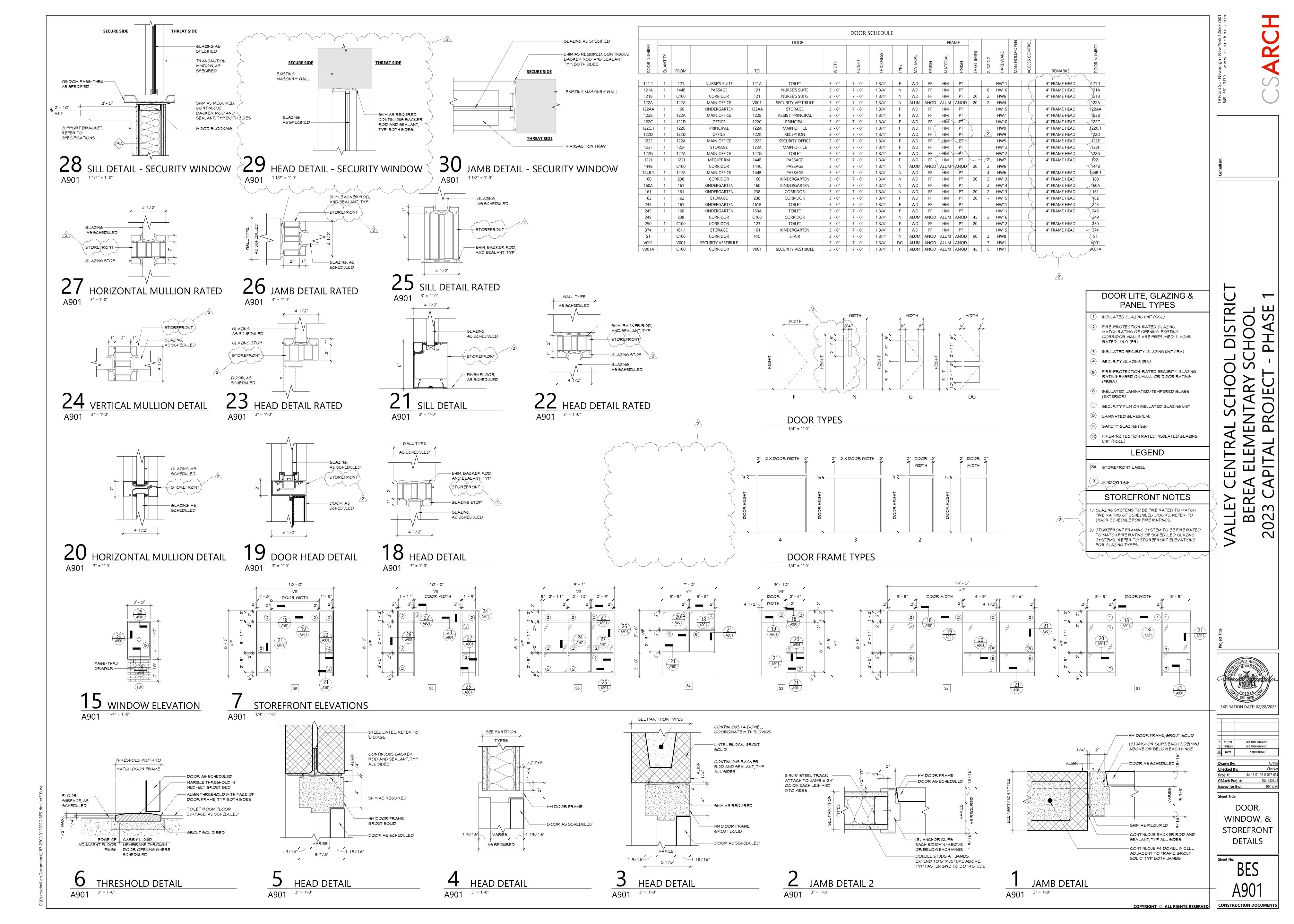
SIGNAGE TYPES AND SCHEDULE

VICINITY MAP









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102	101
103	
104   PLOFFICE	
105	
196	
107   BOOK NOOM	
120	
121	107
121	120
121A	
121D	
122A	
122AA   STORAGE	
122B	
122C	122AA
122C	122B
122D	
122E   SECURITY OFFICE	
122F   STORAGE	
122G	122E
122G	122F
122   MTG/PT RM	
123   SPECIAL ED	
123	
124	
125   SPECIAL ED	123
125   SPECIAL ED	124
126	
127	
128	
129   SPECIAL ED RESOURCE   K1	
130   COMPUTER LAB   K1	128
130   COMPUTER LAB   K1	129
131	
132   SPECH	
133   SPECIAL ED	
134	
135	133
135	134
136	
136A   STORAGE   K1	
137   MUSIC   K1	
139	136A
139	137
140         1ST GRADE         K1         1         FIRST FLOOR           141         1ST GRADE         K1         1         FIRST FLOOR           142         2ND GRADE         K1         1         FIRST FLOOR           143         AIS MATH         K1         1         FIRST FLOOR           144         2ND GRADE         K1         1         FIRST FLOOR           145         2ND GRADE         K1         1         FIRST FLOOR           160         KINDERGARTEN         K1         2         FIRST FLOOR           161         KINDERGARTEN         K1         2         FIRST FLOOR           161.1         STORAGE         K1         1         FIRST FLOOR           162         STORAGE         K1         1         FIRST FLOOR           162         STORAGE         K1         1         FIRST FLOOR           C100         CAFETERIA         K1         2         FIRST FLOOR           C101         STAGE         K1         1         FIRST FLOOR           G100         GYMNASIUM A         K1         2         FIRST FLOOR           G101         GYMNASIUM B         K1         2         FIRST FLOOR	137
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143         AIS MATH         K1         1         FIRST FLOOR           144         2ND GRADE         K1         1         FIRST FLOOR           145         2ND GRADE         K1         1         FIRST FLOOR           160         KINDERGARTEN         K1         2         FIRST FLOOR           161         KINDERGARTEN         K1         2         FIRST FLOOR           161.1         STORAGE         K1         1         FIRST FLOOR           162         STORAGE         K1         1         FIRST FLOOR           236         BOOK STORAGE         K1         1         FIRST FLOOR           C100         CAFETERIA         K1         2         FIRST FLOOR           C101         STAGE         K1         FIRST FLOOR           E100         ELEVATOR VESTIBULE         K1         1         FIRST FLOOR           G101         GYMNASIUM A         K1         2         FIRST FLOOR           G101         GYMNASIUM B         K1         2         FIRST FLOOR           J100         CUSTODIAL         K1         FIRST FLOOR           J101         CUSTODIAL         K1         FIRST FLOOR	139 140
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236         BOOK STORAGE         K1         1         FIRST FLOOR           C100         CAFETERIA         K1         2         FIRST FLOOR           C101         STAGE         K1         FIRST FLOOR           E100         ELEVATOR VESTIBULE         K1         1         FIRST FLOOR           G100         GYMNASIUM A         K1         2         FIRST FLOOR           G101         GYMNASIUM B         K1         2         FIRST FLOOR           J100         CUSTODIAL         K1         FIRST FLOOR           J101         CUSTODIAL         K1         FIRST FLOOR           J102         CUSTODIAL         K1         1         FIRST FLOOR	139 140 141 142 143 144 145 160
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C101         STAGE         K1         FIRST FLOOR           E100         ELEVATOR VESTIBULE         K1         1         FIRST FLOOR           G100         GYMNASIUM A         K1         2         FIRST FLOOR           G101         GYMNASIUM B         K1         2         FIRST FLOOR           J100         CUSTODIAL         K1         FIRST FLOOR           J101         CUSTODIAL         K1         FIRST FLOOR           J102         CUSTODIAL         K1         1         FIRST FLOOR	139 140 141 142 143 144 145 160 161 161.1
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E100         ELEVATOR VESTIBULE         K1         1         FIRST FLOOR           G100         GYMNASIUM A         K1         2         FIRST FLOOR           G101         GYMNASIUM B         K1         2         FIRST FLOOR           J100         CUSTODIAL         K1         FIRST FLOOR           J101         CUSTODIAL         K1         FIRST FLOOR           J102         CUSTODIAL         K1         1         FIRST FLOOR	139 140 141 142 143 144 145 160 161 161.1 162 236 C100
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G101         GYMNASIUM B         K1         2         FIRST FLOOR           J100         CUSTODIAL         K1         FIRST FLOOR           J101         CUSTODIAL         K1         FIRST FLOOR           J102         CUSTODIAL         K1         1         FIRST FLOOR	139 140 141 142 143 144 145 160 161 161.1 162 236 C100 C101
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J102 CUSTODIAL K1 1 FIRST FLOOR	139 140 141 142 143 144 145 160 161 161.1 162 236 C100 C101 E100 G100 G101
J102 CUSTODIAL K1 1 FIRST FLOOR	139 140 141 142 143 144 145 160 161 161.1 162 236 C100 C101 E100 G100 G101
	139 140 141 142 143 144 145 160 161 161.1 162 236 C100 C101 E100 G100 G101 J100
I103 CUSTODIAI K1 1 FIRST FLOOR	139 140 141 142 143 144 145 160 161 161.1 162 236 C100 C101 E100 G100 G101 J100 J101

ROOM NUMBER	ROOM NAME	SIGNAGE TYPE	QUANTITY	REMARKS
202	SPECIAL ED.	K1	1	SECOND FLOOR
203	AIS READING	K1	1	SECOND FLOOR
204	5TH GRADE	K1	1	SECOND FLOOR
205	5TH GRADE	K1	1	SECOND FLOOR
206	5TH GRADE	K1	1	SECOND FLOOR
207	SPECIAL ED.	K1	1	SECOND FLOOR
209	CLASSROOM	K1	1	SECOND FLOOR
216	FACULTY ROOM	K1	1	SECOND FLOOR
218	4TH GRADE	K1	1	SECOND FLOOR
219	4TH GRADE	K1	1	SECOND FLOOR
220	4TH GRADE	K1	1	SECOND FLOOR
221	3RD GRADE	K1	1	SECOND FLOOR
222	3RD GRADE	K1	1	SECOND FLOOR
223	3RD GRADE	K1	1	SECOND FLOOR
224	AIS	K1	1	SECOND FLOOR
E200	ELEVATOR VESTIBULE	K1	1	SECOND FLOOR
S200	STORAGE	K1	1	SECOND FLOOR
S201	STORAGE	K1	1	SECOND FLOOR
S202	STORAGE	K1	1	SECOND FLOOR
T200	TOILET	N1	1	SECOND FLOOR
T201	TOILET	N1	1	SECOND FLOOR
T202	BOYS TOILET	S2	1	SECOND FLOOR
T203	GIRLS TOILET	S1	1	SECOND FLOOR

K1

K1

FIRST FLOOR

1 FIRST FLOOR

1 FIRST FLOOR

1 FIRST FLOOR

ROOM SIGNAGE SCHEDULE

**ROOM NAME** 

SIGNAGE TYPE QUANTITY

REMARKS

1) REFER TO PANEL SIGNAGE ELEVATIONS FOR SIGNAGE TYPES.

CUSTODIAL

CUSTODIAL

DISHWASHING

LIBRARY OFFICE

KITCHEN

OFFICE

LIBRARY

STORAGE

TOILET

GIRLS TOILET

BOYS TOILET

SECURITY VESTIBULE

J104

K100

K101

K102

L100

L101

S100

S101

S102

S103

S104

S106

S107

S109

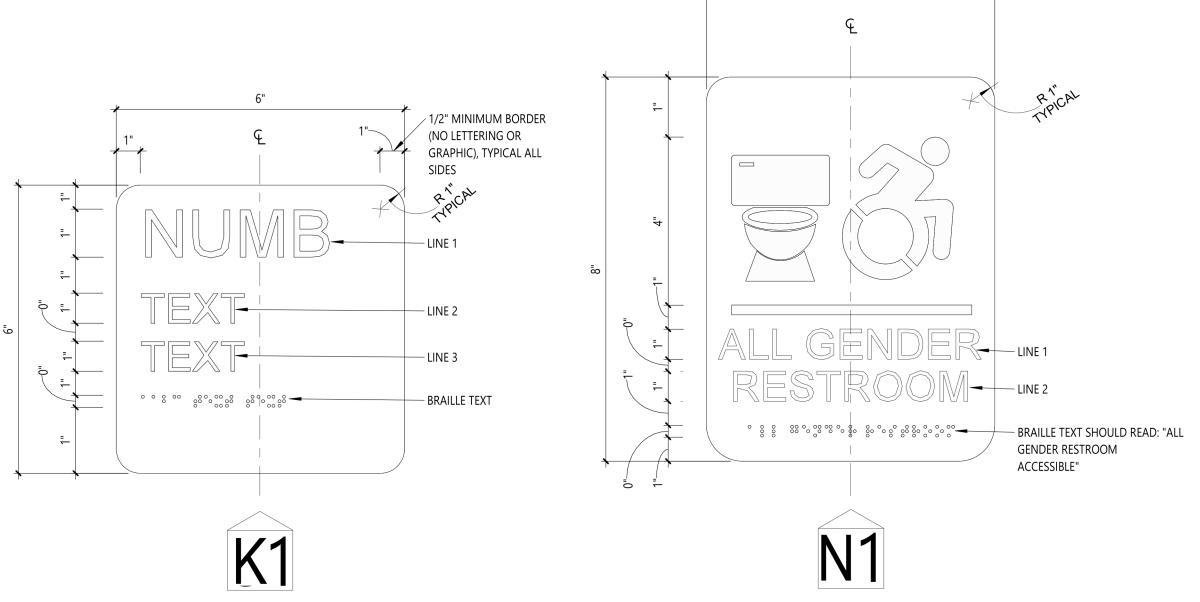
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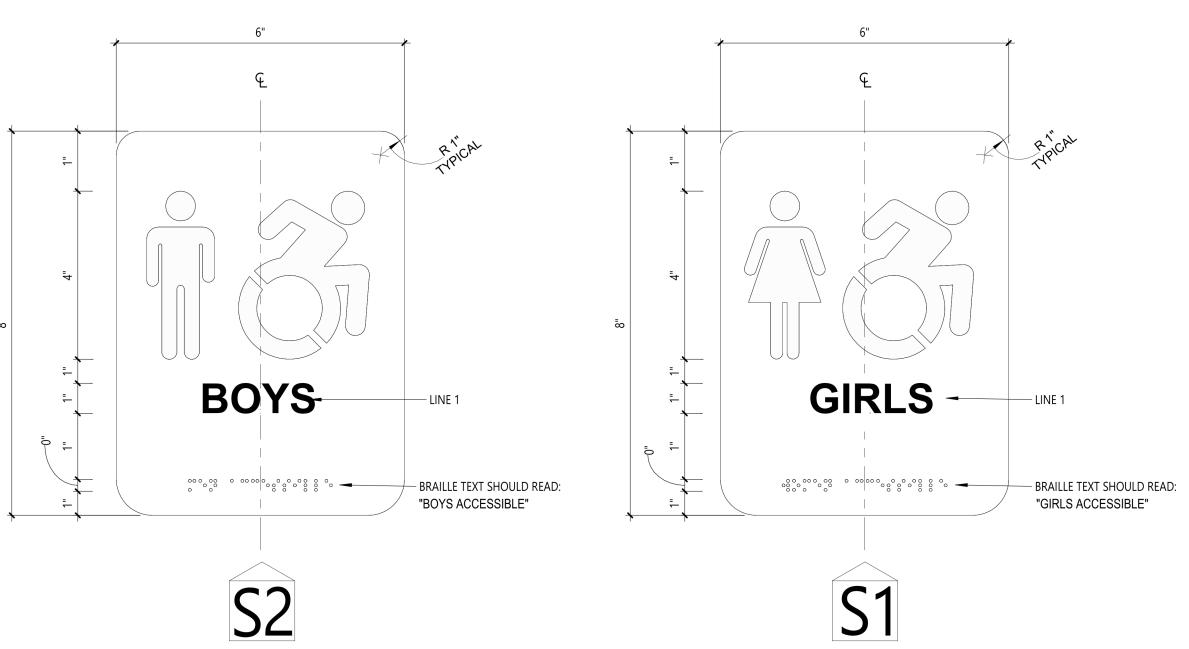
S112

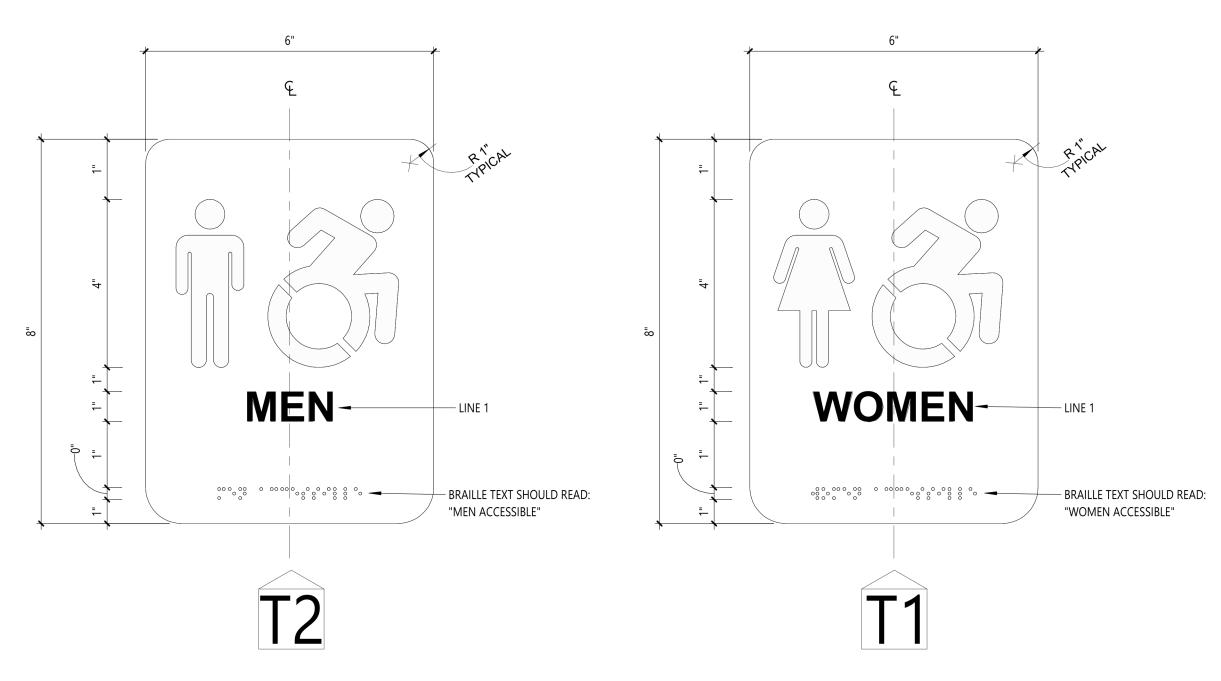
T102 T103

2) REFER TO SPECIFICATION SECTION 101423 - "INTERIOR PANEL SIGNAGE" FOR ADDITIONAL INFORMATION.

3) ALL EXISTING PANEL SIGNAGE FOR ROOMS NOTED ABOVE SHALL BE REMOVED AND REPLACED WITH NEW. 4) FINAL NUMBERING AND NAMING OF ROOMS TO BE DETERMINED BY OWNER DURING THE SUBMITTAL AND SHOP DRAWING REVIEW.







PANEL SIGNAGE ELEVATIONS

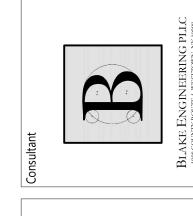
SIGNAGE TYPES AND SCHEDULE

EXPIRATION DATE: 02/28/2025

2 11/1/24 BID ADDENDUM #2

DATE DESCRIPTION

CONSTRUCTION DOCUMENTS



5. COMPONENT ARRANGEMENT MAY VARY BY MANUFACTURER. PROVIDE INSULATION W/ VAPOR BARRIER FOR CONNECTING DUCT SECTIONS.

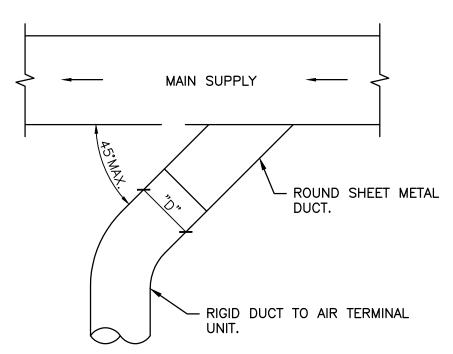
MAIN SUPPLY -ROUND SHEET METAL - RIGID DUCT TO AIR TERMINAL

<u>PLAN VIEW</u>

DIFFUSER (TYP.) -FLEXIBLE AIR DUCT-CONNECTOR; SEE DETAIL SEE NOTE 1 | REHEAT COIL -SEE NOTE 2 SEE NOTE 3 - AIR TERMINAL UNIT (CV OR VAV) SEE SPECIFICATIONS FOR CLAMPS AND SEALANT (TYP.) ✓SEE NOTE 5 1. RIGID STRAIGHT TERMINAL UNIT INLET LENGTH SHALL BE A

- MINIMUM OF 3 TIMES THE DIAMETER OF INLET.
  - 2. A FLEXIBLE AIR DUCT CONNECTOR IS NOT MANDATORY FOR INLET TO THIS BOX. BUT ALLOWED TO ACCOMMODATE MINOR OFFSETS. MAXIMUM LENGTH
  - 3. A BRANCH DUCT SERVING AN INDIVIDUAL BOX MAY BE THE SAME SIZE AS THE BOX INLET, PROVIDED THE EQUIVALENT LENGTH OF THE BRANCH DUCT, AS SHOWN, DOES NOT EXCEED 10 FEET. FOR LONGER LENGTHS, INCREASE THE DUCT SIZE AND PROVIDE A DUCT TRANSITION TO MAINTAIN THE DUCT STATIC PRESSURE DROP AT OR BELOW 0.2"/100'.
- 4. FLEXIBLE AIR DUCT CONNECTORS, WHEN USED FROM TERMINAL UNIT SUPPLY AIR DUCT TO DIFFUSER, SHALL NOT EXCEED 8'-0". USE RIGID ELBOWS FOR CHANGE OF DIRECTION GREATER THAN 45°.





Supply Duct Takeoff for Air Terminal Unit

- ENERGY RECOVERY VENTILATOR, HOT WATER COIL & VRF SYSTEM FURNISHED BY OWNER, INSTALLED BY CONTRACTOR; CONTRACTOR IS RESPONSIBLE TO RECEIVE THE EQUIPMENT DELIVERY AT THE PROJECT SITE, MOVE EQUIPMENT FROM TRUCK(S) TO A DESIGNATED STORAGE LOCATION ON THE SITE & RIG THE UNIT INTO THE FINAL INSTALLATION LOCATION: CONTRACTOR IS TO PROVIDE ALL ASSOCIATED COMPONENTS, I.E., DUCTWORK, PIPING, CONTROLS, ACCESSORIES, ETC. UNLESS OTHERWISE NOTED IN THE PROJECT DOCUMENTS; REFER TO

FRONT END DOCUMENTS FOR ADDITIONAL INFORMATION

WIRED 7 DAY PROGRAMMABLE THERMOSTAT SHALL BE

FURNISHED BY OWNER FOR EACH INDOOR UNIT. THERMOSTATS

SHIP LOOSE FOR FIELD INSTALLATION AND WIRING BY THE

OWNER TO FURNISH CENTRAL CONTROLLER FOR LOCAL SET POINT CONTROL AND SYSTEM VIEWING. CONTROLLER TO BE

INSTALLED AND WIRING BY MECHANICAL CONTRACTOR. 24V

DISCONNECT SWITCHES FOR CONDENSING UNITS AND INDOOR

UNITS SHALL BE FURNISHED BY THE OWNER AND INSTALLED BY

EXTERNAL SUPPORTS FOR INDOOR AND CONDENSING UNITS

SHALL BE FURNISHED BY OWNER AND INSTALLED BY THE

FILTER RACK AND 2" PLEATED MERV-13 FILTERS FOR DUCTED UNITS SHALL FURNISHED BY OWNER AND INSTALLED BY THE

MECHANICAL CONTRACTOR. FILTER RACK SHALL BE GALVANIZED

STEEL, FULLY INSULATED & FACTORY ASSEMBLED. TYPICAL OF

CONDENSATE PUMPS SHIP FOR FIELD INSTALLATION BY MECHANICAL CONTRACTOR FOR WALL MOUNTED UNITS.

DUCTED UNITS FURNISHED WITH FACTORY MOUNTED

CONDENSATE PUMP. MECHANICAL CONTRACTOR TO PROVIDE CONDENSATE PIPING FROM ALL UNITS TO SANITARY DRAIN. FIELD VERIFY EXACT ROUTING AND TERMINATION POINT IN

PROVIDE REFRIGERANT ISOLATION VALVES ON LIQUID AND GAS

BALANCE VALVE

- REDUCER, IF REQUIRED

— SHUT OFF VALVE

— ₩ATER RETURN

- 2-WAY CONTROL VALVE

- UNION CONNECTIONS AT VALVES; TYPICAL ₩ATER SUPPLY

- STRAINER

VRF System Notes:

MECHANICAL CONTRACTOR.

POWER BY ELECTRICAL CONTRACTOR.

THE ELECTRICAL CONTRACTOR.

MECHANICAL CONTRACTOR.

FLT-H SERIES OR EQUAL

LINES AT EVERY FAN COIL UNIT.

Coil Piping Connection Detail

MANUAL AIR VENT -

TEST PLUG (TYP.)

COIL

Scale: None

UNION CONNECTIONS —

DRAIN WITH HOSE-CONNECTION

∖M002 /

(TYP.)

		DUCTED HOT WATER COIL SCHEDULE																	
   	EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	AIRFLOW (CFM)	AIR PRESS. DROP (IN. W.C.)	EFT (°F)	LFT (°F)	CAPACITY (MBH)	E.A.T. DB (°F)	L.A.T. DB (°F)	FPD (FT)	FLOW RATE (GPM)	ROWS	FIN HEIGHT (IN)	FIN LENGTH (IN)	COIL HEIGHT (IN)		OVERALL LENGTH (IN)	NOTES
¦ [	HWC-1	TRANE	D5WB12012G0AA142EABA00A	300	0.35	180	160	11.78	53.8	90	0.02	1.18	1	12	12	13.5	13.375	26 -	

FRESH EXHAUST ROOM EXH. AIR (°F) OUTSIDE AIR (°F) SUPPLY AIR (°F)

WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER |

0.0 | 54.4 | 75.0 | 62.6 | 0.0 | -2.0 | 95.0 | 75.0 | 53.8 | 44.1 | 79.4 | 68.0 | 76.8%

AIR FLOW | AIR FLOW |

(CFM)

RATE

(CFM)

MODEL

HE07-JRTV-D11AA--DGNTF--L

EQUIPMENT | MANUFACTURER

(OR ACCEPT. EQUAL)

RENEWAIRE

ENERGY RECOVERY VENTILATOR SCHEDULE

RECOVERY EFFECTIVENESS

76.8%

ELECTRICAL DATA

| VOLT. | PHASE | Hz. | MCA | MOCP | (LB)

MOTOR

#### INDOOR MINI-SPLIT UNIT SCHEDULE MANUFACTURER AREA OF POWER AIRFLOW **EQUIPMENT** MINI-SPLIT UNIT WEIGHT (OR ACCEPT. MODEL BUILDING CAPACITY EDB | EWB | CAPACITY | EDB | EWB | OUTDOOR | REQUIREMENTS NOTES PRESSURE (LB) EQUAL) SERVED (MBH) | (°F) | (°F) | (MBH) | (°F) | (°F) | UNIT (IN. W.C.) VOLT. PHASE Hz. W FCU-1 PROVIDE W/ BUILT IN CONDENSATE PUMP TRANE TPLFYP008FM104A NURSE'S SUITE 315 28.9 80.0 67.0 70.0 60.0 RECESSED UNIT CONFERENCE CEILING 315 PROVIDE W/ BUILT IN CONDENSATE PUMP FCU-2 TRANE TPLFYP008FM104A 80.0 67.0 70.0 60.0 RECESSED UNIT ROOM **ASSISTANT** CEILING TRANE TPLFYP008FM104A 315 80.0 67.0 PROVIDE W/ BUILT IN CONDENSATE PUMP FCU-3 70.0 60.0 RECESSED UNIT PRINCIPAL PROVIDE W/ BUILT IN CONDENSATE PUMP FCU-4 TRANE TPLFYP012FM140A MAIN OFFICE 335 81.0 66.0 13.5 31.3 **RECESSED UNIT** SECURITY CEILING TRANE TPLFYP008FM104A 315 80.0 67.0 70.0 60.0 28.9 PROVIDE W/ BUILT IN CONDENSATE PUMP RECESSED UNIT OFFICE CEILING TRANE TPLFYP008FM104A OFFICE 315 80.0 67.0 60 50 28.9 PROVIDE W/ BUILT IN CONDENSATE PUMP 70.0 | 60.0 **RECESSED UNIT** CEILING TRANE TPLFYP012FM140A PRINCIPAL 335 81.0 | 66.0 | 13.5 60 50 31.3 PROVIDE W/ BUILT IN CONDENSATE PUMP FCU-7 12 68.0 60.0 208 | 1 **RECESSED UNIT**

								AIR-COOLED HEAT PUMP SCHEDULE														
	EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	INDOOR UNITS SERVED	COMPRESSOR TYPE	NOM. COOL CAPACITY (MBH)	CAPACITY (MBH)	OPERAT RAN	DOOR ING TEMP. GE (°F)	F	EFFICI RATING: IEER	S	REFRIGERANT	HEATING	VOLT.	F	CTRICA OWER IREMEN Hz.	TS	MOCP	WEIGHT (LB)	NOTES	
֓֞֝֞֞֓֓֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֡֓֡֓֓֓֡֓֡֓֡֓֡֓֡֡֡֡֡	HP-1	TRANE	TUHYH0723AN40AN	FCU-1 THRU FCU-7	INVERTER SCROLL HEMETIC	72	80	23 TO 126	-22 TO 60	13.1	27.2	4.39	R410A	55/57	208	3	60	38	60	609	FURNISH W/ REQUIRED PIPING ACCESSORIES	

1. FAN GUARD FROM TRANE IS TO BE USED IN COMBINATION WITH THIS DEVICE, MUST BE MOUNTED 12' OF GROUND OR 12" ABOVE HIGHEST AVERAGE SNOW DEPTH, WHICHEVER IS GREATER

	AIR GRILLE/DIFFUSER SCHEDULE														
EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	AIR DEVICE TYPE	AIRFLO MIN.	W (CFM) MAX.	MAX AIR PRESS. DROP (IN. W.C.)	MOUNTING	PANEL/FRAME SIZE (IN.)	NECK SIZE (IN.)	MAX NC	DAMPER	FINISH	NOTES		
D-1	KRUEGER	PLQ-6-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	50	175	0.10	LAY-IN	24"x24"	6"Ø	20	OBD	WHITE	PROVIDE W/ INSULATED BLANKET ON BACKPAN		
D-2	KRUEGER	PLQ-8-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	176	300	0.10	LAY-IN	24"x24"	8"Ø	20	OBD	WHITE	PROVIDE W/ INSULATED BLANKET ON BACKPAN		
R-1	KRUEGER	S80P-20x20-F23-24x24-00-00-00-44	PERFORATED FACE RETURN GRILLE	0	1,600	0.10	LAY-IN	24"x24"	20"x20"	25	-	WHITE	FURNISH & INSTALL FULL-SIZE SHEET METAL PLENUM BOX ON REAR OF GRILLE, PAINT INSIDE FLAT BLACK		

								NNED T	ΓUBE S	CHED	JLE			
EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	AVG WATER TEMP (°F)	DIU/FI	I TOBL SIZE	ELEMENT TUBE MATERIAL	ELEMENT FIN SIZE (IN)	FINS PER FT	ACTIVE FIN LENGTH	ROW QUANTITY	ENCLOSURE MATERIAL	FINISH	COLOR	NOTES
FT-1	STERLING	JVB-S 24	150	860	3/4	COPPER	4-1/4 X 3-5/8	40	(2) 7FT SECTIONS	1	16 GAUGE STEEL	STANDARD PRIME FINISH		PROVIDE W/ REMOVE 12" ACCESS PANEL AT EACH END PROVIDE W/ FULL SIZE BACK PLATE AND MOUNTING BRACKETS

	FAN SCHEDULE														
EQUIPMENT	MANUFACTURER	MANUFACTURER MODEL SERVICE FAN R.P.M. PRESSURE													
TAG	WAR WOLVING TOTAL		02.11.02	C.F.M.		INCH H <sub>2</sub> O	POWER (HP)	FLA	VOLT.	PHASE	HZ.	REMARKS			
EF-1	GREENHECK	G-133-VG	CLASSROOM	500 (1,500)	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER			
EF-2	GREENHECK	G-133-VG	CLASSROOM	500 (1,500)	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER			
EF-3	GREENHECK	G-090-VG	TOILET ROOM	150	1,336	0.25	1/4	2.6	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIGH INSULATED ROOF CURB & BACKDRAFT DAMPER			

					$\nabla$	ENTI	LATIO	N SCHEI	DULE						
SYSTEM	SPACE SERVED	SPACE TYPE	SPACE AREA (SQ. FT.)	OCCUPANTS PER 1000 SQ. FT.	# OF OCCUPANTS (NOTE 1)	CFM PER PERSON	CFM PER SQ. FT.	CALCULATED VENTILATION RATE (CFM)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ADJUSTED VENTILATION RATE (CFM)	PROVIDED VENTILATION RATE (CFM)	EA CFM PER FIXTURE	EA CFM PER SQ. FT.	MIN. EA RATE (CFM)	EA PROVIDED (CFM)
	NURSE'S SUITE 121	OFFICE/ SICKROOM	435	10	5	10	0.18	128	0.8	160	160	-	-	-	-
	MGT/PT ROOM 122J	CONFERENCE ROOM	194	10	50	5	0.06	62	0.8	77	80	-	-	-	-
	ASSISSTENT PRINCIPAL'S 1228	OFFICE	204	5	2	5	0.06	22	0.8	28	30	-	-	-	-
ERV-1	MAIN OFFICE 122A	RECEPTION AREA	522	30	16	5	0.06	111	0.8	139	140	-	-	-	-
	SECURITY OFFICE 122E	OFFICE	73	5	1	5	0.06	9	0.8	12	15	-	-	-	-
	OFFICE 122D	OFFICE	114	5	1	5	0.06	12	0.8	15	15	-	-	-	-
	PRINCIPAL'S OFFICE 122C	OFFICE	266	5	2	5	0.06	26	0.8	32	35	-	-	-	-
	KINDERGARTEN 160	CLASSROOM (AGES 5-8)	876	25	30	10	0.12	325	0.8	507	510	-	-	-	-
EXISTING	KINDERGARTEN 161	CLASSROOM (AGES 5-8)	872	25	30	10	0.12	325	0.8	507	510	-	-	-	-
RTU	COUNSELOR	OFFICE	198	5	1	5	0.06	17	0.8	21	25	-	-	-	-
	COPY ROOM	COPY, PRINTING	299	4	2	5	0.06	28	0.8	35	35	-	-	-	-

1. QUANTITY OF OCCUPANTS FOR STANDARD CLASSROOMS ARE 25 TO 30 OCCUPANTS BASED ON NYSED STATISTICAL DATA. ALL OTHER OCCUPANCIES ARE BASED UPON OCCUPANT DENSITIES FROM THE 2015 INTERNATIONAL MECHANICAL CODE

				AIR T	AIR TERMINAL UNIT SCHEDULE														
									HYE	RONIC R	EHEAT C	OIL							
EQUIPMENT TAG	MANUFACTURER	MODEL	MAXIMUM PRIMARY CFM	MINIMUM PRIMARY CFM	SENSOR SP	HEAT CFM	EAT DEG F	LAT DEG F	CAPACITY MBH		LWT DEG F	COIL APD FT. W.G.	WATER GPM	COIL ROWS	WPD FT. W.G.	NOTES			
VAV-1	KRUEGER	LMHS	1,500	510	-	1,125	55	90	42.5	180	160	0.23	4.0	2	1.17	1 - 4			
VAV-2	KRUEGER	LMHS	1,500	510	-	1,125	55	90	42.5	180	160	0.23	4.0	2	1.17	1 - 4			

- PROVIDE WITH HOT WATER REHEAT COIL OF SIZE & CAPACITY SPECIFIED PROVIDE W/ FACTORY INSTALLED AIRFLOW MEASURING SENSOR
- PROVIDE W/ BACNET COMPATIBLE DDC CONTROLLER 4. PROVIDE W/ FACTORY INSTALLED TOGGLE DISCONNECT SWITCH

# DDC Temperature Control Notes:

1. HVAC CONTROLS SHALL BE FURNISHED & INSTALLED BY THE OWNER TO MATCH THE EXISTING BUILDING AUTOMATION SYSTEM IN EACH BUILDING (SIEMENS AT BEREA ELEMENTARY). ALL HARDWARE, WIRING AND PROGRAMMING TO BE PROVIDED BY OWNER. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER'S VENDOR THROUGHOUT THE PROJECT TO SUPPORT INSTALLATION, TESTING AND COMMISSIONING. MECHANICAL CONTRACTOR TO INSTALL ALL DEVICES MOUNTED IN OR ON THE PIPING AND/OR DUCTWORK INCLUDING BUT NOT LIMITED TO HYDRONIC CONTROL VALVES, TEMPERATURE SENSORS, FLOW SENSORS, ETC. MECHANICAL CONTRACTOR TO PROVIDE ALL NECESSARY PORTS/THERMOWELLS FOR SENSORS, GAUGES, ETC. COORDINATE WITH OWNER'S VENDOR FOR QUANTITY AND LOCATIONS.

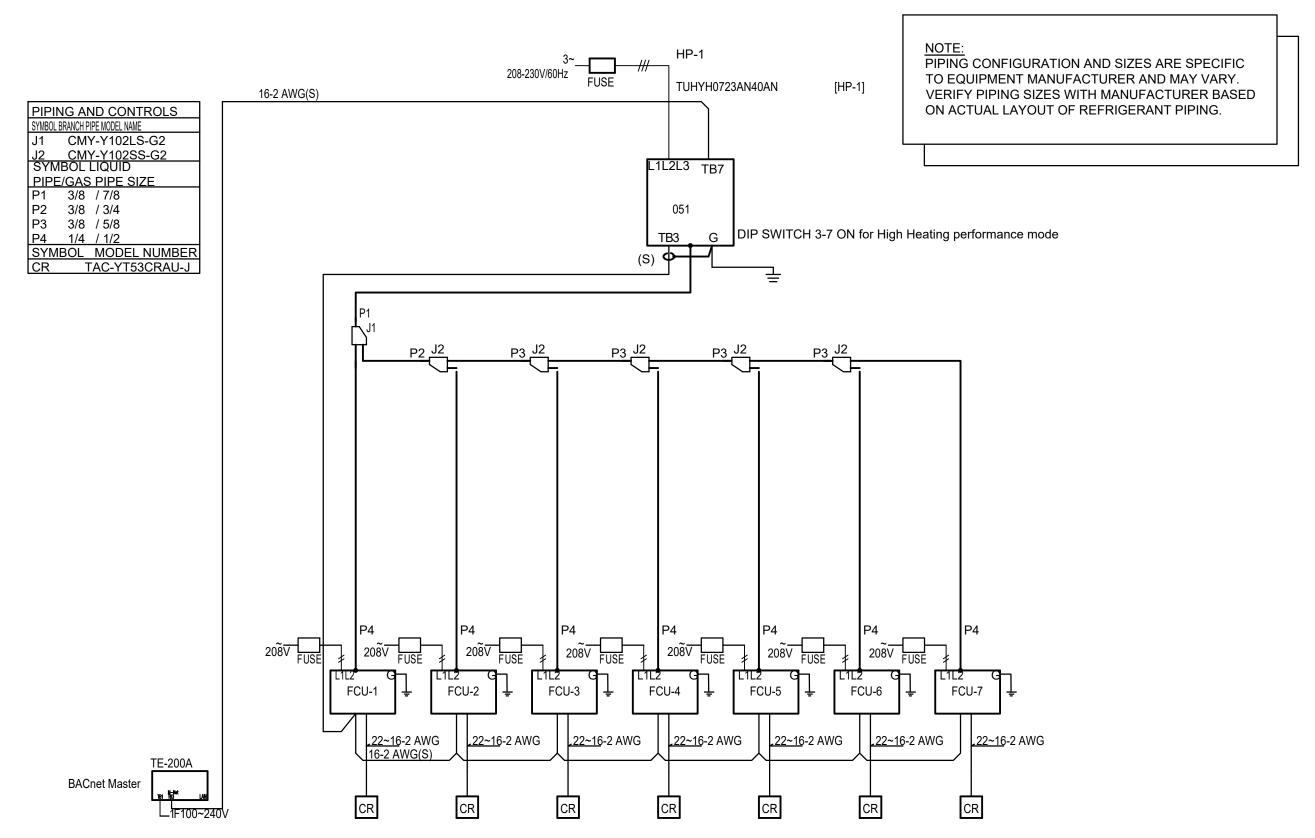
NOTES

DISCONNECT SWITCH, 24" INSULATED ROOF CURB &

FURNISH W/ MERV 8 FILTERS, ECM MOTOR,

BACKDRAFT DAMPERS:

- 2. OWNER SHALL EXPAND EXISTING BUILDING AUTOMATION SYSTEM TO PROVIDE THE CONTROL SEQUENCES SPECIFIED ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE SYSTEM SHALL PROVIDE CONTROL AND MONITORING OF THE EQUIPMENT INDICATED.
- 3. OWNER SHALL PROVIDE CONTROLLERS AND COMMUNICATIONS INFRASTRUCTURE TO MATCH EXISTING CAMPUS-WIDE BUILDING AUTOMATION SYSTEM. PROVIDE SEAMLESS INTEGRATION WITH EXISTING CONTROL NETWORK AND USER INTERFACES. NETWORK GATEWAYS AND PROTOCOL INTERFACE EQUIPMENT ARE NOT ACCEPTABLE UNLESS OTHERWISE NOTED.
- 4. OWNER SHALL PROVIDE INSTRUMENTATION, SENSORS, VALVES, DAMPERS, ACTUATORS AND WIRING AS REQUIRED TO PROVIDE SPECIFIED OPERATING SEQUENCES.
- 5. OWNER SHALL MODIFY EXISTING GRAPHIC USER INTERFACES TO INCLUDE ALL EQUIPMENT AND SYSTEMS INCLUDED IN THIS PROJECT.
- 6. OWNER SHALL REPLACE THE EXISTING BAS SERVER HARDWARE AND UPGRADE THE SOFTWARE TO THE LATEST VERSION OF WEB-ENABLED GRAPHICAL USER INTERFACE WITH A SEAMLESS INTEGRATION OF THE NEW AND EXISTING CONTROL POINTS.
- 7. OWNER SHALL BE RESPONSIBLE FOR POWER THAT IS NOT SHOWN ON THE ELECTRICAL DRAWINGS, TO CONTROLS FURNISHED BY THIS CONTRACTOR. IF POWER CIRCUITS ARE SHOWN ON THE ELECTRICAL DRAWINGS, OWNER SHALL CONTINUE THE POWER RUN TO THE CONTROL DEVICE. IF POWER CIRCUITS ARE NOT SHOWN, OWNER SHALL PROVIDE BREAKERS AT DISTRIBUTION PANELS FOR POWER TO CONTROLS AND PROVIDE POWER FROM THE DISTRIBUTION PANEL TO THE CONTROL DEVICES.
- 8. OWNER SHALL FURNISH & INSTALL ALL REQUIRED END DEVICES. POWER SUPPLY, LOW VOLTAGE TRANSFORMERS, CONTROL WIRING & CONDUITS, ETC. FOR A COMPLETE & OPERATIONAL DDC CONTROL
- 9. NEW WIRING & CONDUITS SHALL BE RUN CONCEALED ABOVE CEILING. ALL EXPOSED WIRING & CONDUITS SHALL BE RUN CONCEALED IN EMT IN UTILITY SPACES AND WIREMOLD IN FINISHED AREAS.
- 10.OWNER TO FIELD INSTALL SENSORS, CONTROLLERS, ETC. WHICH ARE NOT FACTORY-INSTALLED BY EQUIPMENT MANUFACTURERS.
- 11. ANY EQUIPMENT FURNISHED WITH FACTORY CONTROLS SHALL BE PROVIDED WITH BACNET MSTP INTEGRATION CAPABILITIES AND INCLUDE ON-SITE FACTORY CONTROLS INTEGRATION START-UP IN COORDINATION WITH OWNER'S BUILDING AUTOMATION SYSTEM.



VRF System Piping Diagram

**MECHANICAL** 

**SCHEDULES &** 

**DETAILS** 

BID ADDENDUM #2

DESCRIPTION

44-13-01-06-0-017-014

187-2302.01

# DATE

Drawn By:

Proj. #:

CSArch Proj. #:

Issued for Bid:

Sheet Title

	LIGHTING FIXTURE SCHEDULE														
TAG	SYMBOL	MANUFACTURER & MODEL	TYPE	VOLTAGE	# OF LAMPS	LAMP WATTS	FIXTURE WATTS	MOUNTING	SIZE	NOTES					
А	<b>⊟</b> <sub>A</sub>	HE WILLIAMS RECESSED DIRECT/INDIRECT DIG-S22-L32/840-AD-DIM-UNV	LED	120	1	25.8	25.8	RECESSED	2'x2'	4000K COLOR TEMPERATURE					
B-EM	B-EM	HE WILLIAMS VOLTAIRE ARCHITECTURAL WALL PACK VWPH-L30/740-T3-DBZ-SDGL-EM/10WC-DIM-UNV	LED	120	1	36	36	SURFACE WALL MOUNT	12"x12"	VANDAL RESISTANT; 4000K COLOR TEMPERATURE; W/ LED EMERGENCY 90 MINUTE LOW TEMPERATURE BATTERY BACKUP; UL 924 LISTED FIXTURE					
С	Oc	HE WILLIAMS 6" LED DOWNLIGHT - ROUND 6DR-TL-L15/840-DIM-UNV-LW-OF-WH-R	LED	120	1	13.8	13.8	RECESSED	6"Ø	4000K COLOR TEMPERATURE; REMODEL KIT					
-	$\Box$	HE WILLIAMS LED EMERGENCY LIGHT EMER/LED-WHT-SDT-D	LED	120	2	1.0	2.0	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP					
-		HE WILLIAMS LED EXIT & EMERGENCY LIGHT EXIT/EM/LED-R-WHT-RC-SDT-D	LED	120	2	1.5	3.4	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP; PROVIDE W/ REMOTE HEAD MODEL WETRHL-T-WHT-HL-MV					
-	⊗	HE WILLIAMS LED EXIT LIGHT EXIT-R-EM-WHT-SDT-D	LED	120	1	3.8	3.8	UNIVERSAL	-	90-MINUTE BATTERY BACKUP					

		_		i —	i			_		
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LOAD	EXISTING WIRING	20	1	-/-			2	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	3		·/.		4	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	5			·/.	6	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	7	·/.			8	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	9		·/.		10	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	11			·/.	12	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	13	·/.			14	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	15		·/.		16	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	17			·/.	18	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	19	·/.			20	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	21		·/.		22	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	23			·/.	24	20	EXISTING WIRING	EXISTING LOAD
ACCESS CONTROL	(2) #12 CU & (1) #12 GND.	20	25	-/-			26	20	(2) #12 CU & (1) #12 GND.	BATHROOM RECEPTACLE
DOOR OPERATORS	(2) #12 CU & (1) #12 GND.	20	27		·/.		28	20	(2) #12 CU & (1) #12 GND.	WATER FOUNTAIN
REFRIGERATOR	(2) #12 CU & (1) #12 GND.	20	29			·/.	30	20	(2) #12 CU & (1) #12 GND.	KITCHEN RECEPTACLES
SPARE	-	20	31	-/-			32	20	-	SPARE
SPARE	-	20	33		-/-		34	20	-	SPARE
SPARE	-	20	35			·/.	36	20	(2) #12 CU & (1) #12 GND.	KITCHEN RECEPTACLES
KITCHEN RECEPTACLES	(2) #12 CU & (1) #12 GND.	20	37	· / .			38	20	-	SPARE
EXHAUST FANS	(2) #12 CU & (1) #12 GND.	20	39		·/.		40	20	(2) #12 CU & (1) #12 GND.	BATHROOM RECEPTACLE
RECEPTACLES	(2) #12 CU & (1) #12 GND.	20	41			-/-	42	20	(2) #12 CU & (1) #12 GND.	VAV BOXES

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND

RATING PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

Panelboard C Section Scale: None

120/208V 3Ø 4W+G				BUS	S RATING	G: 200A				200A MAIN CIRCUIT BREAKI
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LOAD	EXISTING WIRING	20	1	·/.			2	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	3		-/-		4	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	5			·/.	6	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	7	·/			8	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	9		-/-		10	20	EXISTING WIRING	EXISTING LOAD
RECEPTACLES	(2) #12 CU & (1) #12 GND.	20	11			·/.	12	20	(2) #12 CU & (1) #12 GND.	RECEPTACLES
RECEPTACLES	(2) #12 CU & (1) #12 GND.	20	13	·/.			14	20	(2) #12 CU & (1) #12 GND.	RECEPTACLES
RECEPTACLES	(2) #12 CU & (1) #12 GND.	20	15		·/.		16	20	(2) #12 CU & (1) #12 GND.	RECEPTACLES
RECEPTACLES	(2) #12 CU & (1) #12 GND.	20	17			·/.	18	20	(2) #12 CU & (1) #12 GND.	RECEPTACLES
RECEPTACLES	(2) #12 CU & (1) #12 GND.	20	19	·/.			20	20	(2) #12 CU & (1) #12 GND.	RECEPTACLES
RECEPTACLES	(2) #12 CU & (1) #12 GND.	20	21		·/.		22	-	-	SPACE
SPACE	-	-	23			·/.	24	-	-	SPACE
SPACE	-	-	25	·/.			26	-	-	SPACE
SPACE	-	-	27		·/.		28	-	-	SPACE
SPACE	-	-	29			-/-	30	-	-	SPACE
SPACE	-	-	31	·/.			32	-	-	SPACE
SPACE	-	-	33		·/.		34	-	-	SPACE
SPACE	-	-	35			·/.	36	-	-	SPACE
SPACE	-	-	37	·/.			38	-	-	SPACE
SPACE	-	-	39		-/-		40	-	-	SPACE
SPACE			41		ľ	- /	42			SPACE

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND

 PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

Existing Panelboard CP-2

#### 120/208V 3Ø 4W+G BUS RATING: 225A MLO CONNECTED LOAD CONDUCTORS CONDUCTORS CONNECTED LOAD ISTING LOAD EXISTING LOA ISTING LOAD EXISTING LOA **EXISTING WIRING EXISTING WIRING** (ISTING LOAD **EXISTING WIRING EXISTING WIRING** EXISTING LOA (ISTING LOAD **EXISTING WIRING EXISTING WIRING** EXISTING LC XISTING LOAD EXISTING WIRING EXISTING LOA EXISTING WIRING XISTING LOAD **EXISTING WIRING EXISTING WIRING** EXISTING LOA XISTING LOAD EXISTING LOA **EXISTING WIRING EXISTING WIRING** (ISTING LOAD **EXISTING WIRING** EXISTING WIRING EXISTING LOA XISTING LOAD EXISTING LO EXISTING WIRING EXISTING WIRING (ISTING LOAD **EXISTING WIRING EXISTING WIRING EXISTING LOA** XISTING LOAD **EXISTING WIRING EXISTING WIRING** EXISTING LOA XISTING LOAD **EXISTING WIRING** EXISTING LOA EXISTING WIRING XISTING LOAD **EXISTING WIRING** EXISTING LOA EXISTING WIRING XISTING LOAD **EXISTING WIRING EXISTING WIRING** EXISTING LOA XISTING LOAD EXISTING WIRING EXISTING WIRING **EXISTING LOAI** (ISTING LOAD EXISTING LOA **FXISTING WIRING FXISTING WIRING** (ISTING LOAD **EXISTING WIRING EXISTING WIRING** EXISTING LOA XISTING LOAD **EXISTING WIRING** EXISTING WIRING EXISTING LOA FAN COILS (2) #12 CU & (1) #12 GND. (3) #4 CU & (1) #8 GND. **HEAT PUMP HP-1** (2) #12 CU & (1) #12 GND. | 20 | 4 EXISTING PANEL - kva total

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING

CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

Panelboard C Section 2

# FIRE ALARM LEGEND:

HORN/STROBE DEVICE, ONE ASSEMBLY; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15 CANDELA UNLESS OTHERWISE NOTED

STROBE DEVICE; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15 CANDELA UNLESS OTHERWISE NOTED

MANUAL PULL STATION; MTD. 48" A.F.F.

WATER FLOW SWITCH

VALVE TAMPER SWITCH

DETECTOR; LETTER INDICATES AS FOLLOWS: BLANK = SMOKE DETECTOR P = PHOTOELECTRIC SMOKE M = MULTIPLE STATION SMOKE ALARM D = PHOTOELECTRIC DUCT SMOKE DETECTOR

FSD = DUCT SMOKE DETECTOR FOR FIRE SMOKE DAMPER RATE OF RISE HEAT DETECTOR, 135°F

CARBON MONOXIDE DETECTOR; MTD. 60" A.F.F.

ADDRESSABLE FIRE ALARM CONTROL PANEL

FIRE ALARM ANNUNCIATOR PANEL

REMOTE TEST SWITCH & LED FOR DUCT SMOKE DETECTORS

FIRE ALARM RELAY

# SECURITY LEGEND:

PANIC BUTTON - 18/4 SHIELDED

INTERCOM

DOOR RELEASE BUTTON - 16/2 SHIELDED

WORKSTATION FOR CARD ACCESS & VIDEO SYSTEM

CARD READER - 22/6 SHIELDED

REQUEST TO EXIT - 18/4 SHIELDED

MAGNETIC DOOR CONTACT - 16/2 SHIELDED

ELECTRIC LOCK - 16/2 SHIELDED

• PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

# ELECTRICAL LEGEND:

MOTOR

EARTH GROUND

JUNCTION BOX

EMERGENCY POWER OFF BUTTON

FUSE WITH RATING

MOLDED CASE CIRCUIT BREAKER

DISCONNECT SWITCH, FUSED

DISCONNECT SWITCH, UNFUSED

STARTER, COMBINATION WITH DISCONNECT SWITCH

STARTER OR MOTOR CONTROLLER

M

20A 120V DUPLEX CEILING MOUNTED RECEPTACLE

20A 120V DUPLEX WALL MOUNTED RECEPTACLE; 18" A.F.F. UNLESS OTHERWISE NOTED

20A 120V DUPLEX WALL MOUNTED RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER

WALL MOUNTED SPECIAL PURPOSE RECEPTACLE

20A 120V QUADRAPLEX RECEPTACLE

⇒ USB 20A 120V WALL MOUNTED USB CHARGER RECEPTACLE TYPICAL OF HUBBELL USB20X OR ACCEPTABLE EQUAL

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE; FLUSH MOUNTED

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE & 2 PORT ETHERNET OUTLET; FLUSH MOUNTED

FLOOR MOUNTED BOX W/ QUAD RECEPTACLE & 2 PORT ETHERNET OUTLET; FLUSH MOUNTED

WALL BOX FOR TELEVISION CONNECTION; 1-1/4" EMT CDT. IN WALL

PROVIDE (2) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT

WALL PHONE OUTLET MTD. 48" A.F.F.; 3/4" EMT CDT. IN WALL TO ABOVE CEILING; PROVIDE 1 PORT ETHERNET WALL PLATE; PROVIDE (1) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT CLOSET

TO ABOVE CEILING W/ PULL CORD TELEPHONE/DATA COMMUNICATION BOX W/ (2) 3/4" EMT CDT. IN WALL TO ABOVE CEILING; PROVIDE 2 PORT ETHERNET WALL PLATE;

BRANCH CIRCUIT HOMERUN; LINES INDICATE NUMBER OF CIRCUITS, NEUTRAL, AND SWITCH LEG CONDUCTORS; ONE SEPARATE GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH

HOMERUN; NOT SHOWN 2 = DOUBLE POLE BLANK = SINGLE POLE 3 = THREE-WAY 4 = FOUR-WAY K = KEY OPERATED D = DIMMER P = WITH PILOT LIGHT **PB= PUSH BUTTON** T = TIMER OPERATED WP= WEATHER PROOF X = EXPLOSION PROOF OC= OCCUPANCY SENSOR

DUAL TECHNOLOGY OCCUPANCY SENSOR

DAYLIGHT SENSOR

MULTIMEDIA BOX. PROVIDE DEVICE BOX AT 60" ABOVE FINISHED FLOOR WITH (2) DUPLEX RECEPTACLES & (2) CAT6E PORTS. PROVIDE FACEPLATES AND (2) 1-1/4" CONDUITS STUBBED ABOVE CEILING. (1) W/ CAT6E CABLES RUN TO NEAREST IT CLOSET & (1) W/ PULL CORD FOR FUTURE HDMI. RECESS MOUNT BOX TYPICAL OF WIREMOLD EVOLUTION SERIES WITH CONCEALED CONDUITS IN EXISTING FRAMED WALLS AND ALL NEW WALLS. PROVIDE SURFACE MOUNT BOXES WITH DUAL CHANNEL SURFACE MOUNT RACEWAY (LEGRAND WIREMOLD 5400 SERIES) WHERE INSTALLED ON EXISTING MASONRY

PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE TO

WIRELESS ACCESS POINT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE AT CEILING DEVICE & RUN CABLING TO NEAREST DATA CLOSET COMBINATION WALL MOUNTED CLOCK/SPEAKER UNIT

DEVICE & RUN CABLING TO NEAREST DATA CLOSET

# ELECTRICAL NOTES:

1. ALL MATERIALS AND EQUIPMENT ARE TO BE NEW, UNUSED, AND FREE FROM DEFECTS OF ANY KIND. THE BASIS OF QUALITY SHALL BE THE LATEST REVISION OF ASTM, ANSI, OR OTHER ACCEPTABLE STANDARDS.

THESE DRAWINGS ARE DIAGRAMMATIC, AND INDICATE GENERAL ARRANGEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE REVIEWED THE SITE FOR HIS WORK PRIOR TO HAVING SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF THE CONTRACT.

3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER

4. ALL WORK INCLUDING LABOR AND MATERIALS SHALL BE FULLY GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PAYMENT AND FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.

5. ALL CUTTING, PATCHING, FIRE-STOPPING, AND SURFACE RESTORATION IN CONNECTION WITH THIS TRADE SHALL BE COMPLETED BY THIS CONTRACTOR.

6. A MINIMUM OF FOUR (4) COPIES OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION OF THE EQUIPMENT AND/OR MATERIALS. BY SUBMITTING SHOP DRAWINGS, THE CONTRACTOR REPRESENTS THAT ACTUAL FIELD CONDITIONS ARE VERIFIED BY HIM AND ARE REFLECTED ON HIS SUBMITTALS.

7. THIS CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS, AND OBTAIN ALL PERMITS, INSPECTIONS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT.

8. EQUIPMENT AND MATERIALS FOR WHICH UNDERWRITERS LABORATORIES INC. (UL) PROVIDES PRODUCT LISTING SERVICE SHALL BE LISTED AND BEAR THE LISTING MARK.

ALL WORK IN ASSOCIATION WITH THIS CONTRACT SHALL BE COMPLETED IN STRICT COMPLIANCE WITH THE 2017 NATIONAL ELECTRIC CODE, 2020 BUILDING CODE OF NEW YORK STATE, 2020 FIRE CODE OF NEW YORK STATE & 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.

10. ALL NEW LIGHTING FIXTURES SHALL BE INSTALLED FULLY LAMPED AND OPERABLE. THE CONTRACTOR SHALL TURN OVER TO THE OWNER SPARE LAMPS OF EVERY TYPE ON THE PROJECT IN AN AMOUNT NOT LESS THAN 20% OF THE TOTAL NUMBER OF EACH TYPE (MINIMUM 1 PER TYPE).

11. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, APPLICATIONS AND FEES OF ALL WORK ASSOCIATED WITH THE LOCAL UTILITY COMPANY AND/OR THE TELEPHONE COMPANY. ALL WORK INVOLVING THE UTILITY COMPANY SHALL BE COMPLETED IN ACCORDANCE WITH THEIR REGULATIONS AND GUIDELINES.

12. ALL CONDUCTORS SHALL BE COPPER, SHALL NOT BE LESS THAN #12 AWG, AND SHALL NOT EXCEED 70 FEET FROM PANEL BOARD TO FURTHEST CONNECTION UNLESS OTHERWISE NOTED ON PLANS.

13. LIGHTING LOADS SHALL NOT BE COMBINED ON THE SAME CIRCUIT AS ANY OTHER ELECTRICAL LOADS.

14. CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH & INSTALL ALL SMALL DETAILS AND INCIDENTAL WORK NOT SHOWN OR SPECIFIED, BUT WHICH CAN BE REASONABLY INFERRED AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM OF HIGH QUALITY MEETING ALL APPLICABLE CODES AND REGULATIONS.

15. FOR EACH NEW OR MODIFIED ELECTRICAL PANEL, THE CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD TO REFLECT ALL CIRCUITING. ADDITIONALLY, THE CONTRACTOR SHALL LABEL (WITH A PERMANENT MARKER OR LABEL) EACH RECEPTACLE ON THE INSIDE OF EACH FACE PLATE WITH PANEL AND CIRCUIT NUMBER DESIGNATION.

16. MINIMUM REQUIREMENT FOR EQUIPMENT GROUNDING SHALL BE GOVERNED BY THE NEC. ALL GROUNDS, BONDING, ETC. SHALL MEET THESE REQUIREMENTS. THE CONTRACTOR SHALL FURNISH AND INSTALL ANY AND ALL ITEMS NECESSARY TO MEET THESE REQUIREMENTS AT NO EXTRA COST, EVEN IF SUCH ITEMS ARE NOT DETAILED ON THE DRAWINGS.

17. ALL CONDUIT AND CABLE SHALL BE PROPERLY SUPPORTED AND ROUTED PARALLEL OR PERPENDICULAR TO BUILDING WALLS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK.

18. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, WIRING, DEVICES, AND SYSTEMS INSTALLED UNDER THIS CONTRACT TO ENSURE PROPER OPERATION PRIOR TO FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.

19. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.

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

FOR DOUBLE INSULATED EQUIPMENT ONLY. GREEN/YELLOW MAY BE USED:

CONDUCTORS.

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

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

 $\Delta$ LEN Δ

BID ADDENDUM #2 # DATE DESCRIPTION Drawn By: 44-13-01-06-0-017-014

Proj. #: CSArch Proj. #: Issued for Bid:

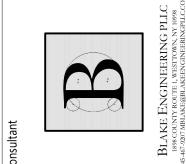
**ELECTRICAL** NOTES, LEGENDS, **SCHEDULES & DETAILS** 

# Key Notes:

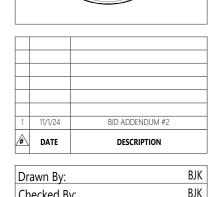
- ADA DOOR OPERATORS PROVIDED BY GC; EC TO PROVIDE ALL 120V LINE VOLTAGE POWER TO OPERATOR & CONTROL DEVICES; GC TO PROVIDE ALL LOW VOLTAGE CONTROLS
- PROVIDE NEW 120V ELECTRICAL CONNECTION FOR FIRE SHUTTER
- FIRE ALARM RELAY; FIRE SHUTTER TO CLOSE UPON ACTIVATION OF FIRE ALARM
- REINSTALL EXISTING WIRELESS ACCESS POINT; CONNECT TO EXISTING DATA CABLING
- EXISTING FIRE ALARM GRAPHIC DISPLAY TO REMAIN; TEMPORARILY REMOVE, PROTECT & STORE DURING CONSTRUCTION; REINSTALL AFTER COMPLETION OF VESTIBULE
- EXISTING FIRE ALARM ANNUNCIATOR PANEL TO REMAIN; TEMPORARILY REMOVE, PROTECT & STORE DURING CONSTRUCTION; REINSTALL IN A NEW LOCATION AFTER COMPLETION OF VESTIBULE, RELOCATE/EXTEND WIRING &

CONDUIT AS NEEDED

- EXISTING RESCUE ASSISTANCE PANEL TO REMAIN; TEMPORARILY REMOVE, PROTECT & STORE DURING CONSTRUCTION; REINSTALL IN A NEW LOCATION AFTER COMPLETION OF VESTIBULE, RELOCATE/EXTEND WIRING & CONDUIT AS NEEDED
- PROVIDE SMOKE DETECTORS ON BOTH SIDES OF THE AUTOMATIC FIRE SHUTTER AT THE TRANSACTION WINDOW; CONNECT TO THE EXISTING BUILDING FIRE ALARM SYSTEM







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Proj. #:

CSArch Proj. #: 44-13-01-06-0-017-014 #: 187-2302.01 Issued for Bid:

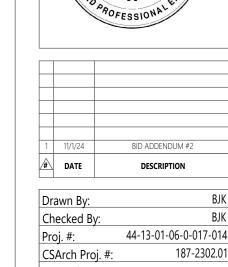
ELECTRICAL

PLAN - PART 1

KEY PLAN

AREA OF — WORK

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 Checked By:
 BJK

 Proj. #:
 44-13-01-06-0-017-014

 CSArch Proj. #:
 187-2302.01

 Issued for Bid:
 10/18/24

PLAN - PART 2

# VALLEY CENTRAL SCHOOL DISTRICT EAST COLDENHAM ELEMENTARY SCHOOL 2023 CAPITAL PROJECT - PHASE 1

**ISSUED FOR BID:** 10/18/24

CSARCH - ARCHITECTS

BLAKE ENGINEERING, PLLC - M.E.P. ENGINEERS PASSERO ASSOCIATES - SITE/CIVIL AND STRUCTURAL ENGINEERS AECC ENVIRONMENTAL CONSULTING - HAZARDOUS MATERIALS DESIGNERS

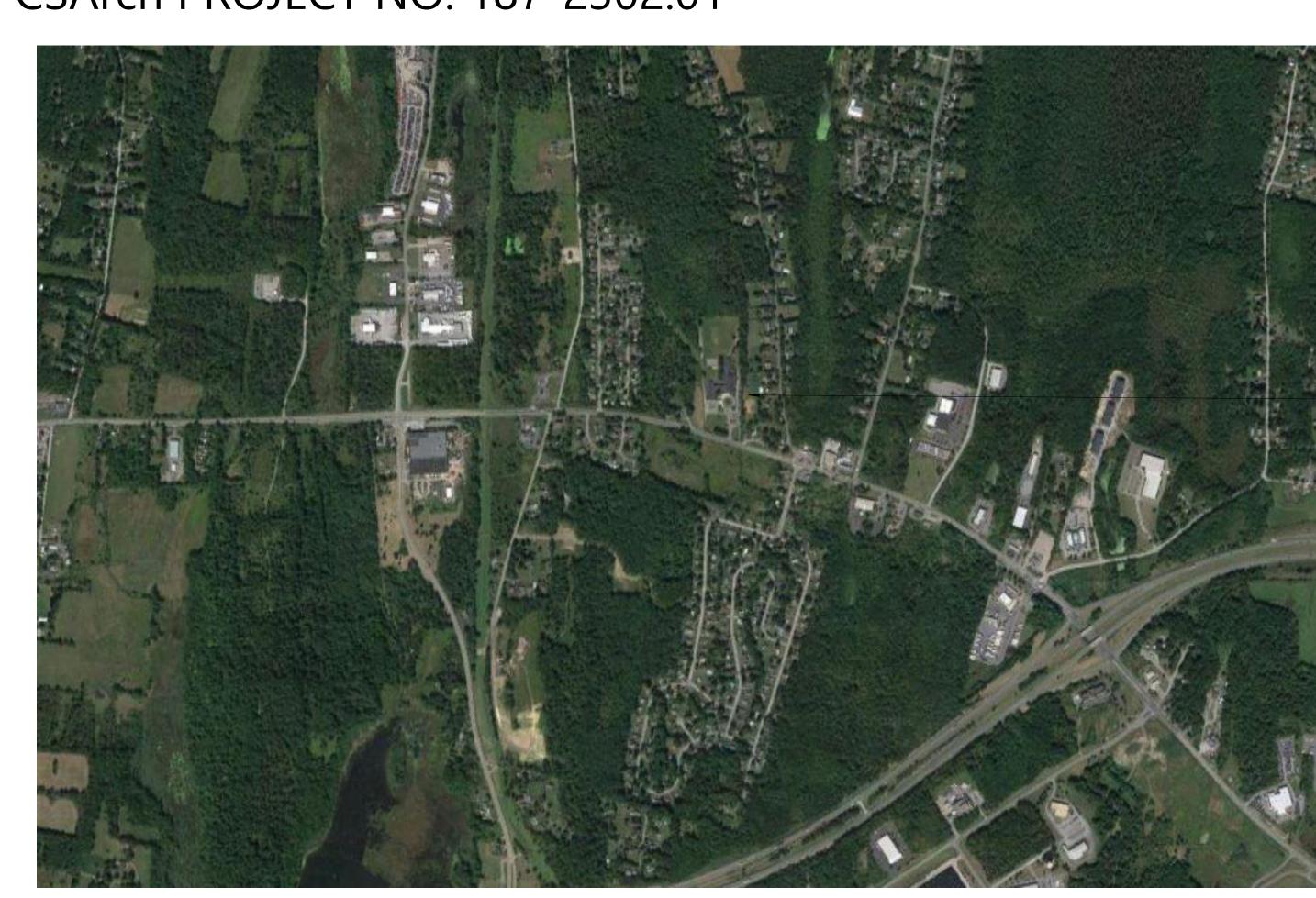
# STATE EDUCATION DEPARTMENT PROJECT CONTROL NUMBER:

2023 CAPITAL PROJECT - PHASE 1

44-13-01-06-0-013-019

THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT.

CSArch PROJECT NO. 187-2302.01



East Coldenham Elementary 286 NY-17K Newburgh, NY 12550

VICINITY MAP



# DRAWING LIST

## **GENERAL DRAWINGS**

ECES G000 COVER & SHEET INDEX

SYMBOLS, ABBREVIATIONS, MISC, AND PARTITION TYPES

ECES G111 OVERALL FLOOR PLAN - FIRST FLOOR

## **LIFE SAFETY DRAWINGS**

ECES LS111 LIFE SAFETY PLAN - FIRST FLOOR

ECES LS112 SMOKE ZONE PLANS

ARCHITECTURAL DEMOLITION DRAWINGS ECES AD111 ENLARGED REMOVAL PLAN AND RCP

ENLARGED FLOOR PLAN, RCP, AND DETAILS ECES A201 EXTERIOR ELEVATIONS

ECES A202 EXTERIOR ELEVATIONS ECES A901 DOOR, WINDOW, & STOREFRONT DETAILS

# **ARCHITECTURAL FINISH DRAWINGS**

SIGNAGE TYPES AND SCHEDULE

MECHANICAL GENERAL DRAWINGS

ECES M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

# **MECHANICAL DEMOLITION DRAWINGS**

ECES MD111 MECHANICAL DEMOLITION PLAN

## **MECHANICAL DRAWINGS** ECES M111 MECHANICAL PLAN

# **ELECTRICAL GENERAL DRAWINGS**

ECES E001 ELECTRICAL NOTES, LEGENDS, DETAILS & SCHEDULES

## **ELECTRICAL DEMOLITION DRAWINGS**

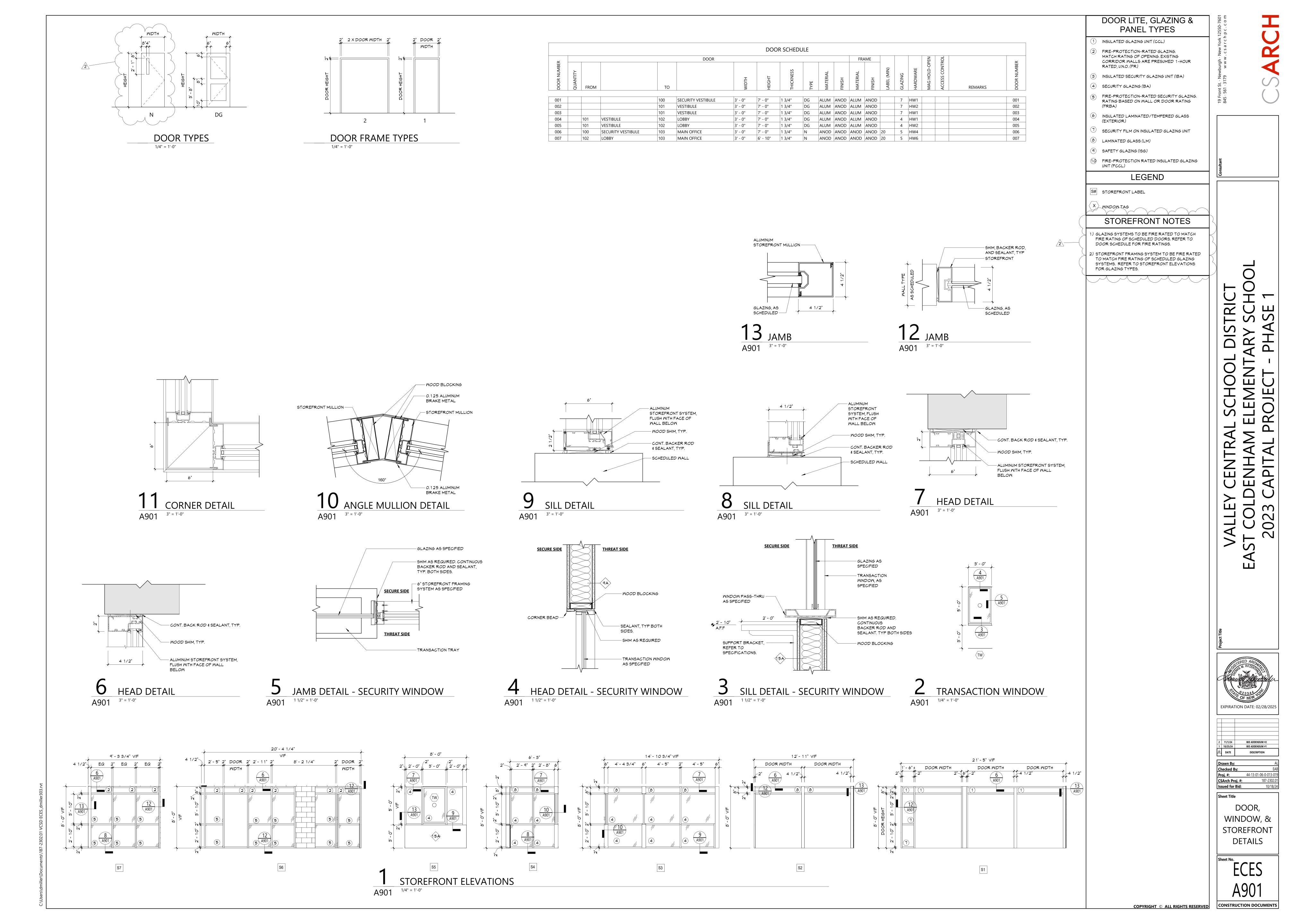
ECES ED111 ELECTRICAL DEMOLITION PLAN

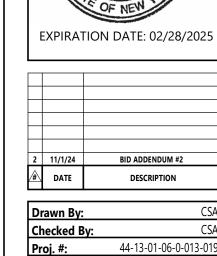
# **ELECTRICAL DRAWINGS**

ECES E111 ELECTRICAL PLAN



EXPIRATION DATE: 02/28/2025

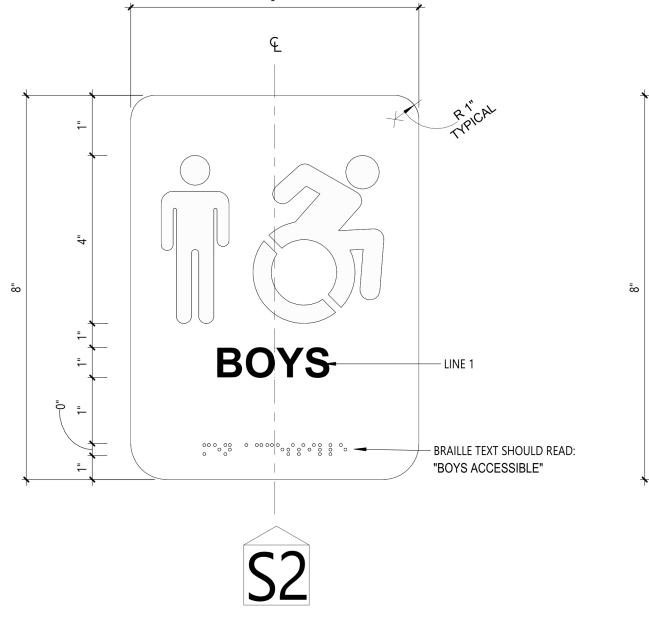


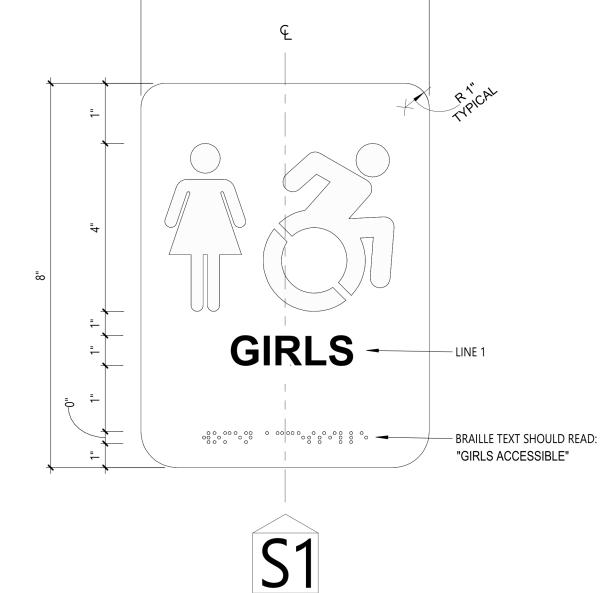


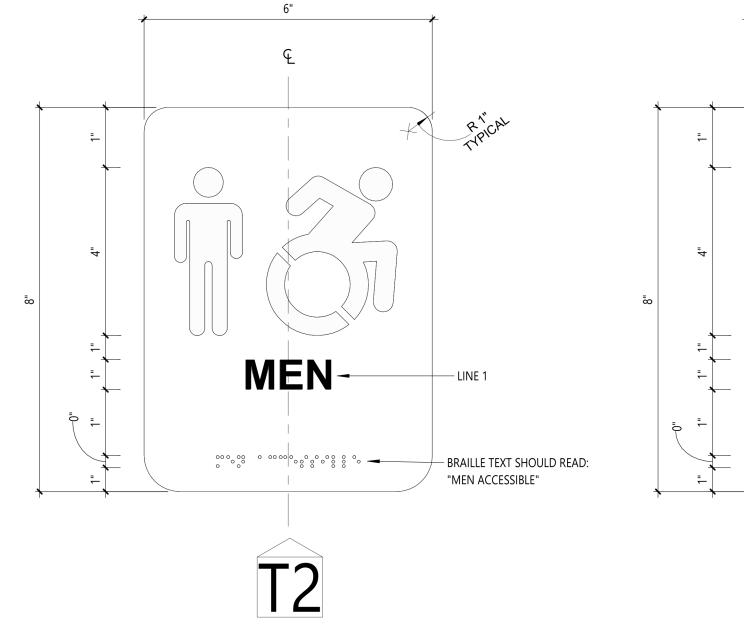
SIGNAGE TYPES AND SCHEDULE

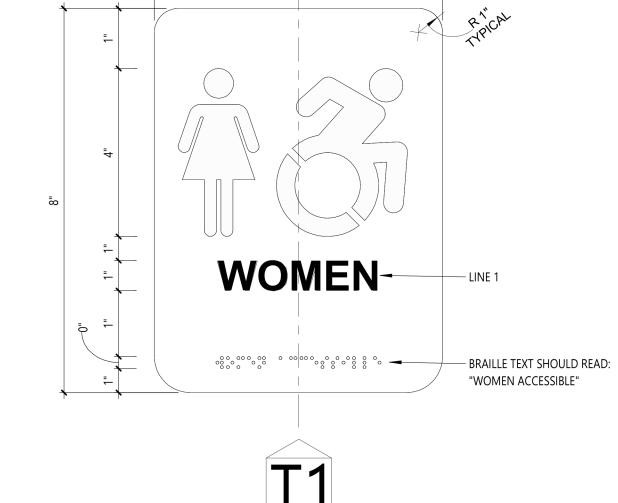
Sheet No. ECES AF001 CONSTRUCTION DOCUMENTS

1/2" MINIMUM BORDER (NO LETTERING OR GRAPHIC), TYPICAL ALL SIDES — LINE 3 BRAILLE TEXT 









PANEL SIGNAGE ELEVATIONS

#### ROOM SIGNAGE SCHEDULE ROOM NUMBER **ROOM NAME** SIGNAGE TYPE QUANTITY REMARKS SECURITY VESTIBULE FIRST FLOOR FIRST FLOOR VESTIBULE FIRST FLOOR LOBBY FIRST FLOOR MAIN OFFICE

4) FINAL NUMBERING AND NAMING OF ROOMS TO BE DETERMINED BY OWNER DURING THE SUBMITTAL AND SHOP DRAWING REVIEW.

1) REFER TO PANEL SIGNAGE ELEVATIONS FOR SIGNAGE TYPES. 2) REFER TO SPECIFICATION SECTION 101423 - "INTERIOR PANEL SIGNAGE" FOR ADDITIONAL INFORMATION. 3) ALL EXISTING PANEL SIGNAGE FOR ROOMS NOTED ABOVE SHALL BE REMOVED AND REPLACED WITH NEW.

Mechanical Plan M111 Scale: 1/4" = 1'-0"

# Key Notes:

- INSTALL CEILING MOUNTED CABINET UNIT HEATER IN NEW VESTIBULE; CONNECT TO HOT WATER PIPING & CONTROLS
- CONNECT TO EXISTING HOT WATER PIPING & EXTEND NEW PIPING TO NEW UNIT HEATERS & EXISTING FINNED TUBE
- PROVIDE POWDER COATED METAL PIPING ENCLOSURE ALONG WALL W/ 1-1/4" HWS PIPING DN. TO EXISTING FINNED TUBE
- EXISTING FINNED TUBE RADIATION TO REMAIN; DISCONNECT HOT WATER PIPING & RECONNECT AFTER BEING RELOCATED TO AVOID CONFLICT WITH NEW DOOR OPENING
- EXISTING HOT WATER SUPPLY & RETURN PIPING ABOVE CEILING



1. HVAC CONTROLS SHALL BE FURNISHED & INSTALLED BY THE OWNER TO MATCH THE EXISTING BUILDING AUTOMATION SYSTEM IN EACH BUILDING (TRANE AT EAST COLDENHAM ELEMENTARY). ALL HARDWARE, WIRING AND PROGRAMMING TO BE PROVIDED BY OWNER. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER'S VENDOR THROUGHOUT THE PROJECT TO SUPPORT INSTALLATION, TESTING AND COMMISSIONING. MECHANICAL CONTRACTOR TO INSTALL ALL DEVICES MOUNTED IN OR ON THE PIPING AND/OR DUCTWORK INCLUDING BUT NOT LIMITED TO HYDRONIC CONTROL VALVES, TEMPERATURE SENSORS, FLOW SENSORS, ETC. MECHANICAL CONTRACTOR TO PROVIDE ALL NECESSARY PORTS/THERMOWELLS FOR SENSORS, GAUGES, ETC. COORDINATE WITH OWNER'S VENDOR FOR QUANTITY AND LOCATIONS.

2. OWNER SHALL EXPAND EXISTING BUILDING AUTOMATION SYSTEM TO PROVIDE THE CONTROL SEQUENCES SPECIFIED ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE SYSTEM SHALL PROVIDE CONTROL AND MONITORING OF THE EQUIPMENT INDICATED.

3. OWNER SHALL PROVIDE CONTROLLERS AND COMMUNICATIONS INFRASTRUCTURE TO MATCH EXISTING CAMPUS-WIDE BUILDING AUTOMATION SYSTEM. PROVIDE SEAMLESS INTEGRATION WITH EXISTING CONTROL NETWORK AND USER INTERFACES. NETWORK GATEWAYS AND PROTOCOL INTERFACE EQUIPMENT ARE NOT ACCEPTABLE UNLESS OTHERWISE NOTED.

4. OWNER SHALL PROVIDE INSTRUMENTATION, SENSORS, VALVES, DAMPERS, ACTUATORS AND WIRING AS REQUIRED TO PROVIDE SPECIFIED OPERATING SEQUENCES.

5. OWNER SHALL MODIFY EXISTING GRAPHIC USER INTERFACES TO INCLUDE ALL EQUIPMENT AND SYSTEMS INCLUDED IN THIS PROJECT.

6. OWNER SHALL REPLACE THE EXISTING BAS SERVER HARDWARE AND UPGRADE THE SOFTWARE TO THE LATEST VERSION OF WEB-ENABLED GRAPHICAL USER INTERFACE WITH A SEAMLESS INTEGRATION OF THE

NEW AND EXISTING CONTROL POINTS. 7. OWNER SHALL BE RESPONSIBLE FOR POWER THAT IS NOT SHOWN ON THE ELECTRICAL DRAWINGS, TO CONTROLS FURNISHED BY THIS CONTRACTOR. IF POWER CIRCUITS ARE SHOWN ON THE ELECTRICAL DRAWINGS, OWNER SHALL CONTINUE THE POWER RUN TO THE CONTROL DEVICE. IF POWER CIRCUITS ARE NOT SHOWN, OWNER SHALL PROVIDE BREAKERS AT DISTRIBUTION PANELS FOR POWER TO

CONTROLS AND PROVIDE POWER FROM THE DISTRIBUTION PANEL TO

8. OWNER SHALL FURNISH & INSTALL ALL REQUIRED END DEVICES, POWER SUPPLY, LOW VOLTAGE TRANSFORMERS, CONTROL WIRING & CONDUITS, ETC. FOR A COMPLETE & OPERATIONAL DDC CONTROL SYSTEM.

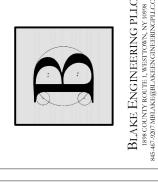
THE CONTROL DEVICES.

9. NEW WIRING & CONDUITS SHALL BE RUN CONCEALED ABOVE CEILING. ALL EXPOSED WIRING & CONDUITS SHALL BE RUN CONCEALED IN EMT IN UTILITY SPACES AND WIREMOLD IN FINISHED AREAS.

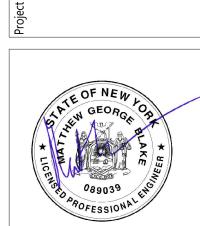
10. OWNER TO FIELD INSTALL SENSORS, CONTROLLERS, ETC. WHICH ARE NOT FACTORY-INSTALLED BY EQUIPMENT MANUFACTURERS.

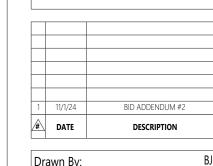
11. ANY EQUIPMENT FURNISHED WITH FACTORY CONTROLS SHALL BE PROVIDED WITH BACNET MSTP INTEGRATION CAPABILITIES AND INCLUDE ON-SITE FACTORY CONTROLS INTEGRATION START-UP IN COORDINATION WITH OWNER'S BUILDING AUTOMATION SYSTEM.











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MECHANICAL PLAN

Sheet Title

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KEY PLAN

— Area of WORK

**Electrical Demolition Plan** 

# Key Notes:

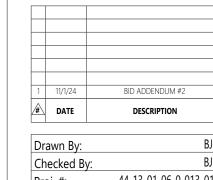
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF LIGHT FIXTURE & ASSOCIATED WIRING & CONDUIT; MAINTAIN EXISTING CIRCUIT AS NEEDED FOR ANY ADJACENT LIGHTING THAT REMAINS IN PLACE, OTHERWISE TERMINATE AT SOURCE
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXIT/ EMERGENCY LIGHT & ASSOCIATED WIRING & CONDUIT; MAINTAIN EXISTING CIRCUIT AS NEEDED FOR ANY ADJACENT LIGHTING THAT REMAINS IN PLACE, OTHERWISE TERMINATE AT SOURCE
- EXISTING CABINET HEATER TO BE REMOVED; DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATED CONDUITS, WIRING, DISCONNECTS, ETC.; REMOVE ALL CONDUITS AND WIRING
- BACK TO SOURCE DISCONNECT, REMOVE & PROPERLY DISPOSE OF THERMOSTAT & ASSOCIATED WIRING & CONDUIT; REMOVE ALL CONDUITS AND
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF FIRE ALARM DEVICE & ASSOCIATED WIRING & CONDUIT; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE; MAINTAIN CONTINUITY OF EXISTING FIRE ALARM CIRCUITS
- EXISTING FIRE ALARM ANNUNCIATOR PANEL & GRAPHIC DISPLAY TO REMAIN; TEMPORARILY REMOVE, PROTECT & STORE DURING CONSTRUCTION; REINSTALL AFTER COMPLETION OF VESTIBULE
- EXISTING LIGHT FIXTURE TO REMAIN

WIRING BACK TO SOURCE

- DISCONNECT, REMOVE & PROPERLY DISPOSE OF DATA OUTLET & ASSOCIATED WIRING & CONDUIT; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF RECEPTACLE & ASSOCIATED WIRING & CONDUIT; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF LIGHT SWITCHES & ASSOCIATED WIRING & CONDUIT; REMOVE ALL CONDUITS AND WIRING BACK TO SOURCE; MAINTAIN CIRCUITS FOR RELOCATED SWITCHES
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF BELL CONTROL SWITCH & ASSOCIATED WIRING & CONDUIT; MAINTAIN CIRCUIT FOR SWITCH TO BE RELOCATED





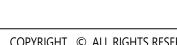


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Proj. #:

CSArch Proj. #: 44-13-01-06-0-013-019 #: 187-2302.01 Issued for Bid: Sheet Title

ELECTRICAL DEMOLITION ---- Area of PLAN WORK

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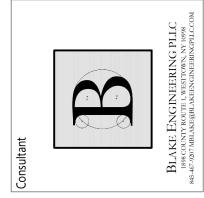


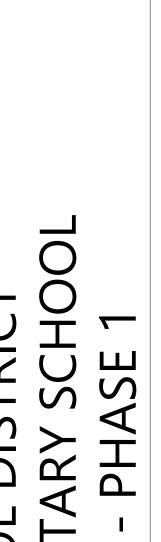
KEY PLAN

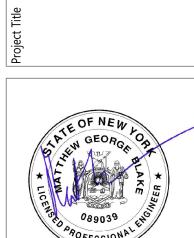
Electrical Plan

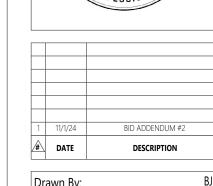
# Key Notes:

- ADA DOOR OPERATORS PROVIDED BY GC; EC TO PROVIDE ALL 120V LINE VOLTAGE POWER TO OPERATOR & CONTROL DEVICES; GC TO PROVIDE ALL LOW VOLTAGE CONTROLS
- PROVIDE NEW 120V ELECTRICAL CONNECTION FOR FIRE SHUTTER
- FIRE ALARM RELAY; FIRE SHUTTER TO CLOSE UPON ACTIVATION OF FIRE ALARM
- PROVIDE NEW BELL CONTROL SWITCH; EXTEND CONDUIT & WIRING AS NEEDED TO CONNECT TO EXISTING CIRCUIT; SEE KEYNOTE 11 ON SHEET ED111 FOR ADDITIONAL INFORMATION
- EXISTING LIGHT FIXTURE TO REMAIN; PROVIDE NEW SWITCH(ES) AS SHOWN; CONNECT TO EXISTING CIRCUIT
  - EXISTING FIRE ALARM ANNUNCIATOR PANEL & GRAPHIC DISPLAY TO REMAIN; TEMPORARILY REMOVE, PROTECT & STORE DURING
- CONSTRUCTION; REINSTALL AFTER COMPLETION OF VESTIBULE PROVIDE SMOKE DETECTORS ON BOTH SIDES OF THE AUTOMATIC FIRE SHUTTER AT THE TRANSACTION WINDOW; CONNECT TO THE EXISTING BUILDING FIRE ALARM SYSTEM



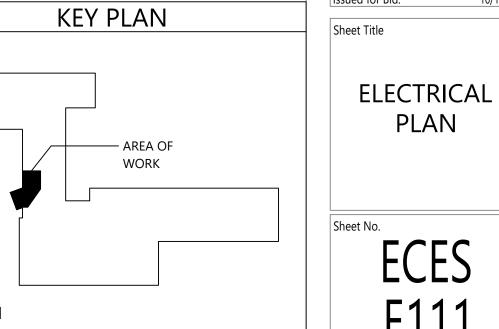






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# VALLEY CENTRAL SCHOOL DISTRICT MONTGOMERY ELEMENTARY SCHOOL 2023 CAPITAL PROJECT - PHASE 1

10/18/24 **ISSUED FOR BID:** 

CSARCH - ARCHITECTS

BLAKE ENGINEERING, PLLC - M.E.P. ENGINEERS PASSERO ASSOCIATES - SITE/CIVIL AND STRUCTURAL ENGINEERS AECC ENVIRONMENTAL CONSULTING - HAZARDOUS MATERIALS DESIGNERS

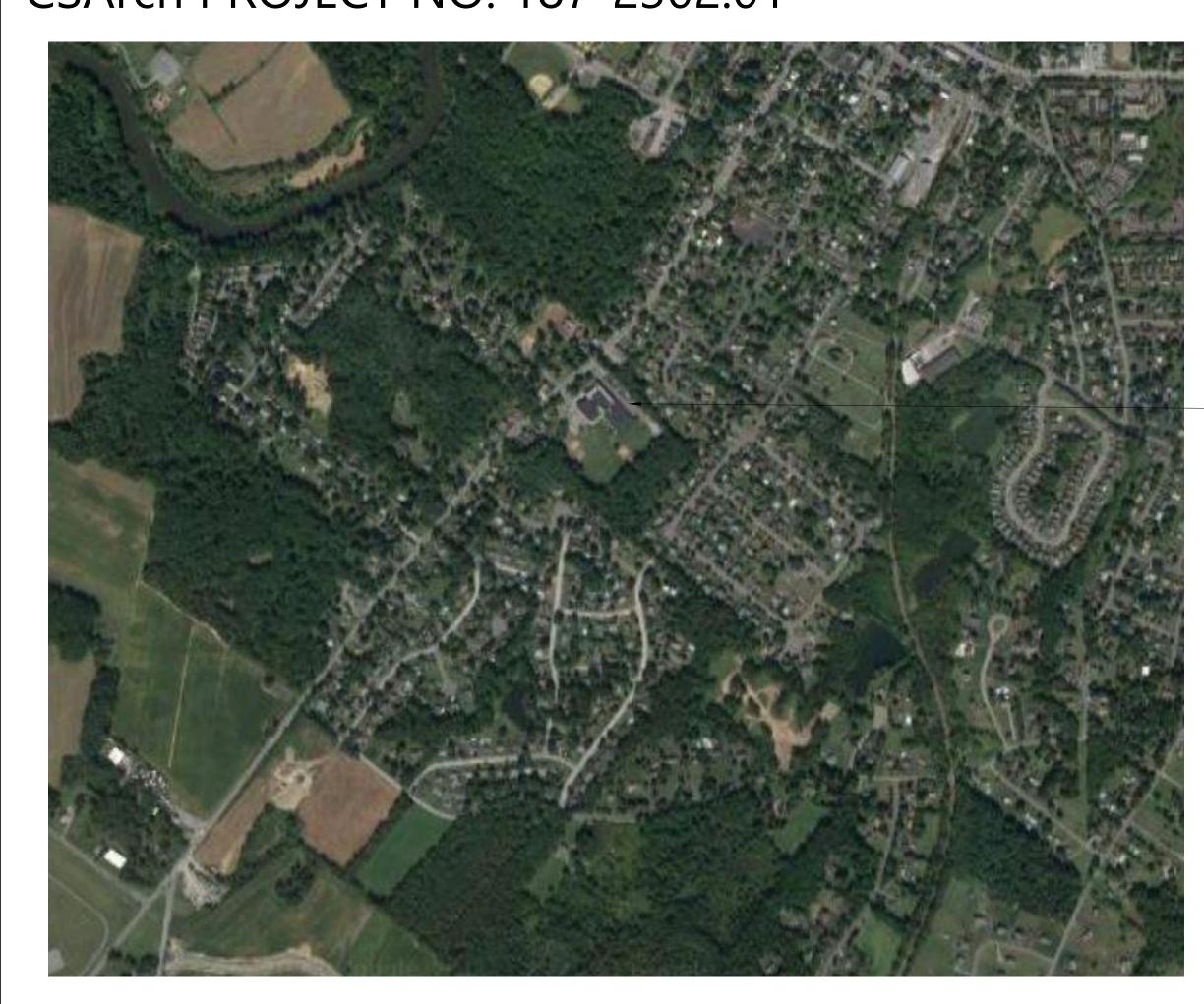
# STATE EDUCATION DEPARTMENT PROJECT CONTROL NUMBER:

2023 CAPITAL PROJECT - PHASE 1

44-13-01-06-0-004-015

THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT.

CSArch PROJECT NO. 187-2302.01



- Montgomery Elementary School Montgomery, NY 12549

VICINITY MAP



# DRAWING LIST

# **GENERAL DRAWINGS**

MES G000 COVER & SHEET INDEX

SYMBOLS, ABBREVIATIONS, MISC, AND PARTITION TYPES

MES G111 OVERALL FLOOR PLAN - FIRST FLOOR

# LIFE SAFETY DRAWINGS

MES LS111 FIRST FLOOR LIFE SAFETY PLAN

MES LS112 SMOKE ZONE PLANS

# **ARCHITECTURAL DEMOLITION DRAWINGS**

MES AD111 ENLARGED REMOVAL PLAN - FIRST FLOOR - AREA C

## ARCHITECTURAL DRAWINGS MES A111 ENLARGED NEW WORK PLAN - FIRST FLOOR - AREA C

EXTERIOR ELEVATIONS

MES A202 EXTERIOR ELEVATIONS

MES A811 REFLECTED CEILING PLAN - FIRST FLOOR - AREA C

# MES A901 DOOR, WINDOW, & STOREFRONT DETAILS

MES AF001 SIGNAGE TYPES AND SCHEDULE

ARCHITECTURAL FINISH DRAWINGS

# MES AF11 MATERIAL SCHEDULE & FLOOR FINISHES PLAN - AREA C

PLUMBING GENERAL DRAWINGS

MES P001 PLUMBING NOTES, SCHEDULE, LEGEND & DETAILS

PLUMBING DRAWINGS MES P111 PLUMBING PLANS

# MECHANICAL GENERAL DRAWINGS

MES M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

# MECHANICAL DEMOLITION DRAWINGS

MES MD111 MECHANICAL DEMOLITION PLAN

# MECHANICAL DRAWINGS

MES M111 MECHANICAL PLAN

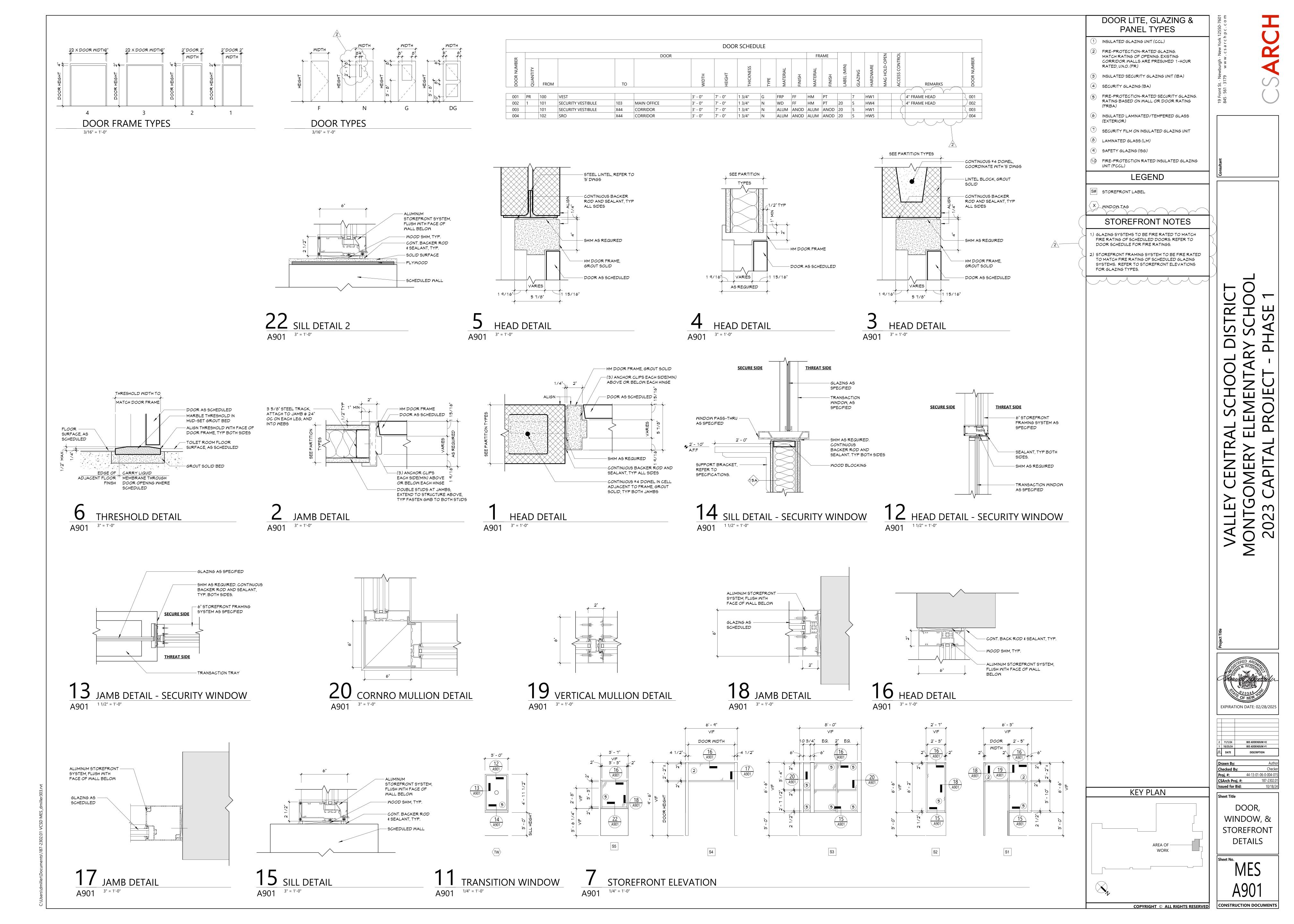
**ELECTRICAL GENERAL DRAWINGS** 

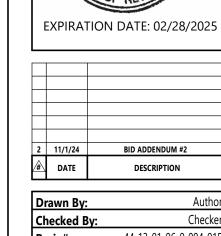
MES E001 ELECTRICAL NOTES, LEGENDS, SCHEDULES & DETAILS

## **ELECTRICAL DEMOLITION DRAWINGS** MES ED111 ELECTRICAL DEMOLITION PLAN

## **ELECTRICAL DRAWINGS** MES E111 ELECTRICAL PLAN

EXPIRATION DATE: 02/28/2025





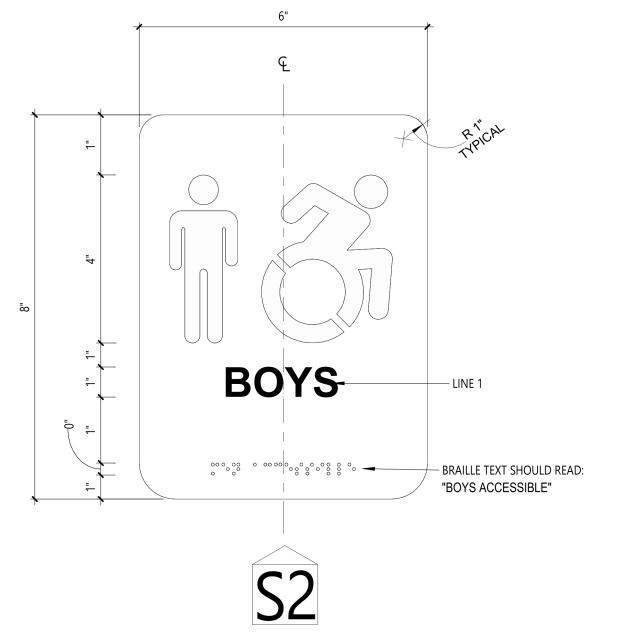
SIGNAGE TYPES AND

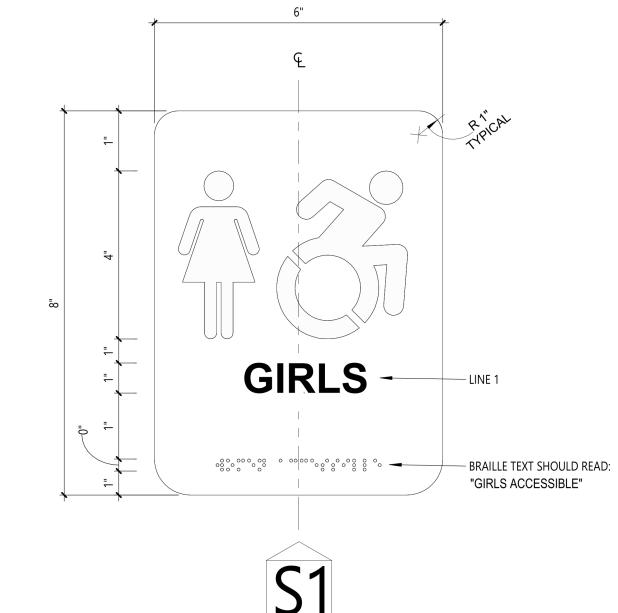
Sheet No. MES AF001

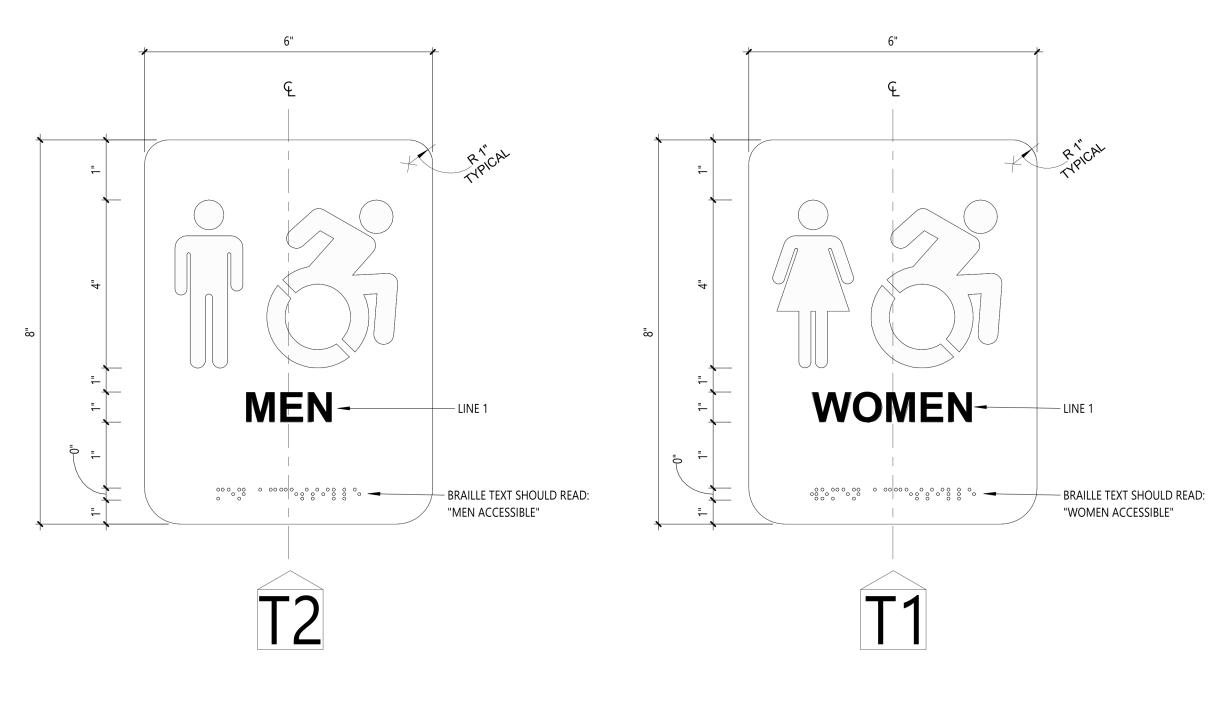
CONSTRUCTION DOCUMENTS

SCHEDULE

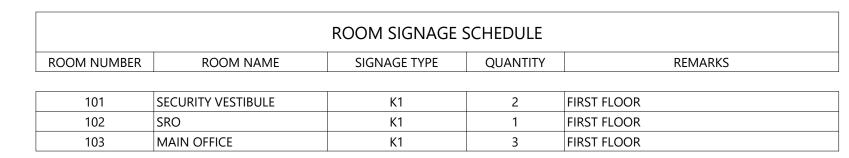
" 1/2" MINIMUM BORDER (NO LETTERING OR GRAPHIC), TYPICAL ALL SIDES —— LINE 3 — BRAILLE TEXT BRAILLE TEXT SHOULD READ: "ALL GENDER RESTROOM ACCESSIBLE"







PANEL SIGNAGE ELEVATIONS



1) REFER TO PANEL SIGNAGE ELEVATIONS FOR SIGNAGE TYPES. 2) REFER TO SPECIFICATION SECTION 101423 - "INTERIOR PANEL SIGNAGE" FOR ADDITIONAL INFORMATION. 3) ALL EXISTING PANEL SIGNAGE FOR ROOMS NOTED ABOVE SHALL BE REMOVED AND REPLACED WITH NEW. 4) FINAL NUMBERING AND NAMING OF ROOMS TO BE DETERMINED BY OWNER DURING THE SUBMITTAL AND SHOP DRAWING REVIEW.

DDC Temperature Control Notes:

1. HVAC CONTROLS SHALL BE FURNISHED & INSTALLED BY THE OWNER

TO MATCH THE EXISTING BUILDING AUTOMATION SYSTEM IN EACH

BUILDING (SIEMENS AT MAYBROOK ALC). ALL HARDWARE, WIRING AND

PROGRAMMING TO BE PROVIDED BY OWNER. MECHANICAL

CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER'S VENDOR THROUGHOUT THE PROJECT TO SUPPORT INSTALLATION, TESTING AND COMMISSIONING. MECHANICAL CONTRACTOR TO INSTALL ALL DEVICES MOUNTED IN OR ON THE PIPING AND/OR DUCTWORK INCLUDING BUT NOT LIMITED TO HYDRONIC CONTROL VALVES, TEMPERATURE SENSORS, FLOW SENSORS, ETC. MECHANICAL CONTRACTOR TO PROVIDE ALL NECESSARY PORTS/THERMOWELLS FOR SENSORS, GAUGES, ETC. COORDINATE

2. OWNER SHALL EXPAND EXISTING BUILDING AUTOMATION SYSTEM TO PROVIDE THE CONTROL SEQUENCES SPECIFIED ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE SYSTEM SHALL PROVIDE CONTROL

3. OWNER SHALL PROVIDE CONTROLLERS AND COMMUNICATIONS INFRASTRUCTURE TO MATCH EXISTING CAMPUS-WIDE BUILDING AUTOMATION SYSTEM. PROVIDE SEAMLESS INTEGRATION WITH EXISTING CONTROL NETWORK AND USER INTERFACES. NETWORK GATEWAYS AND PROTOCOL INTERFACE EQUIPMENT ARE NOT

4. OWNER SHALL PROVIDE INSTRUMENTATION, SENSORS, VALVES, DAMPERS, ACTUATORS AND WIRING AS REQUIRED TO PROVIDE

5. OWNER SHALL MODIFY EXISTING GRAPHIC USER INTERFACES TO INCLUDE ALL EQUIPMENT AND SYSTEMS INCLUDED IN THIS PROJECT.

6. OWNER SHALL REPLACE THE EXISTING BAS SERVER HARDWARE AND UPGRADE THE SOFTWARE TO THE LATEST VERSION OF WEB-ENABLED GRAPHICAL USER INTERFACE WITH A SEAMLESS INTEGRATION OF THE

7. OWNER SHALL BE RESPONSIBLE FOR POWER THAT IS NOT SHOWN ON THE ELECTRICAL DRAWINGS, TO CONTROLS FURNISHED BY THIS CONTRACTOR. IF POWER CIRCUITS ARE SHOWN ON THE ELECTRICAL DRAWINGS, OWNER SHALL CONTINUE THE POWER RUN TO THE CONTROL DEVICE. IF POWER CIRCUITS ARE NOT SHOWN, OWNER SHALL PROVIDE BREAKERS AT DISTRIBUTION PANELS FOR POWER TO

CONTROLS AND PROVIDE POWER FROM THE DISTRIBUTION PANEL TO

8. OWNER SHALL FURNISH & INSTALL ALL REQUIRED END DEVICES, POWER SUPPLY, LOW VOLTAGE TRANSFORMERS, CONTROL WIRING & CONDUITS, ETC. FOR A COMPLETE & OPERATIONAL DDC CONTROL

9. NEW WIRING & CONDUITS SHALL BE RUN CONCEALED ABOVE CEILING. ALL EXPOSED WIRING & CONDUITS SHALL BE RUN CONCEALED IN EMT

10.OWNER TO FIELD INSTALL SENSORS, CONTROLLERS, ETC. WHICH ARE

11.ANY EQUIPMENT FURNISHED WITH FACTORY CONTROLS SHALL BE PROVIDED WITH BACNET MSTP INTEGRATION CAPABILITIES AND INCLUDE ON-SITE FACTORY CONTROLS INTEGRATION START-UP IN

IN UTILITY SPACES AND WIREMOLD IN FINISHED AREAS.

NOT FACTORY-INSTALLED BY EQUIPMENT MANUFACTURERS.

COORDINATION WITH OWNER'S BUILDING AUTOMATION SYSTEM.

WITH OWNER'S VENDOR FOR QUANTITY AND LOCATIONS.

AND MONITORING OF THE EQUIPMENT INDICATED.

ACCEPTABLE UNLESS OTHERWISE NOTED.

SPECIFIED OPERATING SEQUENCES.

NEW AND EXISTING CONTROL POINTS.

THE CONTROL DEVICES.

WIRED 7 DAY PROGRAMMABLE THERMOSTAT SHALL BE FURNISHED BY MECHANICAL CONTRACTOR FOR EACH INDOOR UNIT. THERMOSTATS SHIP LOOSE FOR FIELD INSTALLATION AND

MECHANICAL CONTRACTOR TO PROVIDE CENTRAL CONTROLLER FOR LOCAL SET POINT CONTROL AND SYSTEM VIEWING. CONTROLLER TO BE INSTALLED AND WIRING BY MECHANICAL CONTRACTOR. 24V POWER BY ELECTRICAL CONTRACTOR.

DISCONNECT SWITCHES FOR CONDENSING UNITS AND INDOOR

AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

CONTRACTOR.

SERIES OR EQUAL

LINES AT EVERY FAN COIL UNIT.

UNITS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR

. EXTERNAL SUPPORTS FOR INDOOR AND CONDENSING UNITS

SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL

FILTER RACK AND 2" PLEATED MERV-13 FILTERS FOR DUCTED UNITS SHALL FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. FILTER RACK SHALL BE GALVANIZED STEEL, FULLY INSULATED & FACTORY ASSEMBLED. TYPICAL OF FLT-H

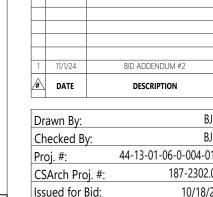
CONDENSATE PUMPS SHIP FOR FIELD INSTALLATION BY

CONDENSATE PIPING FROM ALL UNITS TO SANITARY DRAIN. FIELD VERIFY EXACT ROUTING AND TERMINATION POINT IN

7. PROVIDE REFRIGERANT ISOLATION VALVES ON LIQUID AND GAS

MECHANICAL CONTRACTOR FOR WALL MOUNTED UNITS. DUCTED UNITS FURNISHED WITH FACTORY MOUNTED CONDENSATE PUMP. MECHANICAL CONTRACTOR TO PROVIDE

WIRING BY THE MECHANICAL CONTRACTOR.



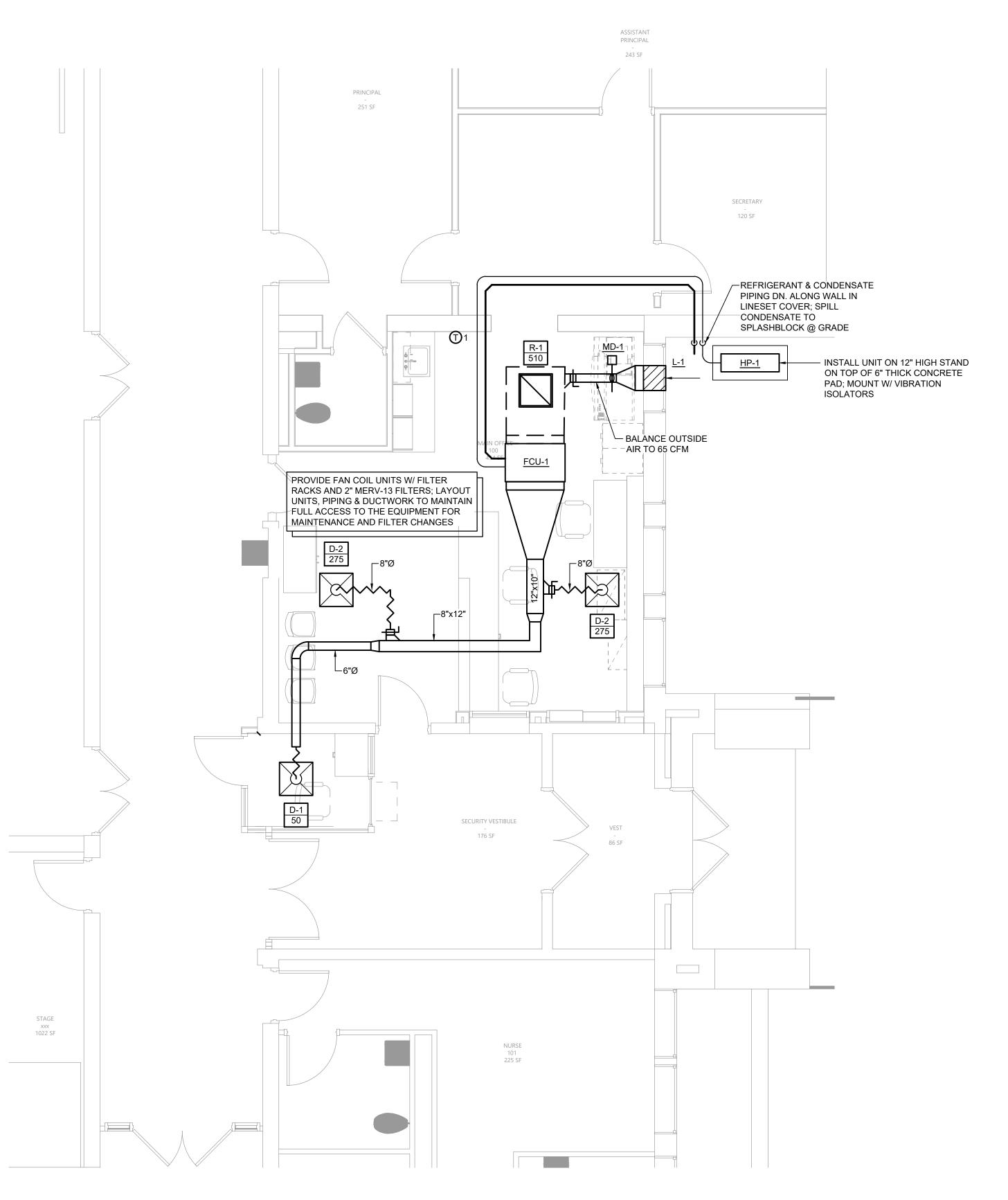
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**KEY PLAN** 

AREA OF ----WORK

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**MECHANICAL** PLAN



Mechanical Plan

∖M111 / Scale: 1/4" = 1'-0"

 								INI	000	R MIN	JI-SF	PLIT	UNIT	SCHED	ULE					<b>]  </b>	VRF System Notes:  1. WIRED 7 DAY PROGRAMMABL
	EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	MINI-SPLIT UNIT TYPE	AREA OF BUILDING SERVED	AIRFLOW (CFM)		COOLING COOLING COOLING COOLING		H CAPACITY (MBH)	EATING EDB (°F)		PAIRED OUTDOOR UNIT	PRESSURE		ELECTRICA POWER REQUIREMEN PHASE Hz	NTS	WEIGHT (LB)	NOTES		FURNISHED BY MECHANICAL CON UNIT. THERMOSTATS SHIP LOOSE WIRING BY THE MECHANICAL CON MECHANICAL CONTRACTOR TO PROCEED TO THE MECHANICAL CONTRACTOR TO THE MECHANICAL CONTRACTO
	FCU-1	MITSUBISHI	PEAD-A18AA8	DUCTED MEDIUM STATIC	MAIN OFFICE	600	18.0	80.0	67.0	21.6	70.0	60.0	HP-1	0.50	208	1 60	) 12	21 60	HYPER HEATING UNIT; SEE VRF SYSTEM NOTES	] i	FOR LOCAL SET POINT CONT CONTROLLER TO BE INSTALLED CONTRACTOR. 24V POWER BY EL
										·			·								DISCONNECT SWITCHES FOR CON

	AIR-COOLED HEAT PUMP SCHEDULE																		
EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	INDOOR UNITS SERVED		NOM. COOL CAPACITY (MBH)	(MBH)	OUTDOOR OPERATING TEMP. RANGE (°F) COOLING HEATING	F	EFFICI RATING SEER	iS	REFRIGERANT	SOUND PRESSURE LEVEL COOLING/ HEATING (dBA)	VOLT	RE	POWE QUIREM	R IENTS	A MO	WEIGHT (LB)	. NOTES
HP-1	MITSUBISHI	SUZ-KA18NAHZ	FCU-1	INVERTER SCROLL HERMETIC	18.0	21.6	0 TO 115 -13 TO 75	12.8	18.9	3.3	R410A	52/53	208	1	60	17	30	131	HYPER HEATING UNIT; FURNISH W/ REQUIRED PIPING ACCESSORIES

	AIR GRILLE/DIFFUSER SCHEDULE													
EQUIPMENT	MANUFACTURER (OR ACCEPT.	MODEL	AIR DEVICE	AIRFLO'	,	MAX AIR PRESS.	MOUNTING	PANEL/FRAME SIZE	NECK SIZE	MAX	DAMPER	FINISH	NOTES	
TAG	EQUAL)	MODEL	TYPE	MIN.	MAX.	DROP (IN. W.C.)		(IN.)	(IN.)	NC	<i>5</i> , 210			
D-1	KRUEGER	PLQ-6-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	50	175	0.10	LAY-IN	24"x24"	6"Ø	20	OBD	WHITE	PROVIDE W/ INSULATED BLANKET ON BACKPAN	
D-2	KRUEGER	PLQ-8-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	176	300	0.10	LAY-IN	24"x24"	8"Ø	20	OBD	WHITE	PROVIDE W/ INSULATED BLANKET ON BACKPAN	
R-1	KRUEGER	S80P-20x20-F23-24x24-00-00-00-44	PERFORATED FACE RETURN GRILLE	0	1,600	0.10	LAY-IN	24"x24"	20"x20"	25	-	WHITE	FURNISH & INSTALL FULL-SIZE SHEET METAL PLENUM BOX ON REAR OF GRILLE, PAINT INSIDE FLAT BLACK	

	LOUVER SCHEDULE													
EQUIPMENT	QTY.	MANUFACTURER (OR ACCEPT.	MODEL	AIR DEVICE TYPE	L	OUVER SIZE	=	FREE AREA		VELOCITY	MOUNTING	SCREEN	FINISH	NOTES
TAG	QII.	EQUAL)	WODEL	AIN DEVICE THE	WIDE	HIGH	DEPTH	(SQ. FT.)	(CFM)	(FT./MIN.)	WOONTING	JONLEN	TINIOTT	NOTES
L-1	1	RUSKIN	ELF6375DX	STATIONARY LOUVER	18"	12"	6"	0.63	65	103.2	EXTERIOR WALL	YES	TBD	1, 2 & 3

3. FURNISH W/ PROPER MOUNTING HARDWARE.

SPLIT SYSTEMS WITH DUCT FAN COIL & HEAT PUMP FURNISHED BY ——

OWNER, INSTALLED BY CONTRACTOR; CONTRACTOR IS RESPONSIBLE

TO RECEIVE THE EQUIPMENT DELIVERY AT THE PROJECT SITE, MOVE

EQUIPMENT FROM TRUCK(S) TO A DESIGNATED STORAGE LOCATION ON THE SITE & RIG THE UNIT INTO THE FINAL INSTALLATION LOCATION;

CONTRACTOR IS TO PROVIDE ALL ASSOCIATED COMPONENTS, I.E.,

OTHERWISE NOTED IN THE PROJECT DOCUMENTS; REFER TO FRONT

DUCTWORK, PIPING, CONTROLS, ACCESSORIES, ETC. UNLESS

END DOCUMENTS FOR ADDITIONAL INFORMATION

	LIGHTING FIXTURE SCHEDULE									
TAG	SYMBOL	MANUFACTURER & MODEL	TYPE	VOLTAGE	# OF LAMPS	LAMP WATTS	FIXTURE WATTS	MOUNTING	SIZE	NOTES
А	<b>⊟</b> <sub>A</sub>	HE WILLIAMS RECESSED DIRECT/INDIRECT DIG-S22-L32/840-AD-DIM-UNV	LED	120	1	25.8	25.8	RECESSED	2'x2'	4000K COLOR TEMPERATURE
B-EM	В-ЕМ	HE WILLIAMS VOLTAIRE ARCHITECTURAL WALL PACK VWPH-L30/740-T3-DBZ-SDGL-EM/10WC-DIM-UNV	LED	120	1	36	36	SURFACE WALL MOUNT	12"x12"	VANDAL RESISTANT; 4000K COLOR TEMPERATURE; W/ LED EMERGENCY 90 MINUTE LOW TEMPERATURE BATTERY BACKUP; UL 924 LISTED FIXTURE
С	$\bigcirc_{c}$	LIGHTSMITH / JEFFERSON LIGHTING CALCUTTA PENDANT LED PD-6209-HNA-ABB-DIM	LED	120	1	52	52	RECESSED	20"x19"	-
-	$\Box$	HE WILLIAMS LED EMERGENCY LIGHT EMER/LED-WHT-SDT-D	LED	120	2	1.0	2.0	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP
-	<b>\$</b> ⊗	HE WILLIAMS LED EXIT & EMERGENCY LIGHT EXIT/EM/LED-R-WHT-RC-SDT-D	LED	120	2	1.5	3.4	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP; PROVIDE W/ REMOTE HEAD MODEL WETRHL-T-WHT-HL-MV
-	⊗	HE WILLIAMS LED EXIT LIGHT EXIT-R-EM-WHT-SDT-D	LED	120	1	3.8	3.8	UNIVERSAL	-	90-MINUTE BATTERY BACKUP

# FIRE ALARM LEGEND:

HORN/STROBE DEVICE, ONE ASSEMBLY; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15 CANDELA UNLESS OTHERWISE NOTED

STROBE DEVICE; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15

CANDELA UNLESS OTHERWISE NOTED

MANUAL PULL STATION; MTD. 48" A.F.F.

WATER FLOW SWITCH

VALVE TAMPER SWITCH

DETECTOR; LETTER INDICATES AS FOLLOWS: BLANK = SMOKE DETECTOR P = PHOTOELECTRIC SMOKE M = MULTIPLE STATION SMOKE ALARM D = PHOTOELECTRIC DUCT SMOKE DETECTOR

> FSD = DUCT SMOKE DETECTOR FOR FIRE SMOKE DAMPER RATE OF RISE HEAT DETECTOR, 135°F

CARBON MONOXIDE DETECTOR; MTD. 60" A.F.F.

ADDRESSABLE FIRE ALARM CONTROL PANEL

FIRE ALARM ANNUNCIATOR PANEL

REMOTE TEST SWITCH & LED FOR DUCT SMOKE DETECTORS

FIRE ALARM RELAY

# SECURITY LEGEND:

PANIC BUTTON - 18/4 SHIELDED

INTERCOM

DOOR RELEASE BUTTON - 16/2 SHIELDED

WORKSTATION FOR CARD ACCESS & VIDEO SYSTEM

CARD READER - 22/6 SHIELDED

REQUEST TO EXIT - 18/4 SHIELDED

MAGNETIC DOOR CONTACT - 16/2 SHIELDED

ELECTRIC LOCK - 16/2 SHIELDED

# ELECTRICAL LEGEND:

MOTOR

EARTH GROUND

JUNCTION BOX

EMERGENCY POWER OFF BUTTON

FUSE WITH RATING

MOLDED CASE CIRCUIT BREAKER

DISCONNECT SWITCH, FUSED

DISCONNECT SWITCH, UNFUSED

STARTER, COMBINATION WITH DISCONNECT SWITCH STARTER OR MOTOR CONTROLLER

M

20A 120V DUPLEX CEILING MOUNTED RECEPTACLE

20A 120V DUPLEX WALL MOUNTED RECEPTACLE; 18" A.F.F. UNLESS OTHERWISE NOTED

20A 120V DUPLEX WALL MOUNTED RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER

20A 120V QUADRAPLEX RECEPTACLE

OUTLET; FLUSH MOUNTED

WALL MOUNTED SPECIAL PURPOSE RECEPTACLE

⇒ USB 20A 120V WALL MOUNTED USB CHARGER RECEPTACLE TYPICAL OF HUBBELL USB20X OR ACCEPTABLE EQUAL

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE; FLUSH MOUNTED

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE & 2 PORT ETHERNET

FLOOR MOUNTED BOX W/ QUAD RECEPTACLE & 2 PORT ETHERNET OUTLET; FLUSH MOUNTED

WALL PHONE OUTLET MTD. 48" A.F.F.; 3/4" EMT CDT. IN WALL TO ABOVE CEILING; PROVIDE 1 PORT ETHERNET WALL PLATE; PROVIDE (1) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT CLOSET

WALL BOX FOR TELEVISION CONNECTION; 1-1/4" EMT CDT. IN WALL TO ABOVE CEILING W/ PULL CORD

WALL TO ABOVE CEILING; PROVIDE 2 PORT ETHERNET WALL PLATE; PROVIDE (2) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT BRANCH CIRCUIT HOMERUN; LINES INDICATE NUMBER OF CIRCUITS,

NEUTRAL, AND SWITCH LEG CONDUCTORS; ONE SEPARATE

GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH

TELEPHONE/DATA COMMUNICATION BOX W/ (2) 3/4" EMT CDT. IN

HOMERUN; NOT SHOWN 2 = DOUBLE POLE BLANK = SINGLE POLE 3 = THREE-WAY 4 = FOUR-WAY D = DIMMER K = KEY OPERATED P = WITH PILOT LIGHT PB= PUSH BUTTON

DUAL TECHNOLOGY OCCUPANCY SENSOR

T = TIMER OPERATED

X = EXPLOSION PROOF

DAYLIGHT SENSOR

MULTIMEDIA BOX. PROVIDE DEVICE BOX AT 60" ABOVE FINISHED FLOOR WITH DUPLEX RECEPTACLE & (2) CAT6E PORTS. PROVIDE FACEPLATES AND (2) 1-1/4" CONDUITS STUBBED ABOVE CEILING. (1) W/ CAT6E CABLES RUN TO NEAREST IT CLOSET & (1) W/ PULL CORD FOR FUTURE HDMI. RECESS MOUNT BOX TYPICAL OF WIREMOLD EVOLUTION SERIES WITH CONCEALED CONDUITS IN EXISTING FRAMED WALLS AND ALL NEW WALLS. PROVIDE SURFACE MOUNT BOXES WITH DUAL CHANNEL SURFACE MOUNT RACEWAY (LEGRAND WIREMOLD 5400 SERIES) WHERE INSTALLED ON EXISTING MASONRY

WP= WEATHER PROOF

OC= OCCUPANCY SENSOR



WIRELESS ACCESS POINT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE AT CEILING DEVICE & RUN CABLING TO NEAREST DATA CLOSET

COMBINATION WALL MOUNTED CLOCK/SPEAKER UNIT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE TO DEVICE & RUN CABLING TO NEAREST DATA CLOSET

# ELECTRICAL NOTES:

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

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

FOR DOUBLE INSULATED EQUIPMENT ONLY.

CONDUCTORS.

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

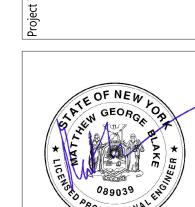
- GREEN OR GREEN/YELLOW MUST ONLY BE USED FOR GROUNDING

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

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

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# DATE

Drawn By:

Proj. #: CSArch Proj. #:

Issued for Bid:

ELECTRICAL

NOTES,

LEGENDS,

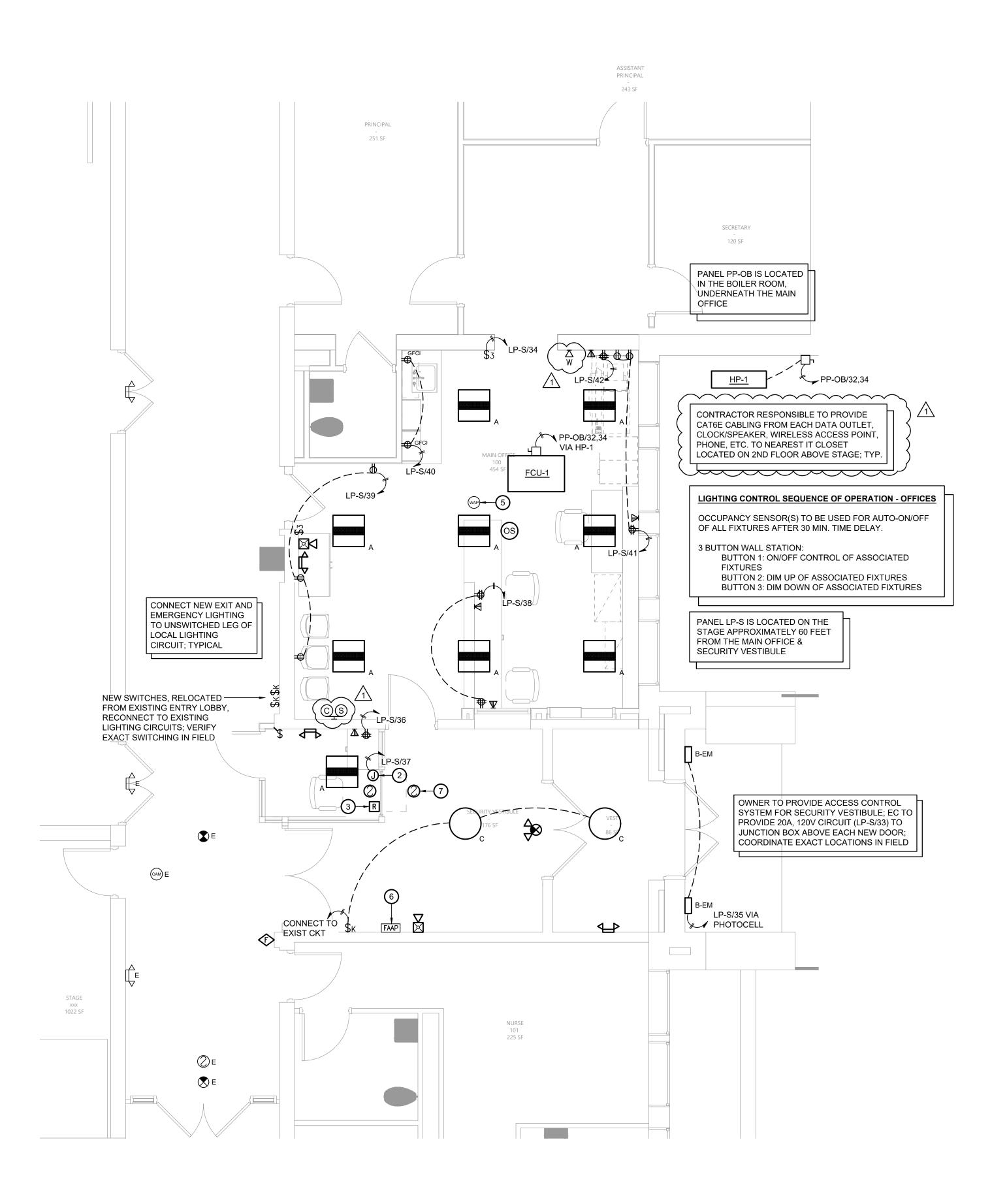
**SCHEDULES &** 

**DETAILS** 

BID ADDENDUM #2

DESCRIPTION

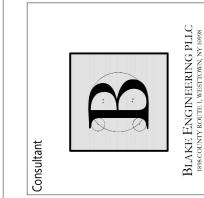
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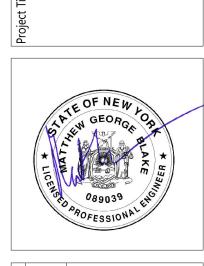
1 Electrical Plan
E111 Scale: 1/4" = 1'-0"

Key Notes:

- EXISTING LIGHT FIXTURE TO REMAIN
- PROVIDE NEW 120V ELECTRICAL CONNECTION FOR FIRE SHUTTER
- FIRE ALARM RELAY; FIRE SHUTTER TO CLOSE UPON ACTIVATION OF FIRE ALARM
- RELOCATE EXISTING LIGHT FIXTURE TO AVOID CONFLICT W/ NEW SECURITY OFFICE; CENTER FIXTURE IN VESTIBULE; EXTEND WIRING & CONDUIT FROM EXISTING CIRCUIT AS NECESSARY
- REINSTALL EXISTING WIRELESS ACCESS POINT; CONNECT TO EXISTING DATA CABLING
- EXISTING FIRE ALARM ANNUNCIATOR PANEL TO REMAIN;
  TEMPORARILY REMOVE, PROTECT & STORE DURING
- CONSTRUCTION; REINSTALL AFTER COMPLETION OF VESTIBULE
  PROVIDE SMOKE DETECTORS ON BOTH SIDES OF THE AUTOMATIC
  FIRE SHUTTER AT THE TRANSACTION WINDOW; CONNECT TO THE
  EXISTING BUILDING FIRE ALARM SYSTEM



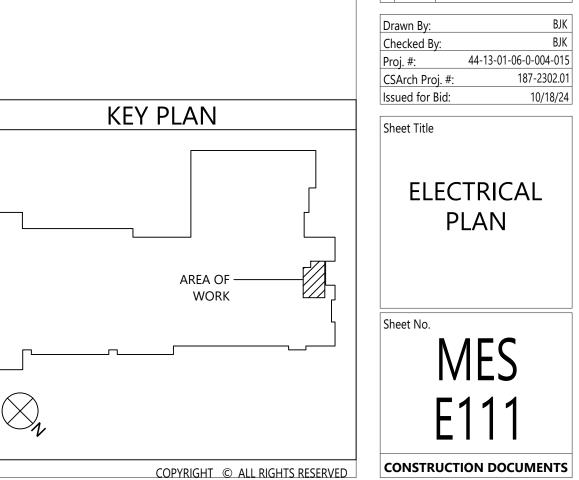
# 10NTGOMERY ELEMENTARY SCHOOL 2023 CAPITAL PROJECT - PHASE 1



BID ADDENDUM #2

DESCRIPTION

# DATE



### VALLEY CENTRAL SCHOOL DISTRICT MAYBROOK ALTERNATIVE LEARNING CENTER 2023 CAPITAL PROJECT - PHASE 1

10/18/24 **ISSUED FOR BID:** 

CSARCH - ARCHITECTS

BLAKE ENGINEERING, PLLC - M.E.P. ENGINEERS PASSERO ASSOCIATES - SITE/CIVIL AND STRUCTURAL ENGINEERS AECC ENVIRONMENTAL CONSULTING - HAZARDOUS MATERIALS DESIGNERS

### STATE EDUCATION DEPARTMENT PROJECT CONTROL NUMBER:

2023 CAPITAL PROJECT - PHASE 1

44-13-01-06-0-002-013

THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT.

CSArch PROJECT NO. 187-2302.01



- Maybrook Alternative Learning Center 141 Union St. Montgomery, NY 12549

VICINITY MAP



### DRAWING LIST

### **GENERAL DRAWINGS**

MAY G000 COVER & SHEET INDEX

SYMBOLS, ABBREVIATIONS, MISC, AND PARTITION TYPES

MAY G111 OVERALL FLOOR PLAN - FIRST FLOOR

### LIFE SAFETY DRAWINGS

MAY LS111 LIFE SAFETY PLAN - FIRST FLOOR MAY LS112 SMOKE ZONE PLANS

### **ARCHITECTURAL DEMOLITION DRAWINGS**

MAY AD121 ENLARGED REMOVAL PLAN - FIRST FLOOR - AREA A MAY AD821 REFLECTED CEILING REMOVAL PLAN - FIRST FLOOR - AREA A

### ARCHITECTURAL DRAWINGS

ENLARGED FLOOR PLAN - FIRST FLOOR - AREA A REFLECTED CEILING PLAN - FIRST FLOOR - AREA A

DOOR & WINDOW DETAILS

### MAY AF001 SIGNAGE TYPES AND SCHEDULE

ARCHITECTURAL FINISH DRAWINGS

**FURNITURE DRAWINGS** MAY FE121 PARTIAL FLOOR FURNITURE PLAN - FIRST FLOOR - AREA A

MAY AF121 MATERIAL SCHEDULE & FINISH FLOOR PLAN - AREA A

### **MECHANICAL GENERAL DRAWING**S

MAY M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

### **MECHANICAL DEMOLITION DRAWINGS** MAY MD111 MECHANICAL DEMOLITION PLAN

### **MECHANICAL DRAWINGS** MAY M111 MECHANICAL PLAN

### **ELECTRICAL GENERAL DRAWINGS**

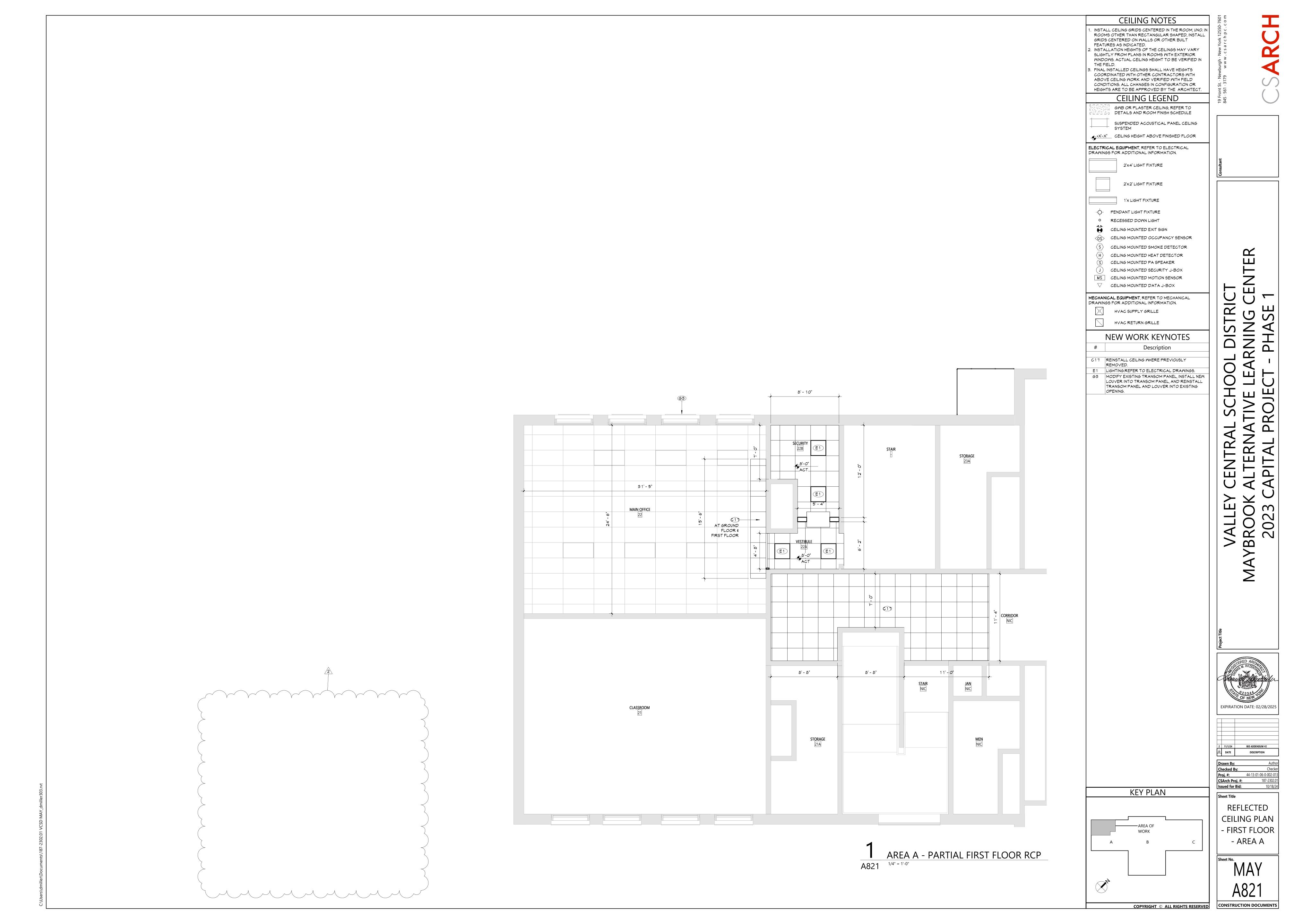
MAY E001 ELECTRICAL NOTES, LEGENDS, SCHEDULES & DETAILS

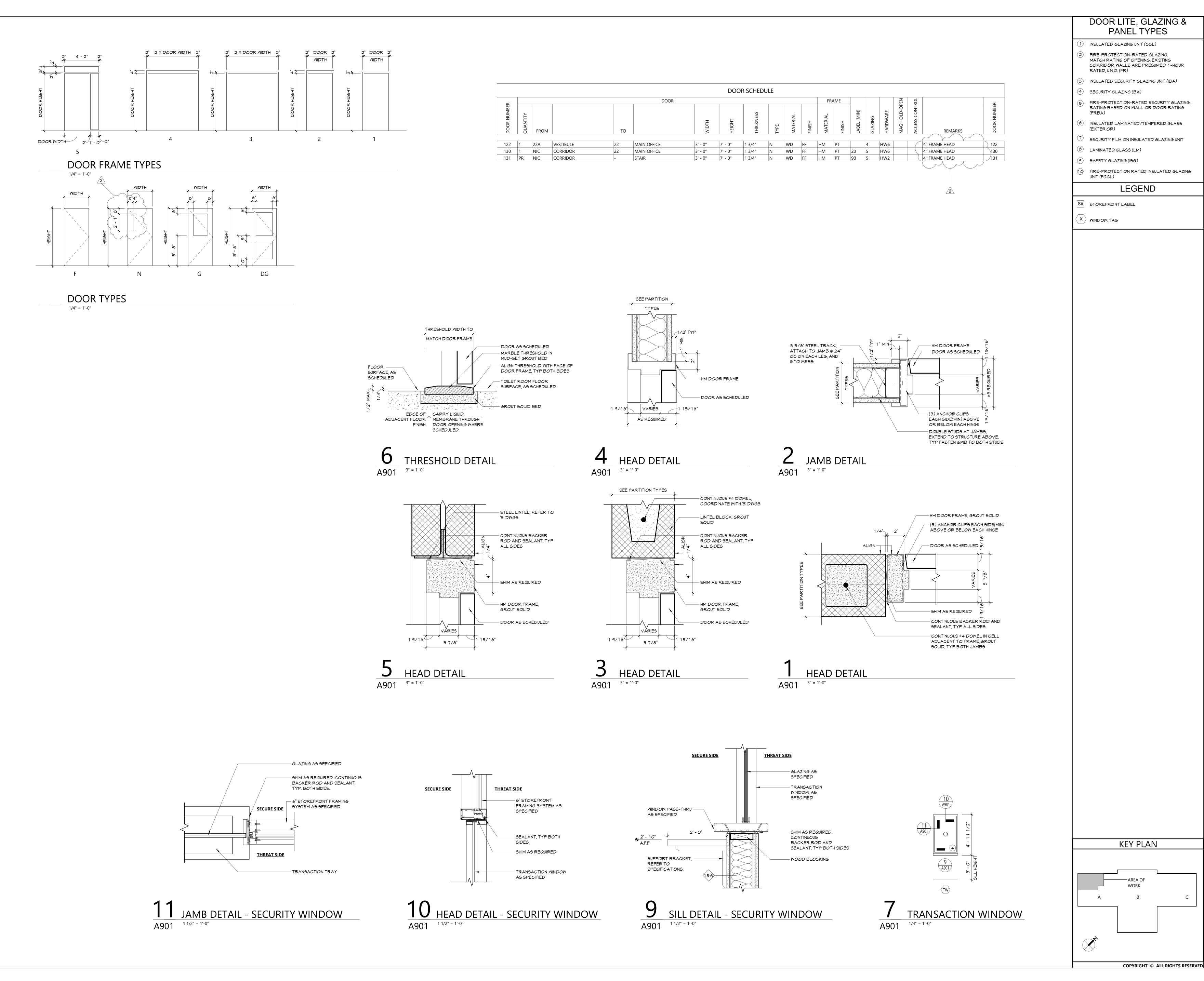
### **ELECTRICAL DEMOLITION DRAWINGS**

MAY ED111 ELECTRICAL DEMOLITION PLAN

### **ELECTRICAL DRAWINGS**

MAY E111 ELECTRICAL PLAN





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ROC 202

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EXPIRATION DATE: 02/28/2025

2 11/1/24 BID ADDENDUM #2
1 10/25/24 BID ADDENDUM #1

ADDED

DATE

DESCRIPTION Drawn By:

 
 Checked By:
 Checker

 Proj. #:
 44-13-01-06-0-002-013

 CSArch Proj. #:
 187-2302.01
 Issued for Bid:

DOOR & WINDOW

DETAILS

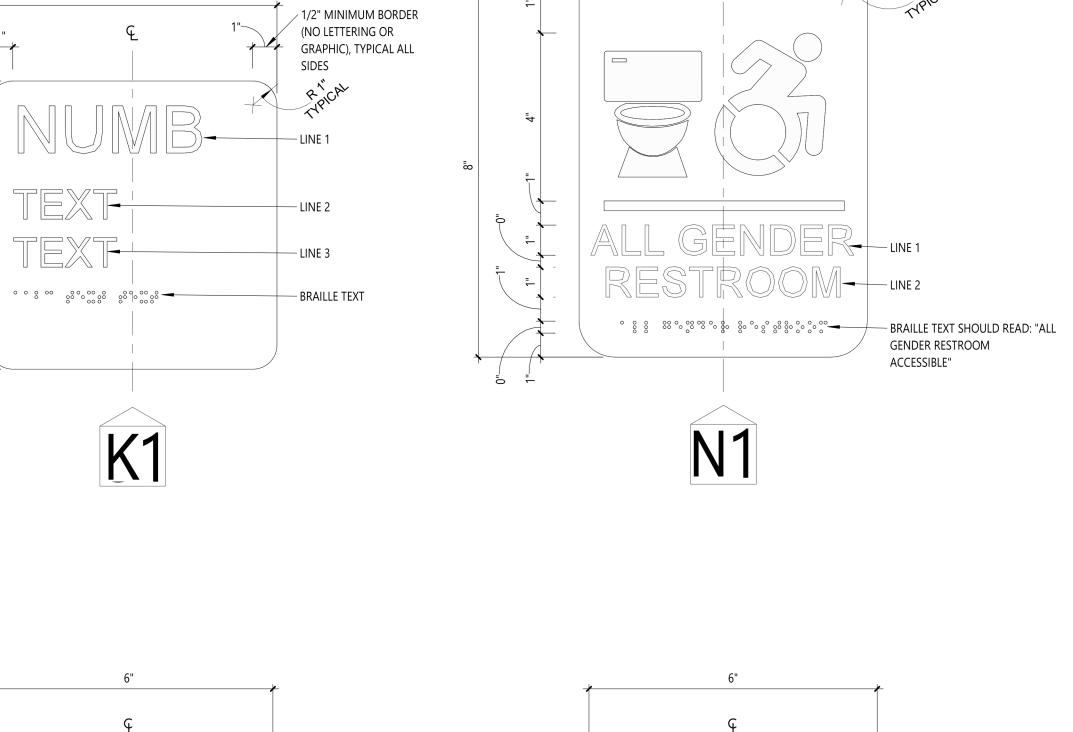
MAY A901

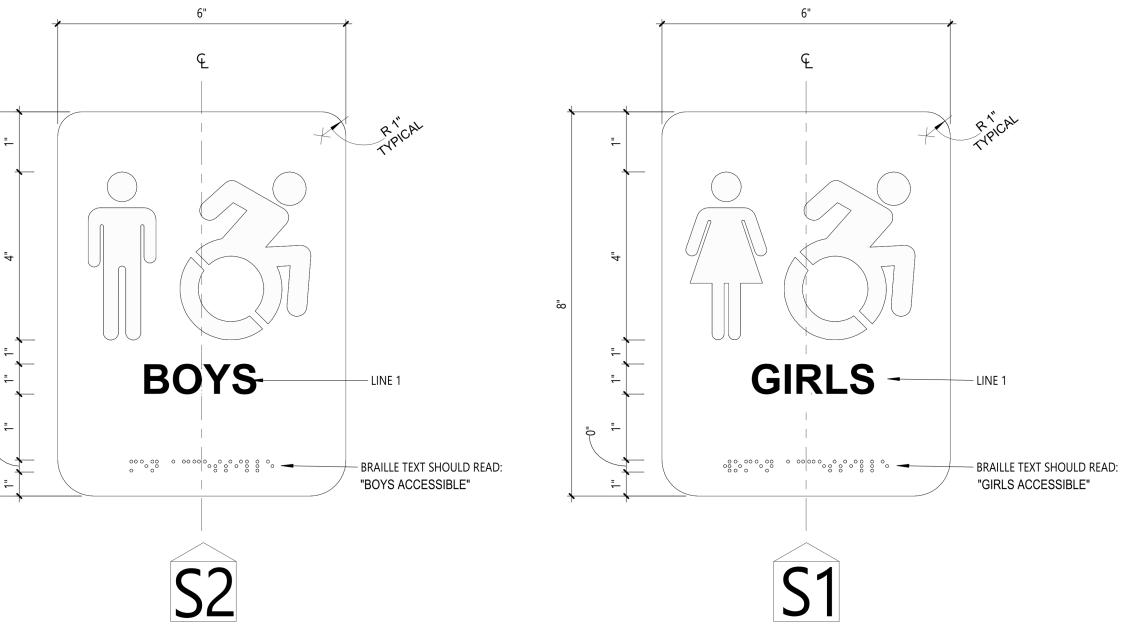
CONSTRUCTION DOCUMENTS

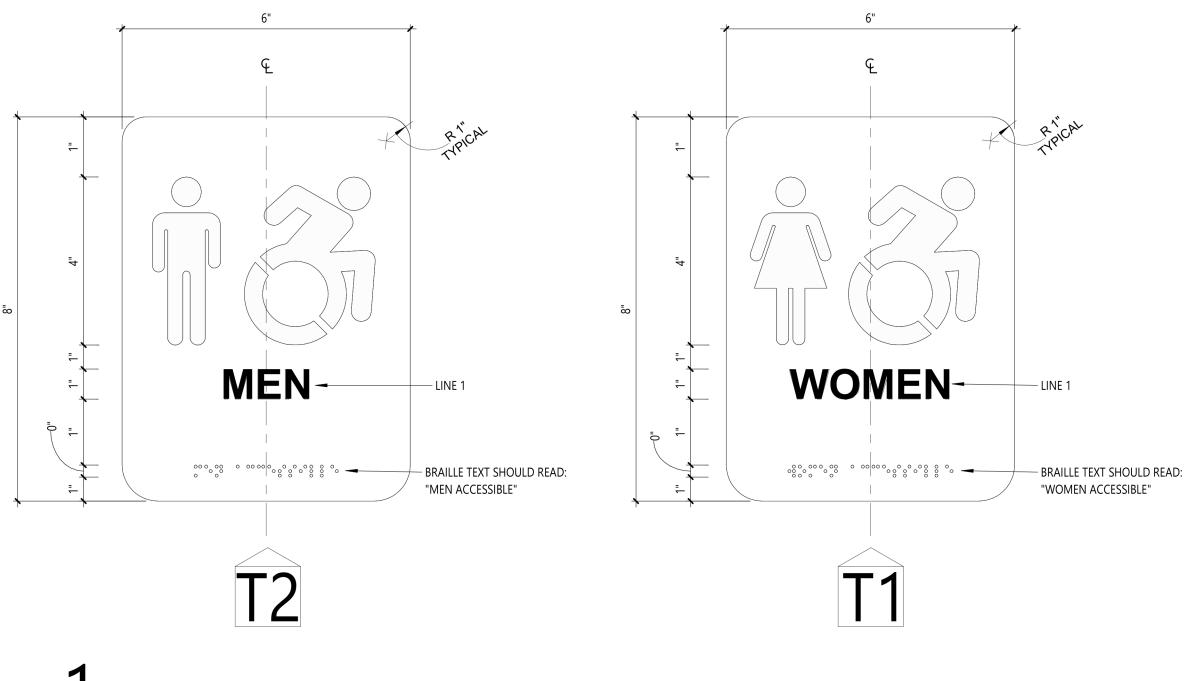
SIGNAGE TYPES AND SCHEDULES

MAY AF001 CONSTRUCTION DOCUMENTS

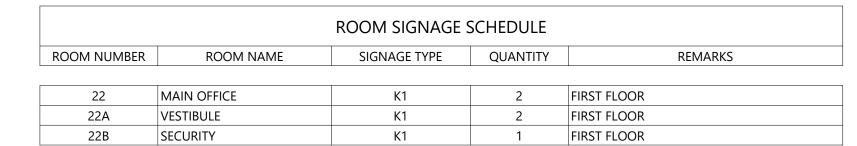
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PANEL SIGNAGE ELEVATIONS

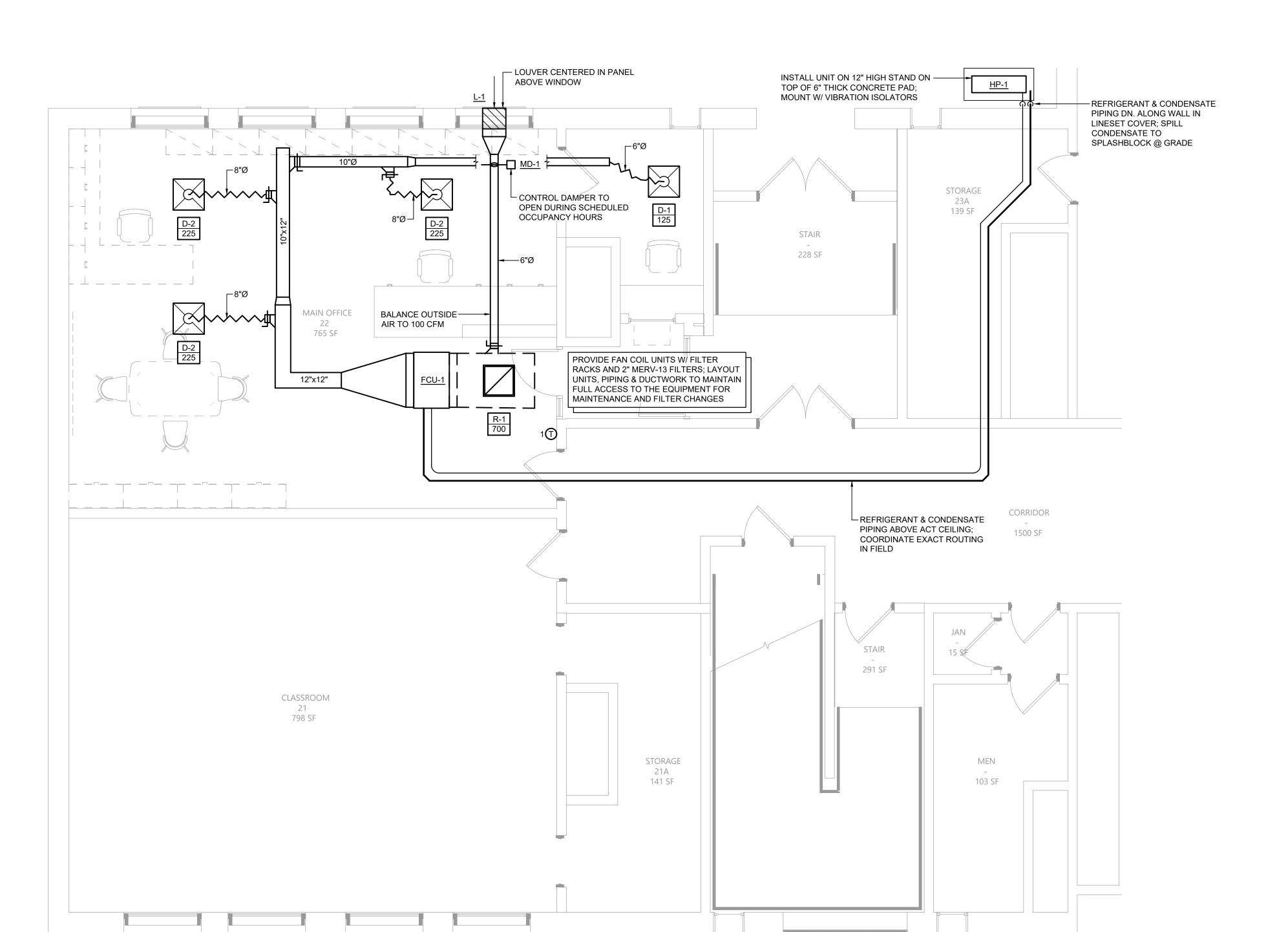


1) REFER TO PANEL SIGNAGE ELEVATIONS FOR SIGNAGE TYPES. 2) REFER TO SPECIFICATION SECTION 101423 - "INTERIOR PANEL SIGNAGE" FOR ADDITIONAL INFORMATION. 3) ALL EXISTING PANEL SIGNAGE FOR ROOMS NOTED ABOVE SHALL BE REMOVED AND REPLACED WITH NEW. 4) FINAL NUMBERING AND NAMING OF ROOMS TO BE DETERMINED BY OWNER DURING THE SUBMITTAL AND SHOP DRAWING REVIEW.

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Sheet Title

**MECHANICAL** PLAN



### Mechanical Plan Scale: 1/4" = 1'-0"

SPLIT SYSTEMS WITH DUCT FAN COIL & HEAT PUMP FURNISHED BY —

OWNER, INSTALLED BY CONTRACTOR; CONTRACTOR IS RESPONSIBLE

TO RECEIVE THE EQUIPMENT DELIVERY AT THE PROJECT SITE, MOVE EQUIPMENT FROM TRUCK(S) TO A DESIGNATED STORAGE LOCATION

ON THE SITE & RIG THE UNIT INTO THE FINAL INSTALLATION LOCATION;

CONTRACTOR IS TO PROVIDE ALL ASSOCIATED COMPONENTS, I.E.,

OTHERWISE NOTED IN THE PROJECT DOCUMENTS; REFER TO FRONT

DUCTWORK, PIPING, CONTROLS, ACCESSORIES, ETC. UNLESS

END DOCUMENTS FOR ADDITIONAL INFORMATION

### INDOOR MINI-SPLIT UNIT SCHEDULE MANUFACTURER AREA OF MINI-SPLIT UNIT EQUIPMENT STATIC CAPACITY EDB EWB CAPACITY EDB EWB OUTDOOR PRESSURE (OR ACCEPT. MODEL BUILDING NOTES REQUIREMENTS TAG TYPE (MBH) (°F) (°F) (MBH) (°F) (°F) UNIT | PRESSURE | VOLT. PHASE | Hz. | W EQUAL) SERVED DUCTED MEDIUM FCU-1 PEAD-A30AA8 MAIN OFFICE 800 0.50 208 1 60 121 67 HYPER HEATING UNIT; SEE VRF SYSTEM NOTES MITSUBISHI 30.0 | 80.0 | 67.0 | 32.0 | 70.0 | 60.0 HP-1

	AIR-COOLED HEAT PUMP SCHEDULE															
EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	INDOOR UNITS SERVED	COMPRESSOR TYPE	NOM. COOL CAPACITY (MBH)	(MBH)	OUTDOOR OPERATING TEMP. RANGE (°F) COOLING HEATING	AHRI EFFICIENCY RATINGS	REFRIGERANT	SOUND PRESSURE LEVEL COOLING/ HEATING (dBA)	VOLT.	ELECTR POWI REQUIREI PHASE Hz	ER MENTS		WEIGHT (LB)	NOTES
HP-1	MITSUBISHI	SUZ-KA30NAHZ	FCU-1	INVERTER SCROLL HERMETIC	30.0	32.0	0 TO 115 -13 TO 75	12.5 15.0 3.4	R410A	52/53	208	1 60	24	40	261	FURNISH W/ REQUIRED PIPING ACCESSORIES

	AIR GRILLE/DIFFUSER SCHEDULE												
EQUIPMENT	MANUFACTURER (OR ACCEPT.	MODEL	AIR DEVICE	AIRFLO'	W (CFM)	MAX AIR PRESS.		PANEL/FRAME SIZE		MAX	DAMPER	FINISH	NOTES
TAG	TAG EQUAL)	WODEL	TYPE	MIN.	MAX.	DROP (IN. W.C.)		(IN.)	(IN.)	NC	B7 (10)		
D-1	KRUEGER	PLQ-6-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	50	175	0.10	LAY-IN	24"x24"	6"Ø	20	OBD	WHITE	PROVIDE W/ INSULATED BLANKET ON BACKPAN
D-2	KRUEGER	PLQ-8-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	176	300	0.10	LAY-IN	24"x24"	8"Ø	20	OBD	WHITE	PROVIDE W/ INSULATED BLANKET ON BACKPAN
R-1	KRUEGER	S80P-20x20-F23-24x24-00-00-00-44	PERFORATED FACE RETURN GRILLE	0	1,600	0.10	LAY-IN	24"x24"	20"x20"	25	-	WHITE	FURNISH & INSTALL FULL-SIZE SHEET METAL PLENUM BOX ON REAR OF GRILLE, PAINT INSIDE FLAT BLACK

	LOUVER SCHEDULE													
EQUIPMENT	QTY.	MANUFACTURER (OR ACCEPT.	R MODEL AIR DEVICE TYPE				FREE AREA	AIRFLOW (CFM)	VELOCITY (FT./MIN.)	MOUNTING	SCREEN	FINISH	NOTES	
TAG		EQUAL) WIDE HIGH DEPTH (SQ. FT.)	(CFIVI)	(F1./WIIN.)										
L-1	1	RUSKIN	ELF6375DX	STATIONARY LOUVER	18"	12"	6"	0.63	100	158.7	EXTERIOR WALL	YES	TBD	1, 2 & 3
2. FURNISI	COLOR TO BE COORDINATED WITH OWNER/ARCHITECT BEFORE ORDERING FURNISH WITH INSECT-SCREEN OPTION. FURNISH W/ PROPER MOUNTING HARDWARE.													

- I. HVAC CONTROLS SHALL BE FURNISHED & INSTALLED BY THE OWNER TO MATCH THE EXISTING BUILDING AUTOMATION SYSTEM IN EACH BUILDING (SIEMENS AT MAYBROOK ALC). ALL HARDWARE, WIRING AND PROGRAMMING TO BE PROVIDED BY OWNER. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER'S VENDOR THROUGHOUT THE PROJECT TO SUPPORT INSTALLATION, TESTING AND COMMISSIONING. MECHANICAL CONTRACTOR TO INSTALL ALL DEVICES MOUNTED IN OR ON THE PIPING AND/OR DUCTWORK INCLUDING BUT NOT LIMITED TO HYDRONIC CONTROL VALVES, TEMPERATURE SENSORS, FLOW SENSORS, ETC. MECHANICAL CONTRACTOR TO PROVIDE ALL NECESSARY PORTS/THERMOWELLS FOR SENSORS, GAUGES, ETC. COORDINATE WITH OWNER'S VENDOR FOR QUANTITY AND LOCATIONS.
- 2. OWNER SHALL EXPAND EXISTING BUILDING AUTOMATION SYSTEM TO PROVIDE THE CONTROL SEQUENCES SPECIFIED ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE SYSTEM SHALL PROVIDE CONTROL AND MONITORING OF THE EQUIPMENT INDICATED.

DDC Temperature Control Notes:

- 3. OWNER SHALL PROVIDE CONTROLLERS AND COMMUNICATIONS INFRASTRUCTURE TO MATCH EXISTING CAMPUS-WIDE BUILDING AUTOMATION SYSTEM. PROVIDE SEAMLESS INTEGRATION WITH EXISTING CONTROL NETWORK AND USER INTERFACES. NETWORK GATEWAYS AND PROTOCOL INTERFACE EQUIPMENT ARE NOT ACCEPTABLE UNLESS OTHERWISE NOTED.
- 4. OWNER SHALL PROVIDE INSTRUMENTATION, SENSORS, VALVES, DAMPERS, ACTUATORS AND WIRING AS REQUIRED TO PROVIDE SPECIFIED OPERATING SEQUENCES.
- 5. OWNER SHALL MODIFY EXISTING GRAPHIC USER INTERFACES TO INCLUDE ALL EQUIPMENT AND SYSTEMS INCLUDED IN THIS PROJECT.
- 6. OWNER SHALL REPLACE THE EXISTING BAS SERVER HARDWARE AND UPGRADE THE SOFTWARE TO THE LATEST VERSION OF WEB-ENABLED GRAPHICAL USER INTERFACE WITH A SEAMLESS INTEGRATION OF THE NEW AND EXISTING CONTROL POINTS.
- 7. OWNER SHALL BE RESPONSIBLE FOR POWER THAT IS NOT SHOWN ON THE ELECTRICAL DRAWINGS, TO CONTROLS FURNISHED BY THIS CONTRACTOR. IF POWER CIRCUITS ARE SHOWN ON THE ELECTRICAL DRAWINGS, OWNER SHALL CONTINUE THE POWER RUN TO THE CONTROL DEVICE. IF POWER CIRCUITS ARE NOT SHOWN, OWNER SHALL PROVIDE BREAKERS AT DISTRIBUTION PANELS FOR POWER TO CONTROLS AND PROVIDE POWER FROM THE DISTRIBUTION PANEL TO THE CONTROL DEVICES.
- 8. OWNER SHALL FURNISH & INSTALL ALL REQUIRED END DEVICES, POWER SUPPLY, LOW VOLTAGE TRANSFORMERS, CONTROL WIRING & CONDUITS, ETC. FOR A COMPLETE & OPERATIONAL DDC CONTROL
- 9. NEW WIRING & CONDUITS SHALL BE RUN CONCEALED ABOVE CEILING. ALL EXPOSED WIRING & CONDUITS SHALL BE RUN CONCEALED IN EMT IN UTILITY SPACES AND WIREMOLD IN FINISHED AREAS.
- 10.OWNER TO FIELD INSTALL SENSORS, CONTROLLERS, ETC. WHICH ARE NOT FACTORY-INSTALLED BY EQUIPMENT MANUFACTURERS.
- 11. ANY EQUIPMENT FURNISHED WITH FACTORY CONTROLS SHALL BE PROVIDED WITH BACNET MSTP INTEGRATION CAPABILITIES AND INCLUDE ON-SITE FACTORY CONTROLS INTEGRATION START-UP IN COORDINATION WITH OWNER'S BUILDING AUTOMATION SYSTEM.

**KEY PLAN** 

—AREA OF

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### VRF System Notes:

THE ELECTRICAL CONTRACTOR.

- . WIRED 7 DAY PROGRAMMABLE THERMOSTAT SHALL BE FURNISHED BY OWNER FOR EACH INDOOR UNIT. THERMOSTATS SHIP LOOSE FOR FIELD INSTALLATION AND WIRING BY THE MECHANICAL CONTRACTOR.
- 2. OWNER TO FURNISH CENTRAL CONTROLLER FOR LOCAL SET POINT CONTROL AND SYSTEM VIEWING. CONTROLLER TO BE INSTALLED AND WIRING BY MECHANICAL CONTRACTOR. 24V POWER BY ELECTRICAL CONTRACTOR.
- DISCONNECT SWITCHES FOR CONDENSING UNITS AND INDOOR UNITS SHALL BE FURNISHED BY THE OWNER AND INSTALLED BY
- 4. EXTERNAL SUPPORTS FOR INDOOR AND CONDENSING UNITS SHALL BE FURNISHED BY OWNER AND INSTALLED BY THE MECHANICAL CONTRACTOR.
- 5. FILTER RACK AND 2" PLEATED MERV-13 FILTERS FOR DUCTED UNITS SHALL FURNISHED BY OWNER AND INSTALLED BY THE MECHANICAL CONTRACTOR. FILTER RACK SHALL BE GALVANIZED STEEL, FULLY INSULATED & FACTORY ASSEMBLED. TYPICAL OF FLT-H SERIES OR EQUAL
- 6. CONDENSATE PUMPS SHIP FOR FIELD INSTALLATION BY MECHANICAL CONTRACTOR FOR WALL MOUNTED UNITS. DUCTED UNITS FURNISHED WITH FACTORY MOUNTED CONDENSATE PUMP. MECHANICAL CONTRACTOR TO PROVIDE CONDENSATE PIPING FROM ALL UNITS TO SANITARY DRAIN. FIELD VERIFY EXACT ROUTING AND TERMINATION POINT IN BUILDING.
- 7. PROVIDE REFRIGERANT ISOLATION VALVES ON LIQUID AND GAS LINES AT EVERY FAN COIL UNIT.

	LIGHTING FIXTURE SCHEDULE									
TAG	SYMBOL	MANUFACTURER & MODEL	TYPE	VOLTAGE	# OF LAMPS	LAMP WATTS	FIXTURE WATTS	MOUNTING	SIZE	NOTES
А	<b>⊟</b> <sub>A</sub>	HE WILLIAMS RECESSED DIRECT/INDIRECT DIG-S22-L32/840-AD-DIM-UNV	LED	120	1	25.8	25.8	RECESSED	2'x2'	4000K COLOR TEMPERATURE
В	В-ЕМ	HE WILLIAMS VOLTAIRE ARCHITECTURAL WALL PACK VWPH-L30/740-T3-DBZ-SDGL-EM/10WC-DIM-UNV	LED	120	1	36	36	SURFACE WALL MOUNT	12"x12"	VANDAL RESISTANT; 4000K COLOR TEMPERATURE; W/ LED EMERGENCY 90 MINUTE LOW TEMPERATURE BATTERY BACKUP; UL 924 LISTED FIXTURE
-	$\Box$	HE WILLIAMS LED EMERGENCY LIGHT EMER/LED-WHT-SDT-D	LED	120	2	1.0	2.0	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP
-	<b>\$</b> ⊗	HE WILLIAMS LED EXIT & EMERGENCY LIGHT EXIT/EM/LED-R-WHT-RC-SDT-D	LED	120	2	1.5	3.4	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP; PROVIDE W/ REMOTE HEAD MODEL WETRHL-T-WHT-HL-MV
-	⊗	HE WILLIAMS LED EXIT LIGHT EXIT-R-EM-WHT-SDT-D	LED	120	1	3.8	3.8	UNIVERSAL	-	90-MINUTE BATTERY BACKUP

### FIRE ALARM LEGEND:

HORN/STROBE DEVICE, ONE ASSEMBLY; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15 CANDELA UNLESS OTHERWISE NOTED

STROBE DEVICE; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15

CANDELA UNLESS OTHERWISE NOTED

MANUAL PULL STATION; MTD. 48" A.F.F.

WATER FLOW SWITCH

VALVE TAMPER SWITCH

DETECTOR; LETTER INDICATES AS FOLLOWS: BLANK = SMOKE DETECTOR P = PHOTOELECTRIC SMOKE M = MULTIPLE STATION SMOKE ALARM

RATE OF RISE HEAT DETECTOR, 135°F

D = PHOTOELECTRIC DUCT SMOKE DETECTOR FSD = DUCT SMOKE DETECTOR FOR FIRE SMOKE DAMPER

CARBON MONOXIDE DETECTOR; MTD. 60" A.F.F.

ADDRESSABLE FIRE ALARM CONTROL PANEL

FIRE ALARM ANNUNCIATOR PANEL

REMOTE TEST SWITCH & LED FOR DUCT SMOKE DETECTORS

FIRE ALARM RELAY

### SECURITY LEGEND:

PANIC BUTTON - 18/4 SHIELDED

INTERCOM

BUS RATING: 225A

DOOR RELEASE BUTTON - 16/2 SHIELDED

WORKSTATION FOR CARD ACCESS & VIDEO SYSTEM

CARD READER - 22/6 SHIELDED

REQUEST TO EXIT - 18/4 SHIELDED

MAGNETIC DOOR CONTACT - 16/2 SHIELDED

ELECTRIC LOCK - 16/2 SHIELDED

### ELECTRICAL LEGEND:

Ø MOTOR

EARTH GROUND

JUNCTION BOX

EMERGENCY POWER OFF BUTTON

FUSE WITH RATING

MOLDED CASE CIRCUIT BREAKER

DISCONNECT SWITCH, FUSED

DISCONNECT SWITCH, UNFUSED

STARTER, COMBINATION WITH DISCONNECT SWITCH STARTER OR MOTOR CONTROLLER

M

20A 120V DUPLEX CEILING MOUNTED RECEPTACLE

20A 120V DUPLEX WALL MOUNTED RECEPTACLE; 18" A.F.F. UNLESS OTHERWISE NOTED

20A 120V DUPLEX WALL MOUNTED RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER

20A 120V QUADRAPLEX RECEPTACLE

WALL MOUNTED SPECIAL PURPOSE RECEPTACLE

⇒ USB 20A 120V WALL MOUNTED USB CHARGER RECEPTACLE TYPICAL OF HUBBELL USB20X OR ACCEPTABLE EQUAL

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE; FLUSH MOUNTED

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE & 2 PORT ETHERNET OUTLET: FLUSH MOUNTED

FLOOR MOUNTED BOX W/ QUAD RECEPTACLE & 2 PORT ETHERNET OUTLET; FLUSH MOUNTED

WALL PHONE OUTLET MTD. 48" A.F.F.; 3/4" EMT CDT. IN WALL TO ABOVE CEILING; PROVIDE 1 PORT ETHERNET WALL PLATE; PROVIDE (1) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT CLOSET

WALL BOX FOR TELEVISION CONNECTION; 1-1/4" EMT CDT. IN WALL TO ABOVE CEILING W/ PULL CORD

WALL TO ABOVE CEILING; PROVIDE 2 PORT ETHERNET WALL PLATE; PROVIDE (2) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT BRANCH CIRCUIT HOMERUN; LINES INDICATE NUMBER OF CIRCUITS,

TELEPHONE/DATA COMMUNICATION BOX W/ (2) 3/4" EMT CDT. IN

NEUTRAL, AND SWITCH LEG CONDUCTORS; ONE SEPARATE GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH HOMERUN; NOT SHOWN

2 = DOUBLE POLE BLANK = SINGLE POLE 3 = THREE-WAY 4 = FOUR-WAY K = KEY OPERATED D = DIMMER P = WITH PILOT LIGHT **PB= PUSH BUTTON** T = TIMER OPERATED WP= WEATHER PROOF X = EXPLOSION PROOF OC= OCCUPANCY SENSOR

DUAL TECHNOLOGY OCCUPANCY SENSOR

DAYLIGHT SENSOR

MULTIMEDIA BOX. PROVIDE DEVICE BOX AT 60" ABOVE FINISHED FLOOR WITH DUPLEX RECEPTACLE & (2) CAT6E PORTS. PROVIDE FACEPLATES AND (2) 1-1/4" CONDUITS STUBBED ABOVE CEILING, (1) W/ CAT6E CABLES RUN TO NEAREST IT CLOSET & (1) W/ PULL CORD FOR FUTURE HDMI. RECESS MOUNT BOX TYPICAL OF WIREMOLD EVOLUTION SERIES WITH CONCEALED CONDUITS IN EXISTING FRAMED WALLS AND ALL NEW WALLS. PROVIDE SURFACE MOUNT BOXES WITH DUAL CHANNEL SURFACE MOUNT RACEWAY (LEGRAND WIREMOLD 5400 SERIES) WHERE INSTALLED ON EXISTING MASONRY

WIRELESS ACCESS POINT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE AT CEILING DEVICE & RUN CABLING TO NEAREST DATA CLOSET

COMBINATION WALL MOUNTED CLOCK/SPEAKER UNIT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE TO DEVICE & RUN CABLING TO NEAREST DATA CLOSET

### ELECTRICAL NOTES:

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

REQUIRED FOR PROPER INSTALLATION OF WORK.

FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS

19. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.

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

- FOR DOUBLE INSULATED EQUIPMENT ONLY.
- GREEN/YELLOW MAY BE USED: - GREEN/YELLOW SHALL BE GREEN WITH ONE OR MORE YELLOW STRIPES. - GREEN = 50 TO 70%, YELLOW = 50 TO 30%. - GREEN/YELLOW IS THE ONLY COLOR INTERNATIONALLY ACCEPTED FOR

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

USE AS AN EQUIPMENT GROUNDING CONDUCTOR. - GREEN OR GREEN/YELLOW MUST ONLY BE USED FOR GROUNDING CONDUCTORS.

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

**EXISTING LOA** EXISTING LO

### 120/208V 3Ø 4W+G BUS RATING: 100A 40A MAIN CIRCUIT BREAKER CONDUCTORS CONNECTED LOAD CONNECTED LOAD CONDUCTORS ISTING LOAD **EXISTING WIRING EXISTING LOAD EXISTING WIRING** ISTING LOAD EXISTING WIRING SPAR (ISTING LOAD **EXISTING WIRING** (ISTING LOAD **EXISTING WIRING** SPAR XISTING LOAD SPAR EXISTING WIRING XISTING LOAD SPAR **FXISTING WIRING** (ISTING LOAD **EXISTING WIRING** SPAF EXTERIOR LIGHTING (2) #12 CU & (1) #12 GND. SPARE SPACE HP-1 & FCU-1 (2) #8 CU & (1) #10 GND. SPACE SPACE

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY,

CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

Existing Panelboard PP-EF1

GE A SERIES PANEL

CUTLER HAMMER PRL1a PANEL

120/208V 3Ø 4W+G

CONNECTED LOAD

ISTING LOAD

ISTING LOAD

KISTING LOAD

KISTING LOAD

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RECEPTACLES

**EXISTING WIRING EXISTING WIRING** - kVA TOTAL PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

E001 / Scale: None

Existing Panelboard LP-E

CONDUCTORS

**EXISTING WIRING** 

EXISTING WIRING

**EXISTING WIRING** 

**EXISTING WIRING** 

(2) #12 CU & (1) #12 GND

**FXISTING WIRING** 

EXISTING WIRING

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**EXISTING WIRING** 

CONDUCTORS

**EXISTING WIRING** 

(2) #12 CU & (1) #12 GND.

EXISTING WIRING

**EXISTING WIRING** 

(2) #12 CU & (1) #12 GND.

EXISTING WIRING

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CONNECTED LOAD

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RECEPTACLES

FIRE SHUTTER

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BID ADDENDUM #2 DESCRIPTION

44-13-01-06-0-002-013

187-2302.01

**ELECTRICAL** NOTES, LEGENDS, **SCHEDULES & DETAILS** 

# DATE

Drawn By:

Proj. #:

CSArch Proj. #:

Issued for Bid:

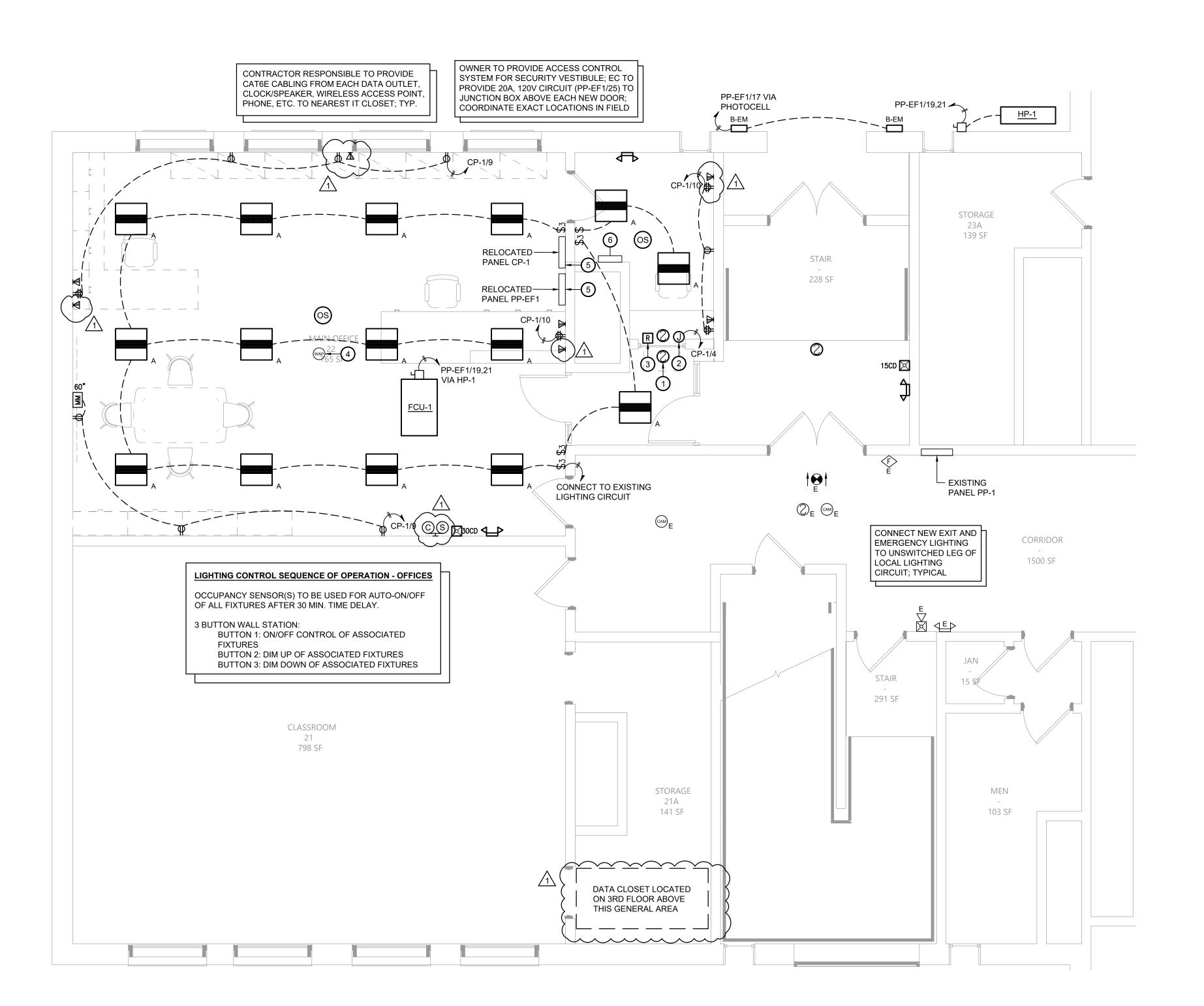
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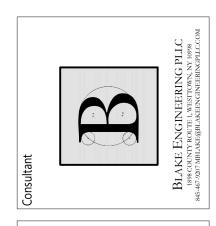
1 Electrical Plan
E111 Scale: 1/4" = 1'-0"

### Key Notes:

- PROVIDE SMOKE DETECTORS ON BOTH SIDES OF THE AUTOMATIC FIRE SHUTTER AT THE TRANSACTION WINDOW; CONNECT TO THE
- EXISTING BUILDING FIRE ALARM SYSTEM

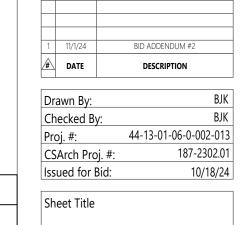
  PROVIDE NEW 120V ELECTRICAL CONNECTION FOR FIRE SHUTTER
- FIRE ALARM RELAY; FIRE SHUTTER TO CLOSE UPON ACTIVATION OF FIRE ALARM
- REINSTALL EXISTING WIRELESS ACCESS POINT; CONNECT TO EXISTING DATA CABLING
- EXISTING PANELBOARD TO BE REINSTALLED IN NEW LOCATION;
  EXTEND FEEDERS, BRANCH CIRCUITS AND CONDUITS TO NEW
  PANEL LOCATION, FIELD VERIFY EXACT ROUTING; PROVIDE
  JUNCTION BOXES & ADDITIONAL WIRING & CONDUITS AS NEEDED
- EXISTING JUNCTION BOX TO BE REINSTALLED IN NEW LOCATION;
  EXTEND WIRING AND CONDUITS TO NEW BOX LOCATION, FIELD
  VERIFY EXACT ROUTING; PROVIDE ADDITIONAL JUNCTION BOXES,
  WIRING & CONDUITS AS NEEDED

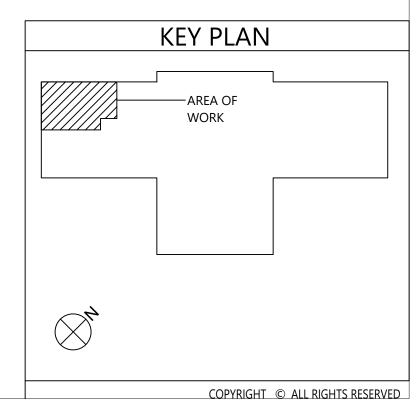
SARC



## VALLEY CENTRAL SCHOOL DISTRICT MAYBROOK ALTERNATIVE LEARNING CENTER 2023 CAPITAL PROJECT - PHASE 1







MAY
E111

CONSTRUCTION DOCUMENT

ELECTRICAL

PLAN

## VALLEY CENTRAL SCHOOL DISTRICT VALLEY CENTRAL HIGH SCHOOL 2023 CAPITAL PROJECT - PHASE 1

**ISSUED FOR BID:** 10/18/24

CSARCH - ARCHITECTS

BLAKE ENGINEERING, PLLC - M.E.P. ENGINEERS

PASSERO ASSOCIATES - SITE/CIVIL AND STRUCTURAL ENGINEERS

AECC ENVIRONMENTAL CONSULTING - HAZARDOUS MATERIALS DESIGNERS

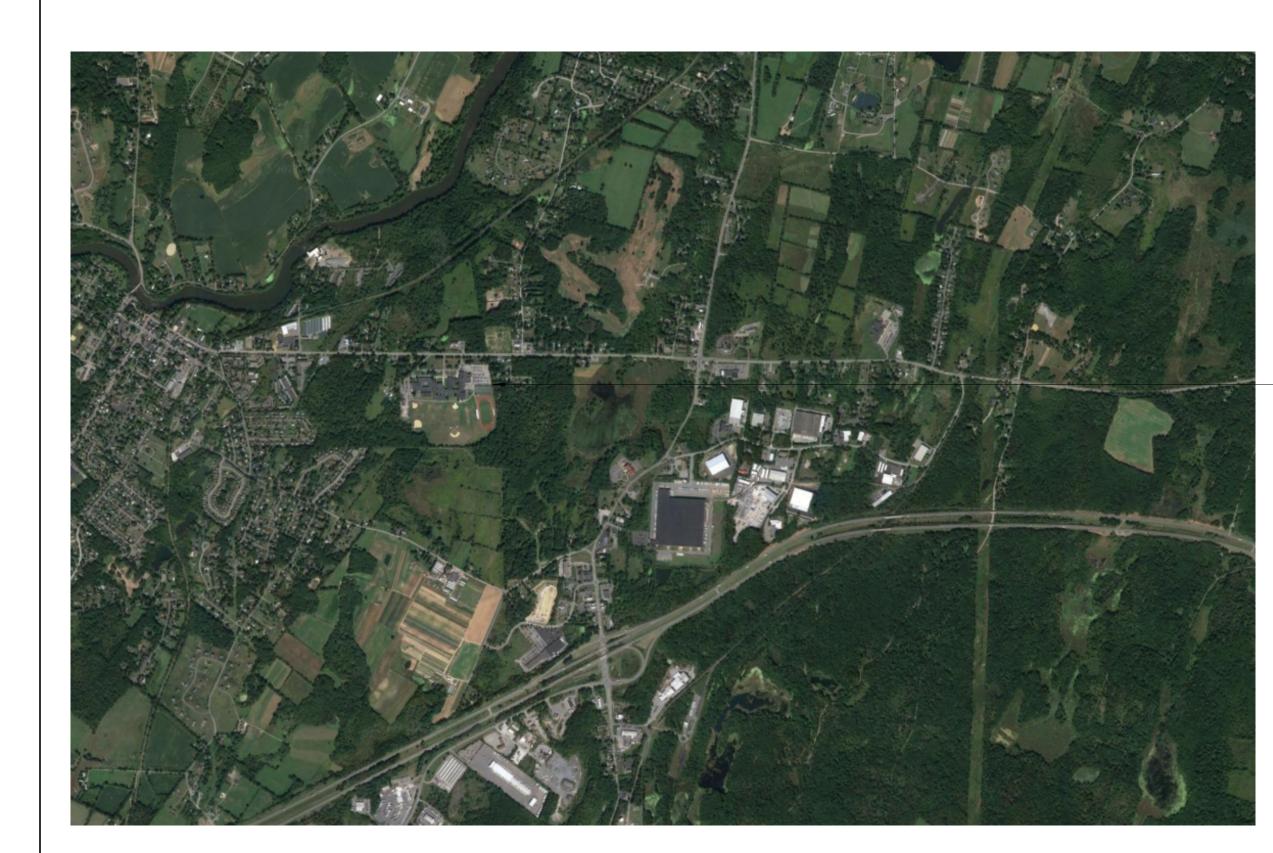
### STATE EDUCATION DEPARTMENT PROJECT CONTROL NUMBER:

2023 CAPITAL PROJECT - PHASE 1

44-13-01-06-0-015-033

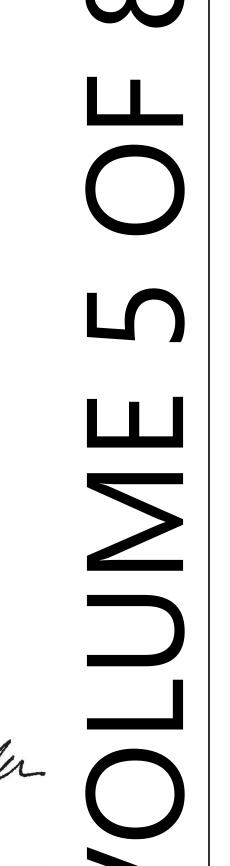
THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT.

CSArch PROJECT NO. 187-2302.01

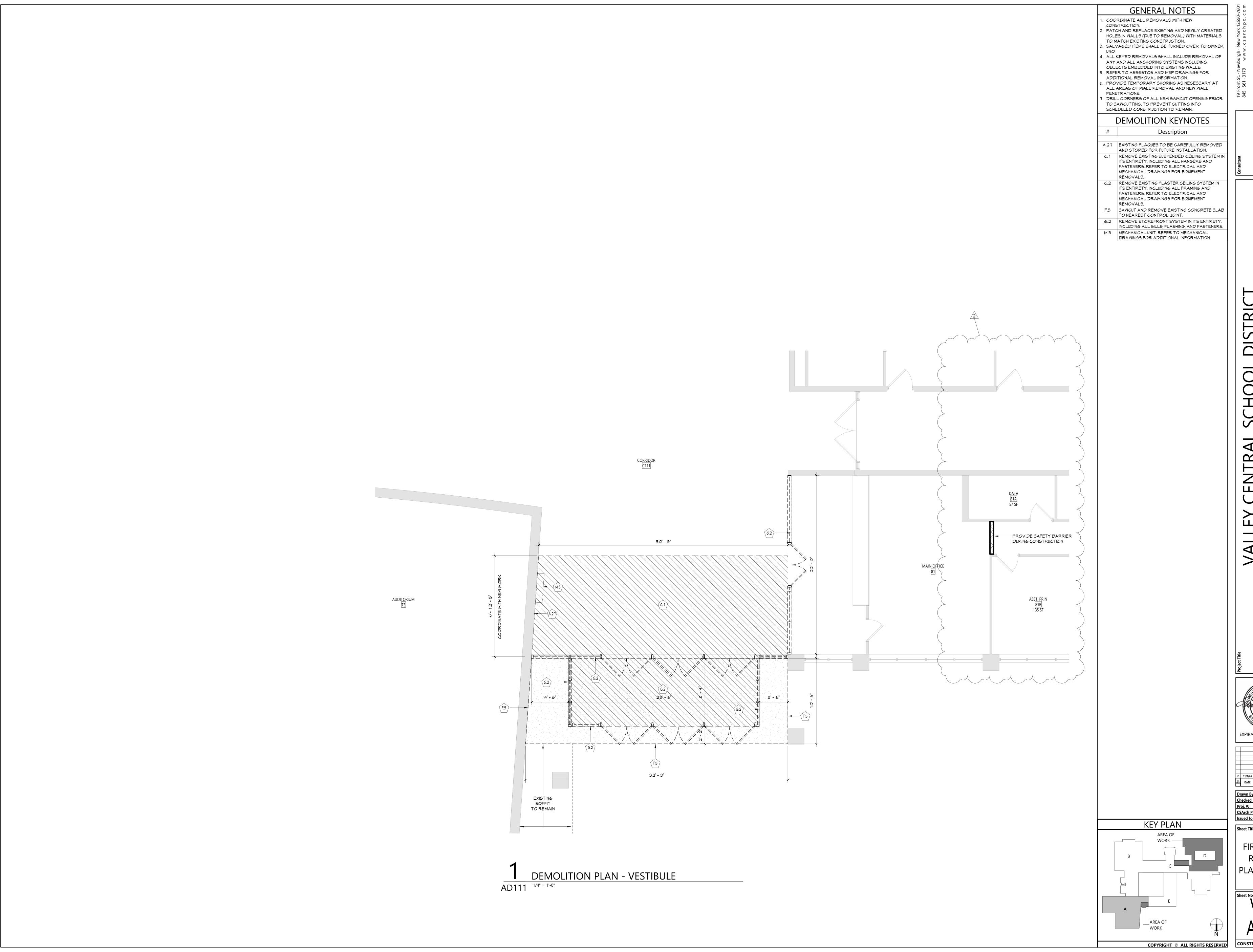


Valley Central High School 1175 NY-17K Montgomery, NY 12549

**DRAWING LIST GENERAL DRAWINGS** PLUMBING GENERAL DRAWINGS VCHS G000 COVER & SHEET INDEX VCHS P001 PLUMBING NOTES, SCHEDULE, LEGEND & DETAILS SYMBOLS, ABBREVIATIONS, MISC, & PARTITION TYPES PLUMBING DEMOLITION DRAWINGS BOILER ROOM PLUMBING DEMOLITION PLAN **PLUMBING DRAWINGS** VCHS P301 PLUMBING PLAN **LIFE SAFETY DRAWINGS** VCHS LS101 BASEMENT LIFE SAFETY PLAN **MECHANICAL GENERAL DRAWINGS** VCHS LS111 FIRST FLOOR LIFE SAFETY PLAN MECHANICAL NOTES, LEGEND, SCHEDULE & DETAILS VCHS LS112 SMOKE ZONE PLANS MECHANICAL SCHEDULES MECHANICAL SCHEDULES ARCHITECTURAL DEMOLITION DRAWINGS MECHANICAL DETAILS VCHS AD111 FIRST FLOOR REMOVAL PLAN - AREA A VCHS M005 TEMPERATURE CONTROLS NOTES, LEGEND & SCHEMATICS VCHS M006 MECHANICAL PIPING DIAGRAMS VCHS AD112 FIRST FLOOR REMOVAL PLAN - AREA C & D VCHS AD401 ROOF REMOVAL PLAN - AREA C & D VCHS AD802 REFLECTED CEILING REMOVAL PLAN - AREA C & D MECHANICAL DEMOLITION DRAWINGS MECHANICAL DEMOLITION PLAN ARCHITECTURAL DRAWINGS MECHANICAL DEMOLITON PLAN - PART 1 VCHS A101 BOILER ROOM PLANS AND DETAILS MECHANICAL DEMOLITON PLAN - PART 2 VCHS MD301 MECHANICAL DEMOLITION PLAN ENLARGED VESTIBULE PLAN, SECTION AND DETAILS AREA C & D - FIRST FLOOR NEW WORK PLAN EXTERIOR ELEVATIONS **MECHANICAL DRAWINGS** EXTERIOR ELEVATIONS SECURITY VESTIBULE MECHANICAL PLAN ROOF PLAN - AREA A, C, & D MECHANICAL PLAN - PART 1 REFLECTED CEILING PLAN & CEILING DETAIL - AREA A VCHS M212 MECHANICAL PLAN - PART 2 FIRST FLOOR REFLECTED CEILING PLAN - AREA C & D VCHS M301 MECHANICAL PLAN DOOR, WINDOW, & STOREFRONT DETAILS **ELECTRICAL GENERAL DRAWINGS** ELECTRICAL NOTES, LEGEND, DETAILS & SCHEDULES ARCHITECTURAL FINISH DRAWINGS VCHS AFOOL MATERIAL SCHEDULE **ELECTRICAL PANEL SCHEDULES** VCHS AFOO2 SIGNAGE TYPES AND \$CHEDULE VCHS AF112 AREA C & D - FLOOR FINISHES PLAN **ELECTRICAL DEMOLITION DRAWINGS** ELECTRICAL DEMOLITION PLAN ELECTRICAL DEMOLITION PLAN ELECTRICAL DEMOLITION PLAN **ELECTRICAL DRAWINGS** ELECTRICAL PLAN ELECTRICAL PLAN VCHS E301 ELECTRICAL PLAN

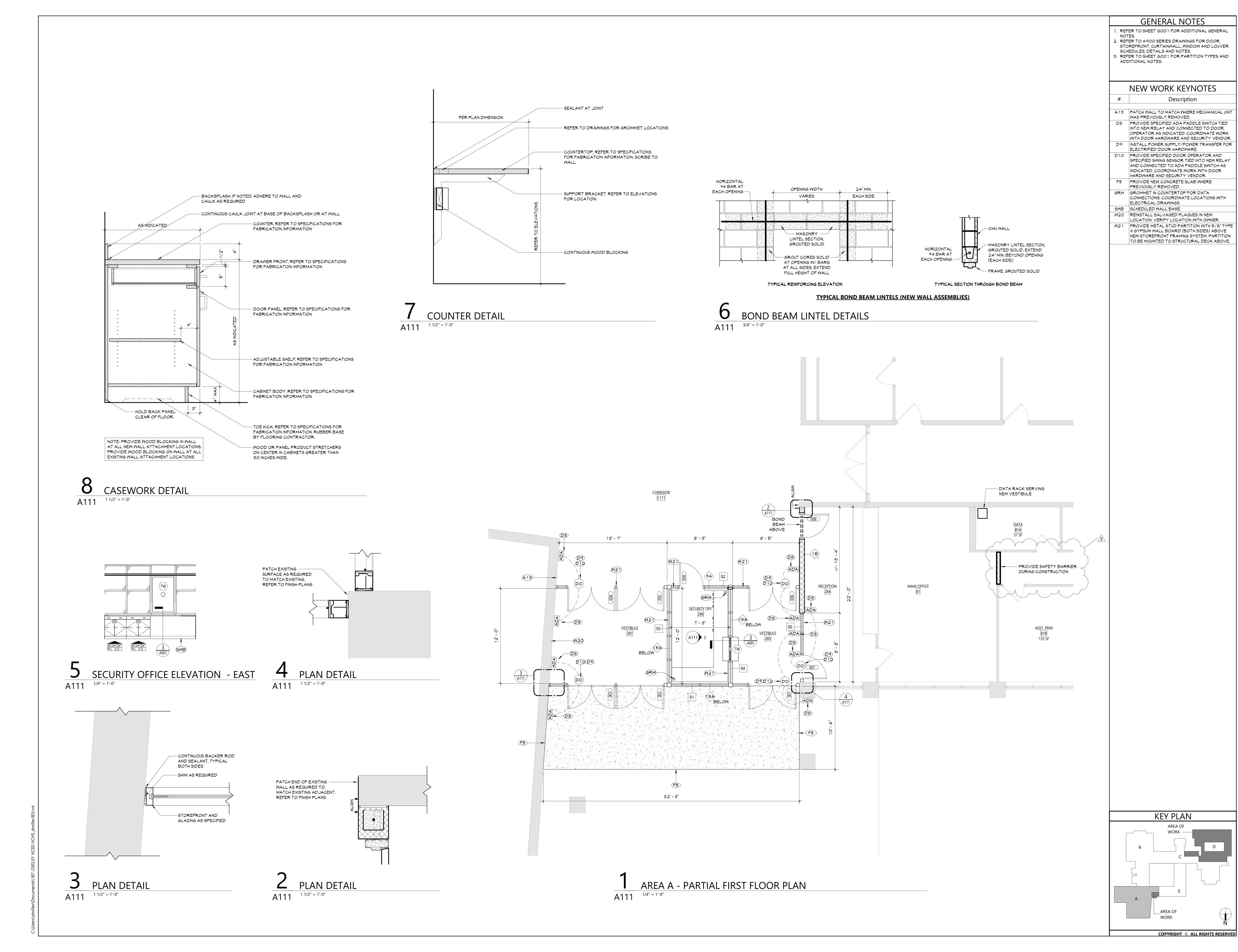






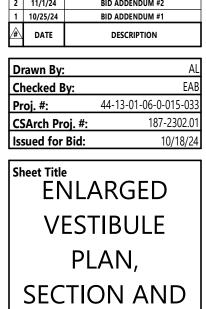


FIRST FLOOR REMOVAL PLAN - AREA A



LEY CENTRAL SCHOOL DISTRICT ALLEY CENTRAL HIGH SCHOOL 23 CAPITAL PROJECT - PHASE 1

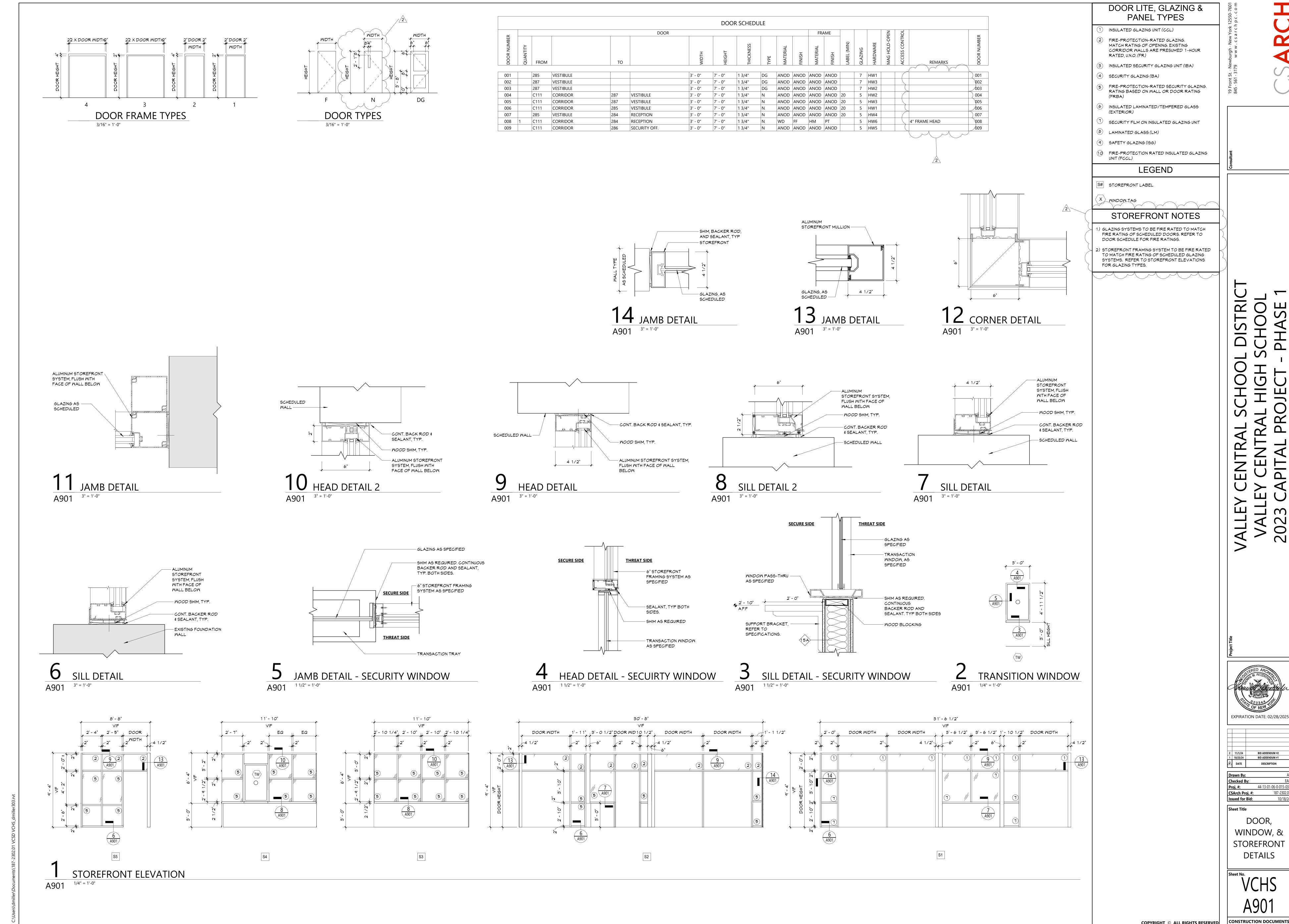
EXPIRATION DATE: 02/28/2025



DETAILS

OPERATE OF THE PROPERTY OF THE PROPER

CONSTRUCTION DOCUMENTS



EXPIRATION DATE: 02/28/2025 2 11/1/24 BID ADDENDUM #2
1 10/25/24 BID ADDENDUM #1

ADDED

DATE

DESCRIPTION

WINDOW, & STOREFRONT

SIGNAGE
TYPES AND
SCHEDULE

Sheet No.

VCHS

AF002

CONSTRUCTION DOCUMENTS

ROOM SIGNAGE SCHEDULE

ROOM NUMBER ROOM NAME SIGNAGE TYPE QUANTITY REMARKS

81 MAIN OFFICE K1 2 FIRST FLOOR
285 VESTIBULE K1 2 FIRST FLOOR
286 SECURITY OFF. K1 1 FIRST FLOOR

1 FIRST FLOOR

NOTES:

1) REFER TO PANEL SIGNAGE ELEVATIONS FOR SIGNAGE TYPES.

VESTIBULE

2) REFER TO SPECIFICATION SECTION 101423 - "INTERIOR PANEL SIGNAGE" FOR ADDITIONAL INFORMATION.
3) ALL EXISTING PANEL SIGNAGE FOR ROOMS NOTED ABOVE SHALL BE REMOVED AND REPLACED WITH NEW.
4) FINAL NUMBERING AND NAMING OF ROOMS TO BE DETERMINED BY OWNER DURING THE SUBMITTAL AND SHOP DRAWING REVIEW.

TOTAL MINIMUM BORDER
(NO LETTERING OR GAPHIC), TYPICAL ALL
SIDES

LINE 1

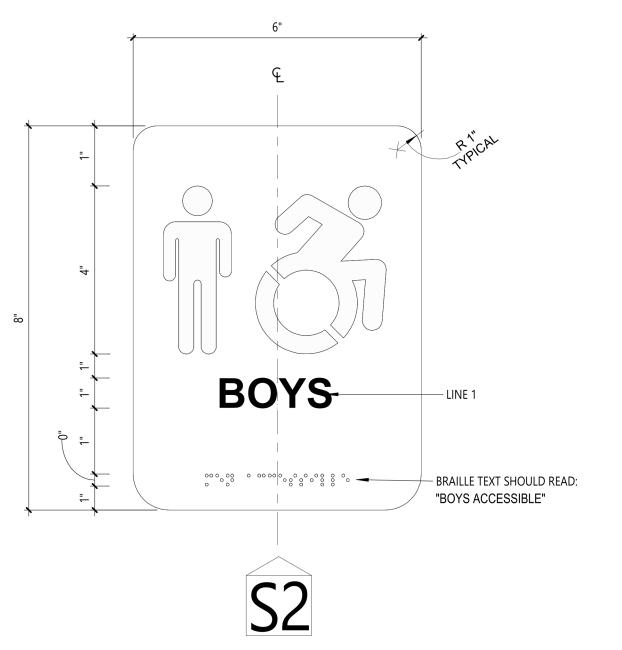
LINE 2

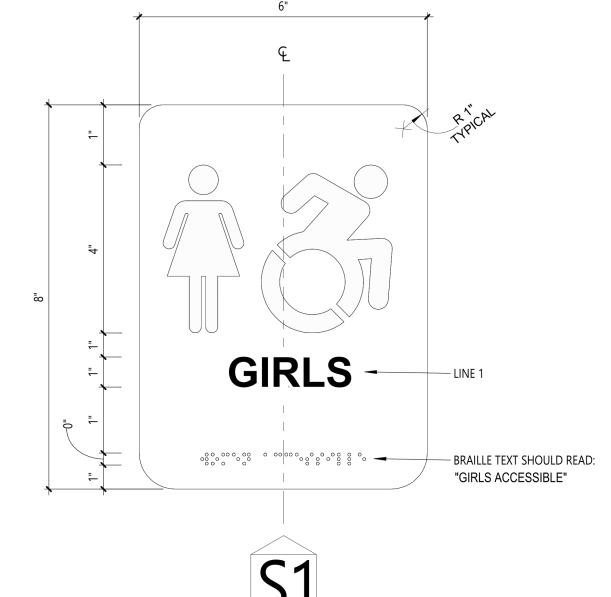
LINE 2

LINE 3

BRAILLE TEXT

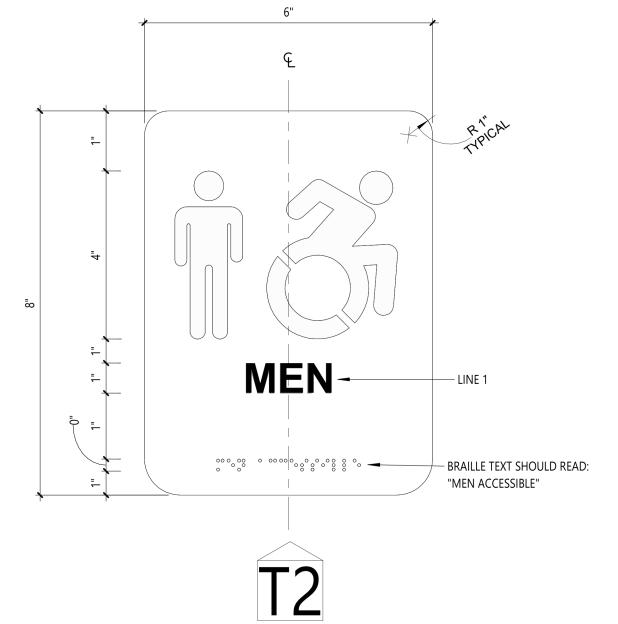
BRAILLE TEXT SHOULD READ. "ALL GENDER RESTROOM ACCESSIBLE"



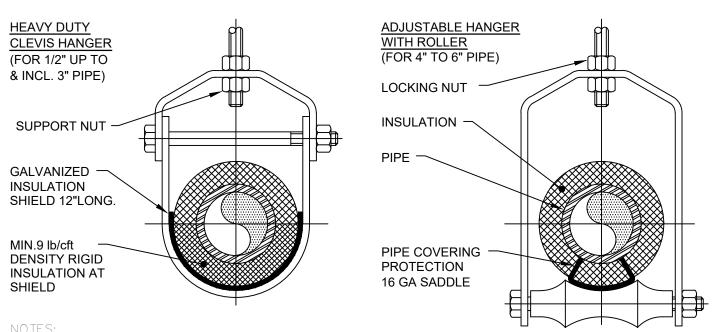


WOMEN-

"WOMEN ACCESSIBLE"



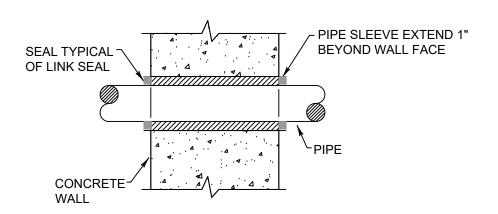




1. PIPE 8" AND LARGER SHALL HAVE ROLLER SUPPORTED WITH DUAL RODS.
 2. FOR CHW SERVICE OVER 3" REPLACE SADDLE WITH 12" LONG 14 GA SHIELD WITH RIGID INSULATION BETWEEN PIPE AND SHIELD.

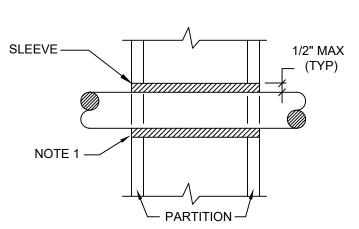
PIPE Ø (IN.)	MAX. S	MIN. ROD SIZE		
	STEEL PIPE	COPPER PIPE	CPVC	(IN.)
1/2 THRU 1	7	5	5	3/8
1-1/2 THRU 2	9	8	6	3/8
2-1/2	11	9	7.5	1/2
3	12	10	7.5	1/2
4	14	12	8.5	5/8
6	17	14	9	3/4
8	19	16	10	7/8
10	22	18	10.5	7/8





Exterior Wall Pipe Penetrations

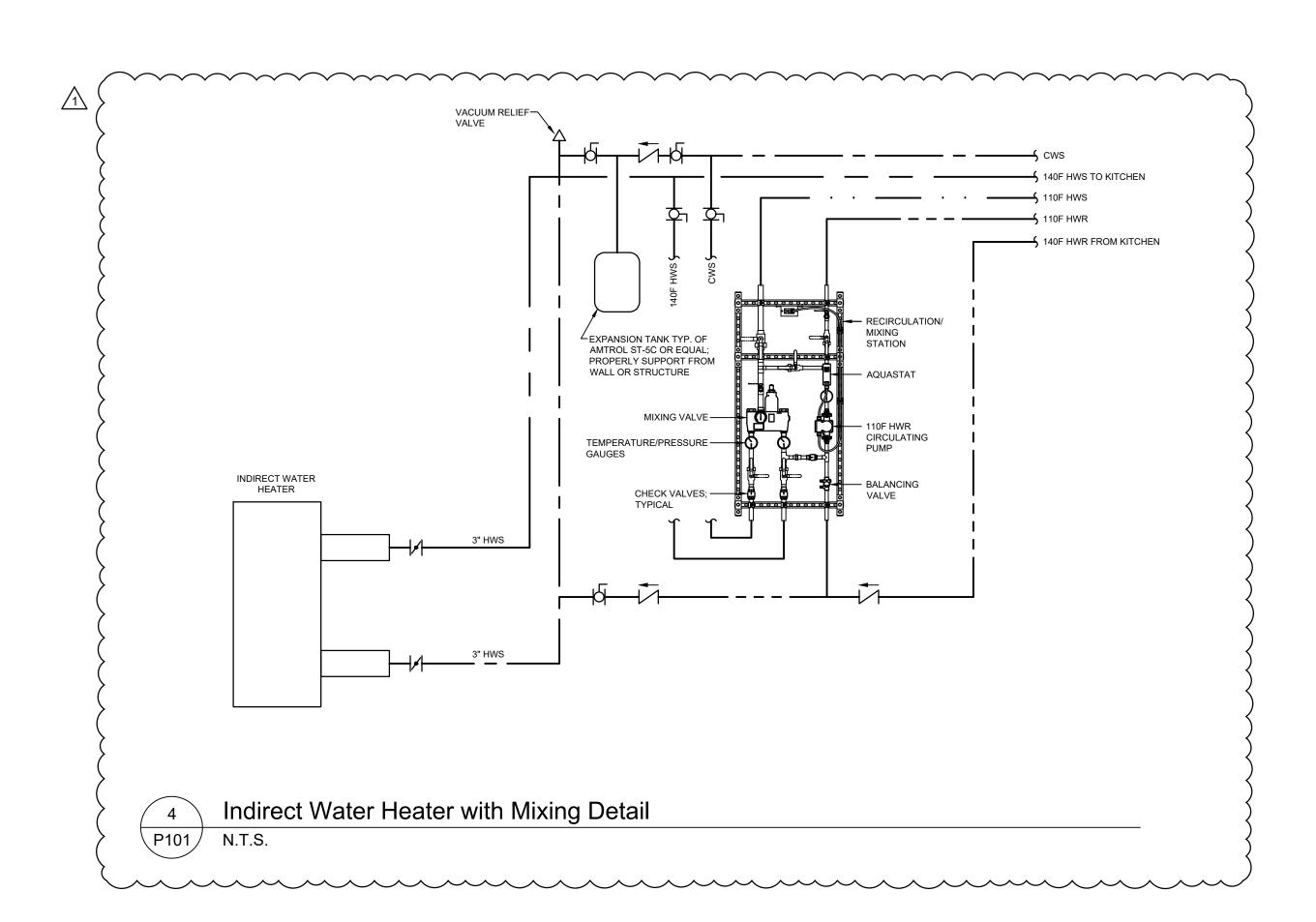
N.T.S.



1. AT FIRE RATED PARTITIONS, ADD ADDITIONAL LAYER OF FIRE SAFING INSULATION AROUND PENETRATION SO AS TO FILL CAVITY.

2. DUCT AND PIPE PENETRATIONS THRU CORRIDOR WALLS ABOVE THE CEILING ARE TO BE FIRE STOPPED AROUND THE PENETRATION.





Plumbing Legend	d:
	DOMESTIC COLD WATER SUPPLY
· · ·	110 °F DOMESTIC HOT WATER SUPPLY
	140 °F DOMESTIC HOT WATER SUPPLY
	HOT WATER RETURN
	SANITARY SEWER, ABOVE GRADE
	SANITARY SEWER, BELOW GRADE
GV GV	GREASE WASTE, BELOW GRADE
	PLUMBING VENT
-SD	STORM WATER, ABOVE GRADE
— sp— —	STORM WATER, BELOW GRADE
_	NATURAL GAS PIPING
	DIRECTION OF PIPE SLOPE (DOWN)
$\rightarrow$	CONCENTRIC REDUCER OR INCREASE
	ECCENTRIC REDUCER
<u></u>	TOP CONNECTION, 45° OR 90°
<del></del>	BOTTOM CONNECTION, 45° OR 90°
	SIDE CONNECTION
	CAPPED OUTLET
Э	RISE OR DROP IN PIPE
——————————————————————————————————————	UNION
0	PIPE UP
C	PIPE DOWN
	POINT OF CONNECTION BETWEEN NEV AND EXISTING WORK
<del>\</del>	STRAINER
]-c	HOSE BIB
——————————————————————————————————————	SOLENOID VALVE
$\longrightarrow$	GATE VALVE
$-\!$	GLOBE VALVE
$\overline{}$	CHECK VALVE
	BUTTERFLY VALVE
——	FULL PORT BALL VALVE
 ►	PRESSURE GAUGE
————	PRESSURE REDUCING VALVE (PRV)
H_	DRAIN VALVE

FLEXIBLE PIPING CONNECTION

CLEANOUT

WALL CLEANOUT

FLOOR CLEANOUT

CLEANOUT TO GRADE

DOUBLE CLEANOUT TO GRADE

PLUMBING FIXTURE MARK

C.O.

W.C.O.

F.C.O.

C.O.T.G.

D.C.O.T.G.

(P-X)

Plumbing Notes:

THE CONTRACT.

<u> P</u>	lumbing Notes:
1.	ALL MATERIALS AND EQUIPMENT ARE TO BE NEW, UNUSED, AND FREE FROM DEFECTS
	OF ANY KIND. THE BASIS OF QUALITY SHALL BE THE LATEST REVISION OF ASTM, ANSI,
	OR OTHER ACCEPTABLE STANDARDS.

- 2. THESE DRAWINGS ARE DIAGRAMMATIC, AND INDICATE GENERAL ARRANGEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE REVIEWED THE SITE FOR HIS WORK PRIOR TO HAVING SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF
- 3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES.
- 4. ALL CUTTING, PATCHING, FIRE-STOPPING, AND SURFACE RESTORATION IN
- CONNECTION WITH THIS TRADE SHALL BE COMPLETED BY THIS CONTRACTOR.
   THIS CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS, AND OBTAIN ALL PERMITS, INSPECTIONS AND CERTIFICATES OF APPROVAL

REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT.

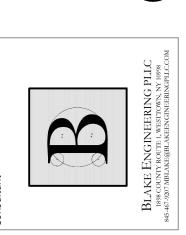
- 6. ALL WORK IN ASSOCIATION WITH THIS CONTRACT SHALL BE COMPLETED IN STRICT COMPLIANCE WITH THE 2020 BUILDING CODE OF NEW YORK STATE, 2020 PLUMBING CODE OF NEW YORK STATE, 2020 FUEL GAS CODE OF NEW YORK STATE & 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.
- 7. WHERE THE PROJECT INVOLVES A GAS SERVICE, THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, APPLICATIONS AND FEES OF ALL WORK ASSOCIATED WITH THE LOCAL GAS UTILITY COMPANY. ALL WORK INVOLVING THE GAS UTILITY COMPANY SHALL BE COMPLETED IN ACCORDANCE WITH THEIR REGULATIONS AND GUIDELINES.
- 8. ALL DOMESTIC COLD AND HOT WATER PIPING AND FITTINGS ARE TO BE INSULATED WITH 1" THICK RIGID ONE-PIECE MOLDED SECTIONAL FIBERGLASS PIPE COVERING WITH UNIVERSAL JACKET. ALL JOINTS ARE TO BE COMPLETELY SEALED A MINIMUM OF 6" BEYOND JOINT ENDS.
- 9. ALL PIPING SHALL BE PROPERLY SUPPORTED AND ROUTED PARALLEL OR PERPENDICULAR TO BUILDING WALLS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK.
- 10. ALL EXPOSED PIPING, FITTINGS, TRAPS, ESCUTCHEONS, VALVES, ETC. SHALL BE CHROME PLATED.
- 11. SLOPE SANITARY DRAINAGE PIPING 2" DIAMETER AND SMALLER NOT LESS THAN 1/4" PER FOOT. SLOPE SANITARY DRAINAGE PIPING OVER 2" DIAMETER NOT LESS THAN 1/8" PER FOOT.
- 12. INSTALL A CLEANOUT AT THE BASE OF EACH SOIL STACK, AT EACH CHANGE IN DIRECTION, AT INTERVALS NOT OVER 50 FEET AND ELSEWHERE AS SHOWN ON DRAWINGS OR REQUIRED BY CODE.
- 13. PROVIDE EXPOSED PIPING WITH CHROME PLATED CAST BRASS ESCUTCHEON WITH SET SCREW WHERE PENETRATING FLOORS, CEILINGS, WALLS OR PARTITIONS.
- 14. TEST PIPING AND PROVE TIGHT FOR AT LEAST TWO HOURS IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND/OR AS SPECIFIED. TEST SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER AND LOCAL INSPECTOR. TEST SHALL BE REPEATED IF NECESSARY UNTIL FINAL APPROVAL OF SYSTEM IS OBTAINED.
- 14.1. WATER & GAS PIPING TO BE AIR-PRESSURE TESTED TO 1-1/2 TIMES MAXIMUM WORKING PRESSURE.
- 14.2. DRAINAGE, WASTE & VENT PIPING TO BE TESTED BY FILLING THE SYSTEM WITH WATER TO 10-FEET ABOVE HIGHEST POINT.
- 15. SUPPORT HORIZONTAL PIPING UTILIZING A SPACING PER PIPING MANUFACTURER'S REQUIREMENTS.
- 16. INSTALL VALVES ON THE ENTIRE DISTRIBUTION SYSTEM, SO LOCATED AS TO GIVE COMPLETE CONTROL TO ALL FIXTURES AND EQUIPMENT.
- 17. INSTALL DRAIN VALVES AT BASE OF ALL RISERS AND AT LOW POINTS OF PIPING SYSTEM.
- 18. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, PIPING, FIXTURES, AND SYSTEMS INSTALLED UNDER THIS CONTRACT TO ENSURE PROPER OPERATION PRIOR
- TO FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.

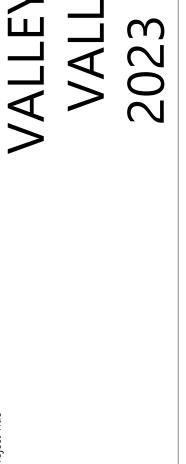
  19. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED
- CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.

  20. CONTRACTOR IS RESPONSIBLE TO CREATE AND SUBMIT RED-LINE "AS-BUILT" PLANS TO THE ENGINEER AT THE END OF THE PROJECT. AS-BUILT PLANS SHALL ACCURATELY

REPRESENT THE SYSTEMS AS THEY WERE INSTALLED.

LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE





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1 11/1/24 BID ADDENDUM #2

A DATE DESCRIPTION

Drawn By: BJK
Checked By: BJK

 Drawn By:
 BJK

 Checked By:
 BJK

 Proj. #:
 44-13-01-06-0-015-033

 CSArch Proj. #:
 187-2302.01

 Issued for Bid:
 10/18/24

PLUMBING NOTES, SCHEDULE,

LEGEND &

**DETAILS** 

Sheet No.

VCHS

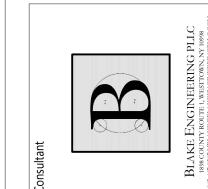
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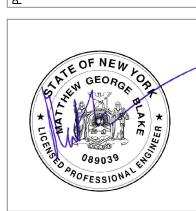
Boiler Room Plumbing Demolition Plan

PD301 Scale: 1/4" = 1'-0"

### Key Notes:

- EXISTING STEAM BOILER TO BE REMOVED BY MECHANICAL CONTRACTOR
- EXISTING GAS FIRED DOMESTIC WATER HEATER TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF INCLUDING ANY ASSOCIATED PIPING, VENTING, HANGERS, SUPPORTS, ACCESSORIES, ETC.
- EXISTING DOMESTIC WATER STORAGE TANK TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF INCLUDING ANY ASSOCIATED PIPING, HANGERS, SUPPORTS, ACCESSORIES,
- EXISTING EYEWASH STATION TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF INCLUDING ANY ASSOCIATED PIPING, HANGERS, SUPPORTS, ACCESSORIES, ETC.
- EXISTING NATURAL GAS PIPING TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF INCLUDING ANY ASSOCIATED VALVES, REGULATORS, HANGERS, SUPPORTS, ACCESSORIES, ETC.





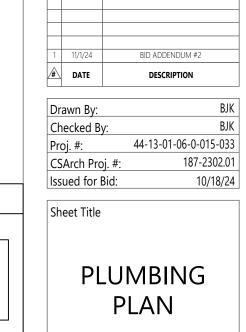
Checked By:
Proj. #: 44
CSArch Proj. #: 44-13-01-06-0-015-033 #: 187-2302.01 Issued for Bid:

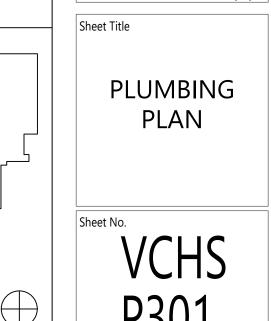
Sheet Title **BOILER ROOM** 

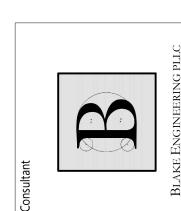
PLUMBING DEMOLITION PLAN

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KEY PLAN







Consultant	BLAKE ENGINEERING PLLC 1898 COUNTY ROUTE 1, WESTTOWN, NY 10998

AL SCHOOL DISTRICT FRAL HIGH SCHOOL PROJECT - PHASE 1

1-3



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$\dashv$		
	11/1/24	BID ADDENDUM #2

1	11/1/24	BID ADDENDUM #2
#	DATE	DESCRIPTION
Dr	awn By:	ВЈ
Cł	necked By:	: BJI
Pr	oj. #:	44-13-01-06-0-015-03
CS	SArch Proj	. #: 187-2302.0
lss	sued for B	id: 10/18/2

Sheet Title

MECHANICAL SCHEDULES

	<b>V</b> (	]	15
	M	0(	)3
CONS	TRUCTIO	ON D	OCUMENTS

QUIPMENT TAG EF-91	MANUFACTURER		I									
		MODEL	SERVICE	FAN C.F.M.	R.P.M.	EXTERNAL STATI PRESSURE	POWER (HP)	FLA	OTOR	PHASE	HZ.	REMARKS
	GREENHECK	G-133-VG	CLASSROOM	1,250	818	0.25	1/4	3.7	120	1	HZ. 60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIG
EF-112	GREENHECK	G-090-VG	91 CLASSROOM	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIG
EF-131	GREENHECK	G-133-VG	112 CLASSROOM	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIC
EF-132	GREENHECK	G-090-VG	131 CLASSROOM	1,250	818	0.25	1/4	3.7	120	1	60	INSULATED ROOF CURB & BACKDRAFT DAMPE PROVIDE W/ FAN SPEED CONTROLLER, 24" HIG
			132 CLASSROOM	1,250						1		INSULATED ROOF CURB & BACKDRAFT DAMPE PROVIDE W/ FAN SPEED CONTROLLER, 24" HIG
EF-133	GREENHECK	G-143-VG	133 CLASSROOM	·	818	0.25	1/4	3.7	120	1	60	INSULATED ROOF CURB & BACKDRAFT DAMPE PROVIDE W/ FAN SPEED CONTROLLER, 24" HIG
EF-134A	GREENHECK	G-143-VG	134A	1,250	818	0.25	1/4	3.7	120	1	60	INSULATED ROOF CURB & BACKDRAFT DAMPE
EF-134B	GREENHECK	G-143-VG	CLASSROOM 134B	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIG INSULATED ROOF CURB & BACKDRAFT DAMPE
EF-135	GREENHECK	G-143-VG	CLASSROOM 135	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HIG INSULATED ROOF CURB & BACKDRAFT DAMPE
EF-136	GREENHECK	G-143-VG	CLASSROOM 136	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMPI
EF-137	GREENHECK	G-143-VG	CLASSROOM 137	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMPI
EF-138	GREENHECK	G-143-VG	CLASSROOM 138	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMPI
EF-139A	GREENHECK	G-143-VG	CLASSROOM 139A	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMPI
EF-139B	GREENHECK	G-143-VG	CLASSROOM 139B	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HII INSULATED ROOF CURB & BACKDRAFT DAMPI
EF-140A	GREENHECK	G-143-VG	CLASSROOM 140A	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMPI
EF-140B	GREENHECK	G-143-VG	CLASSROOM 140B	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMP
EF-141A	GREENHECK	G-143-VG	CLASSROOM 141A	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMP
EF-141B	GREENHECK	G-143-VG	CLASSROOM 141B	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMPI
EF-142A	GREENHECK	G-143-VG	CLASSROOM 142A	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMP
EF-142B	GREENHECK	G-143-VG	CLASSROOM 142B	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HII INSULATED ROOF CURB & BACKDRAFT DAMPI
EF-143	GREENHECK	G-143-VG	CLASSROOM 143	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMP
EF-144	GREENHECK	G-143-VG	CLASSROOM 144	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMP
EF-145	GREENHECK	G-143-VG	CLASSROOM	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI INSULATED ROOF CURB & BACKDRAFT DAMP
EF-146	GREENHECK	G-143-VG	145 CLASSROOM	1,250	818	0.25	1/4	3.7	120	1	60	PROVIDE W/ FAN SPEED CONTROLLER, 24" HI
EF-158	GREENHECK	G-143-VG	146 CLASSROOM	1,250	818	0.25	1/4	3.7	120	1	60	INSULATED ROOF CURB & BACKDRAFT DAMP PROVIDE W/ FAN SPEED CONTROLLER, 24" HI
EF-159	GREENHECK	G-143-VG G-143-VG	158 CLASSROOM	1,250	818	0.25	1/4	3.7	120	1	60	INSULATED ROOF CURB & BACKDRAFT DAMP PROVIDE W/ FAN SPEED CONTROLLER, 24" HI

				COND	ENSING	BOILER	SCHEI	DULE
EQUIPMENT	MANUEACTURER		INPUT	(MBH)	THERMAL	GROSS	TURNDOWN	REMARKS
TAG	MANUFACTURER	MODEL	MIN.	MAX.	EFFICIENCY	OUTPUT (MBH)	RATIO	REIVIARNS
B-1	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1
B-2	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1
B-3	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1
B-4	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1
B-5	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1
B-6	LOCHINVAR	FB 3001	150	3000	96.0%	2883	20:1	FURNISH W/ ADD'L HIGH LIMIT & LOW WATER CUTOFF; BOILERS TO BE UL-795 LISTED & IN COMPLIANCE WITH ASME CSD-1

	AIR GRILLE/DIFFUSER SCHEDULE														
EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	AIR DEVICE TYPE	AIRFLO MIN.		MAX AIR PRESS. DROP (IN. W.C.)	MOUNTING	PANEL/FRAME SIZE (IN.)	NECK SIZE (IN.)	MAX NC	DAMPER	FINISH	NOTES		
D-1	KRUEGER	PLQ-10-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	301	450	0.10	LAY-IN	24"x24"	10"Ø	20	OBD	WHITE	FURNISH W/ INSULATED BACKPAN		
D-2	KRUEGER	880-H-48-24-F22-NONE-00-01-00-44	DOUBLE DEFLECTION SUPPLY GRILLE	0	3500	0.10	WALL MTD.	50"x26"	48"x24"	20	OBD	WHITE	-		
D-3	KRUEGER	5DMGDR-H-14-8-20-01-81	DUCT MOUNTED SUPPLY GRILLE	0	200	0.10	DUCT MTD.	16"x10"	14"x8"	20	OBD	CLEAR ANOD.	FURNISH W/ DAMPER/EXTRACTOR		
R-1	KRUEGER	S80P-20x20-F23-24x24-00-00-00-44	PERFORATED FACE RETURN GRILLE	0	1,600	0.10	LAY-IN	24"x24"	20"x20"	25	-	WHITE	FURNISH & INSTALL FULL-SIZE SHEET METAL PLENUM BOX ON REAR OF GRILLE, PAINT INSIDE FLAT BLACK		
R-2	KRUEGER	S80H-36x12-F22-NONE-00-00-01	35° DEFLECTION RETURN GRILLE	0	1,300	0.10	DUCT MTD.	38"x14"	36"x12"	25	-	MILL	FURNISH & INSTALL FULL-SIZE SHEET METAL PLENUM BOX ON REAR OF GRILLE, PAINT INSIDE FLAT BLACK		

					VE	NTILA	ATION	SCHED	DULE						
SYSTEM	SPACE SERVED	SPACE TYPE	SPACE AREA (SQ. FT.)	OCCUPANTS PER 1000 SQ. FT.	# OF OCCUPANTS (NOTE 1)	CFM PER PERSON	CFM PER SQ. FT.	CALCULATED VENTILATION RATE (CFM)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ADJUSTED VENTILATION RATE (CFM)	PROVIDED VENTILATION RATE (CFM)	EA CFM PER FIXTURE	EA CFM PER SQ. FT.	MIN. EA RATE (CFM)	EA PROVIDED (CFM)
UV-91	CLASSROOM 91	LIBRARY	715	35	30	10	0.12	386	0.9	429	440	-	-	-	450
UV-112	CLASSROOM 112	CLASSROOM	720	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-130	CLASSROOM 130	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-131	CLASSROOM 131	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-132	CLASSROOM 132	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-133	CLASSROOM 133	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-134A	CLASSROOM 134A	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-134B	CLASSROOM 134B	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-135	CLASSROOM 135	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-136	CLASSROOM 136	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-137	CLASSROOM 137	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-138	CLASSROOM 138	CLASSROOM	780	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-139A	CLASSROOM 139A	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-139B	CLASSROOM 139B	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-140A	CLASSROOM 140A	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-140B	CLASSROOM 140B	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-141A	CLASSROOM 141A	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-141B	CLASSROOM 141B	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-142A	CLASSROOM 142A	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-142B	CLASSROOM 142B	CLASSROOM	398	35	15	10	0.12	198	0.9	220	210	-	-	-	225
UV-143	CLASSROOM 143	CLASSROOM	782	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-144	CLASSROOM 144	CLASSROOM	782	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-145	CLASSROOM 145	CLASSROOM	782	35	30	10	0.12	394	0.9	437	440	-	-	-	450
UV-146	CLASSROOM 146	CLASSROOM	782	35	30	10	0.18	394	0.9	437	440	-	-	-	450
10/450	BOYS LOCKER ROOM	LOCKER ROOMS	1303	0	0	0	0	0	0	0	050	-	0.5	650	050
UV-158	BOYS LOCKER ROOM OFFICE	OFFICE SAPCE	169	5	1	5	0.06	15	0.8	19	650 -	-	-	-	650
	GIRLS LOCKER ROOM	LOCKER ROOMS	1303	0	0	0	0	0	0	0	050	-	0.5	650	252
UV-159	GIRLS LOCKER ROOM OFFICE	OFFICE SPACE	169	5	1	5	0.06	15	0.8	19	650 -	-	-	-	650

NOTES:

1. QUANTITY OF OCCUPANTS FOR STANDARD CLASSROOMS ARE 30 OCCUPANTS BASED ON NYSED STATISTICAL DATA. ALL OTHER OCCUPANCIES ARE BASED UPON OCCUPANT DENSITIES FROM THE 2015 INTERNATIONAL MECHANICAL CODE

					]	PUMP S	CHE	DULE								
EQUIPMENT	MANUFACTURER (OR ACCEPT.	MODEL	LOCATION	AREA SERVED	PUMP TYPE		CIRCUL	ATING FLUID				MOTOR				NOTE
TAG	EQUAL)	MODEL	LOCATION	AREA SERVED	PUMPTIPE	FLUID	G.P.M.	HEAD (FT.)	TEMP. (°F)	NOM. H.P.	VOLT.	PHASE	HZ.	RPM	FLA	NOTE
BP-1	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #1	IN-LINE	HOT WATER	144	32	180	1.5	208	1	60	1760	6.7	1-3
BP-2	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #2	IN-LINE	HOT WATER	144	32	180	1.5	208	1	60	1760	6.7	1-3
BP-3	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #3	IN-LINE	HOT WATER	144	32	180	1.5	208	1	60	1760	6.7	1-3
BP-4	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #4	IN-LINE	HOT WATER	144	32	180	1.5	208	1	60	1760	6.7	1-3
BP-5	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #5	IN-LINE	HOT WATER	144	32	180	1.5	208	1	60	1760	6.7	1-3
BP-6	GRUNDFOS	TPE3 65-150-S -A-G-A-BQQE	BOILER ROOM	BOILER #6	IN-LINE	HOT WATER		32	180	1.5	208	1	60	1760	6.7	1-3
P-1/2/3	GRUNDFOS	DELTA HCU 3 NBS	BOILER	BUILDING	DAGE	HOT WATER		100	180	20 (3)	208	3	60	1760	165.6	1-3

BASE CHILLED MOUNTED WATER

IN-LINE HOT WATER 225

P-7 GRUNDFOS TPE3 80-180-S BOILER DOMESTIC WATER HEATER IN-LINE HOT WATER 225 25 180 3 208 3 60 1760 11 1-3

180

208

3 60 1760

$\sim$	
NC	OTES:
1.	CLOSE COUPLED IN-LINE CENTRIFUGAL PUMP W/ VARIABLE FREQUENCY CONTROLLED MOTOR & DIFFERENTIAL PRESSURE TRANSMITTER

DOMESTIC WATER HEATER

DELTA HCU 3 CRE BOILER 32-2-1 3x208V ROOM

TPE3 80-180-S BOILER
-A-G-A-BQQE ROOM

2. PROVIDE W/ SUCTION DIFFUSER 3. PROVIDE W/ MULTI-PURPOSE VALVE

4. INSULATE PUMP BODY & ALL ASSOCIATED PIPING, VALVES, ACCESSORIES 5. TRIPLEX SKID PACKAGE W/ (2) ACTIVE PUMPS & (1) BACKUP PUMP W/ FACTORY INSTALLED HEADERS & CONTROLS

P-4/5/6

OUTSIDE
AIR

SP AO

SP AO

SP AO

SYSTEM AND NIGHT-TIME SETBACK HEATING;
RETURN
AIR

FILTER

DX

COMPRESSORS & CONTROL SEQUENCE TO UTILIZE
FINNED TUBE AS SECOND STAGE HEATING TO VRF
SYSTEM AND NIGHT-TIME SETBACK HEATING;
REPLACE CONTROL VALVE IN CRAWL SPACE

SUPPLY
AIR

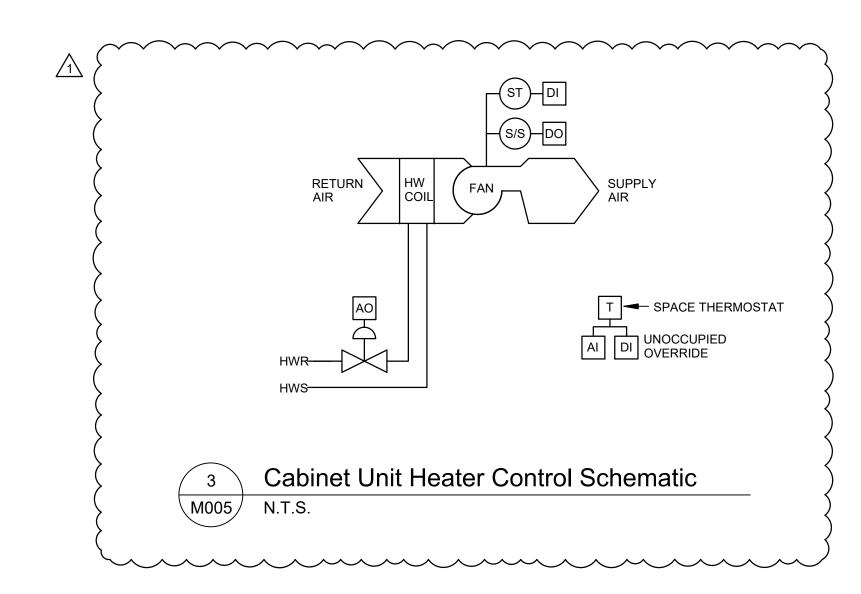
T SPACE THERMOSTAT

COMPRESSORS & CONTROLLER

UNOCCUPIED
OVERRIDE

Security Office Fan Coil Control Schematic
N.T.S.

Unit Ventilator with Exhaust Fan Control Schematic



DDC Temperature Control Notes:

1. HVAC CONTROLS SHALL BE FURNISHED & INSTALLED BY THE OWNER TO MATCH THE EXISTING BUILDING AUTOMATION SYSTEM IN EACH BUILDING (COMBINATION OF TRANE & SIEMENS AT THE HIGH SCHOOL). ALL HARDWARE, WIRING AND PROGRAMMING TO BE PROVIDED BY OWNER. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER'S VENDOR THROUGHOUT THE PROJECT TO SUPPORT INSTALLATION, TESTING AND COMMISSIONING. MECHANICAL CONTRACTOR TO INSTALL ALL DEVICES MOUNTED IN OR ON THE PIPING AND/OR DUCTWORK INCLUDING BUT NOT LIMITED TO HYDRONIC CONTROL VALVES, TEMPERATURE SENSORS, FLOW SENSORS, ETC. MECHANICAL CONTRACTOR TO PROVIDE ALL NECESSARY PORTS/THERMOWELLS FOR SENSORS, GAUGES, ETC. COORDINATE WITH OWNER'S VENDOR FOR QUANTITY AND LOCATIONS.

2. OWNER SHALL EXPAND EXISTING BUILDING AUTOMATION SYSTEM TO PROVIDE THE CONTROL SEQUENCES SPECIFIED ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE SYSTEM SHALL PROVIDE CONTROL AND MONITORING OF THE EQUIPMENT INDICATED.

3. OWNER SHALL PROVIDE CONTROLLERS AND COMMUNICATIONS INFRASTRUCTURE TO MATCH EXISTING CAMPUS-WIDE BUILDING AUTOMATION SYSTEM. PROVIDE SEAMLESS INTEGRATION WITH EXISTING CONTROL NETWORK AND USER INTERFACES. NETWORK GATEWAYS AND PROTOCOL INTERFACE EQUIPMENT ARE NOT ACCEPTABLE UNLESS OTHERWISE NOTED.

 OWNER SHALL PROVIDE INSTRUMENTATION, SENSORS, VALVES, DAMPERS, ACTUATORS AND WIRING AS REQUIRED TO PROVIDE SPECIFIED OPERATING SEQUENCES.

5. OWNER SHALL MODIFY EXISTING GRAPHIC USER INTERFACES TO INCLUDE ALL EQUIPMENT AND SYSTEMS INCLUDED IN THIS PROJECT.

6. OWNER SHALL REPLACE THE EXISTING BAS SERVER HARDWARE AND UPGRADE THE SOFTWARE TO THE LATEST VERSION OF WEB-ENABLED GRAPHICAL USER INTERFACE WITH A SEAMLESS INTEGRATION OF THE NEW AND EXISTING CONTROL POINTS.

7. OWNER SHALL BE RESPONSIBLE FOR POWER THAT IS NOT SHOWN ON THE ELECTRICAL DRAWINGS, TO CONTROLS FURNISHED BY THIS CONTRACTOR. IF POWER CIRCUITS ARE SHOWN ON THE ELECTRICAL DRAWINGS, OWNER SHALL CONTINUE THE POWER RUN TO THE CONTROL DEVICE. IF POWER CIRCUITS ARE NOT SHOWN, OWNER SHALL PROVIDE BREAKERS AT DISTRIBUTION PANELS FOR POWER TO CONTROLS AND PROVIDE POWER FROM THE DISTRIBUTION PANEL TO THE CONTROL DEVICES.

8. OWNER SHALL FURNISH & INSTALL ALL REQUIRED END DEVICES, POWER SUPPLY, LOW VOLTAGE TRANSFORMERS, CONTROL WIRING & CONDUITS, ETC. FOR A COMPLETE & OPERATIONAL DDC CONTROL SYSTEM.

9. NEW WIRING & CONDUITS SHALL BE RUN CONCEALED ABOVE CEILING.
ALL EXPOSED WIRING & CONDUITS SHALL BE RUN CONCEALED IN EMT
IN UTILITY SPACES AND WIREMOLD IN FINISHED AREAS.

10.OWNER TO FIELD INSTALL SENSORS, CONTROLLERS, ETC. WHICH ARE NOT FACTORY-INSTALLED BY EQUIPMENT MANUFACTURERS.

11.ANY EQUIPMENT FURNISHED WITH FACTORY CONTROLS SHALL BE PROVIDED WITH BACNET MSTP INTEGRATION CAPABILITIES AND INCLUDE ON-SITE FACTORY CONTROLS INTEGRATION START-UP IN COORDINATION WITH OWNER'S BUILDING AUTOMATION SYSTEM.

DDC Temperature Control Legend:

AI ANALOG INPUT

AO ANALOG OUTPUT

AQ AQUASTAT (SPDT)

AMD AIR FLOW MEASUREMENT DEVICE (ANALOG)

FLOW SWITCH (DIGITAL)

A CONTROL ACTUATOR CONTROL DAMPER OR

DIFFERENTIAL PRESSIRE SWITCH (SPDT)

DIFFERENTIAL PRESSIRE

TRANSDUCER (ANALOG)

INDOOR AIR QUALITY

MS MAGNETIC STARTER

VFD VARIABLE FREQUENCY DRIVE

R CONTROL RELAY (24VAC-SPDT)

CURRENT TRANSDUCER (ANALOG)

CURRENT SWITCH (DIGITAL)

DI DIGITAL INPUT

DIGITAL OUTPUT

S END SWITCH (SPST)

RH RELATIVE HUMIDITY SENSOR

CARBON-MONOXIDE SENSOR

CO2 CARBON-DIOXIDE SENSOR

WALL-MOUNTED SWITCH

TS TEMPERATURE SENSOR (PROBE/IMMERSION)

TS TEMPERATURE SENSOR (AVERAGING)

LOW-LIMIT TEMPERATURE SWITCH

SMOKE DETECTOR (DUCT)

TC THERMOSTAT SWITCH (SPDT)

120/24VAC TRANSFORMER

VCHS M005

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**TEMPERATURE** 

CONTROLS

NOTES, LEGEND

& SCHEMATICS

BID ADDENDUM #2

DESCRIPTION

44-13-01-06-0-015-033

# DATE

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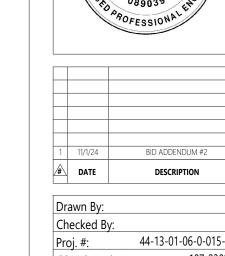
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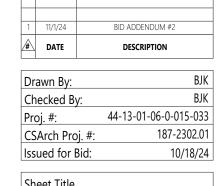
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Sheet Title

VALLEY CENTRAL SCHOOL DI VALLEY CENTRAL HIGH SCH 2023 CAPITAL PROJECT - PH

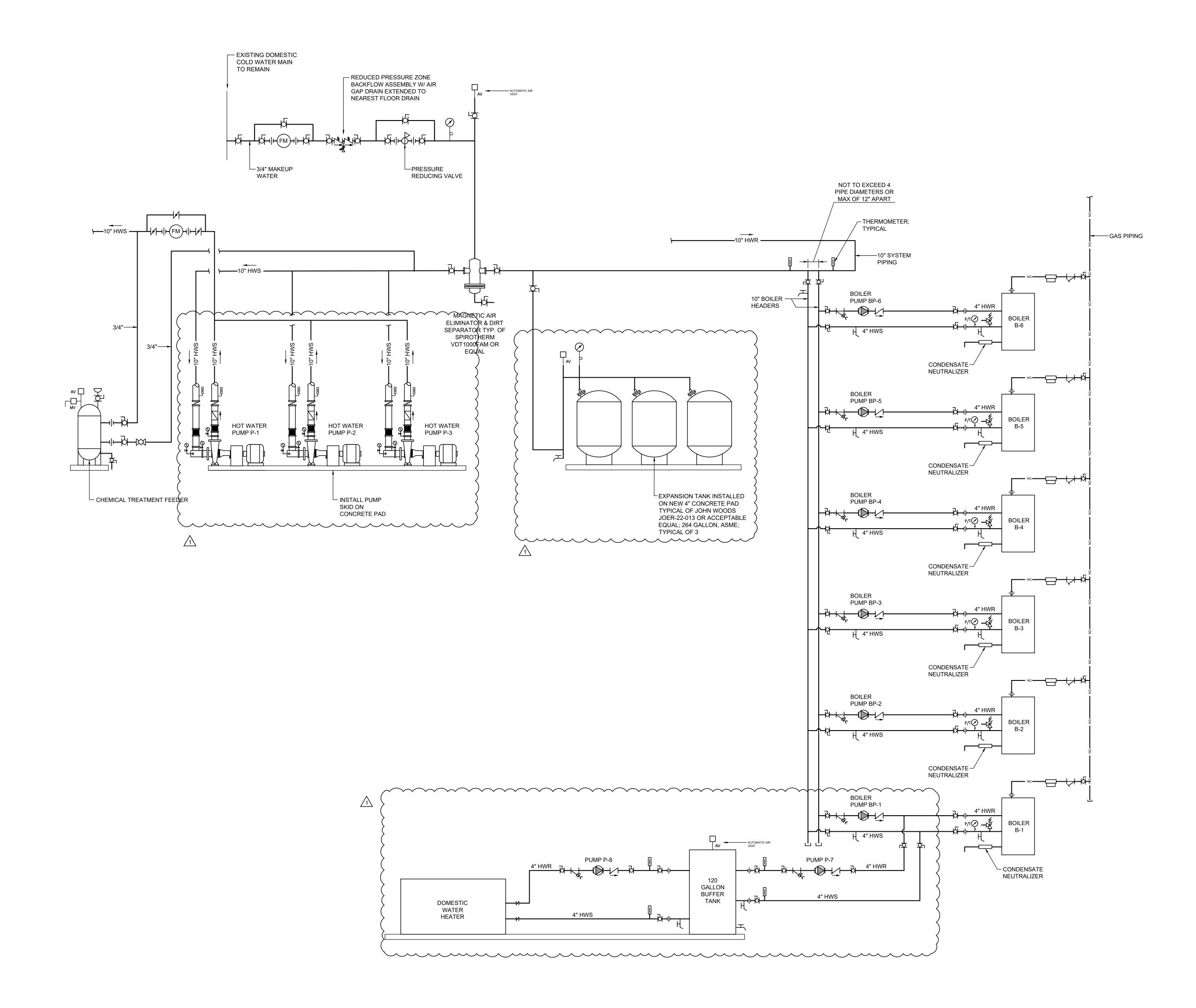






Sheet Title MECHANICAL PIPING DIAGRAMS

VCHS M006



### Sheet Notes:

1. TEMPERATURE CONTROLS SCOPE - REMOVE & REPLACE ALL EXISTING PNEUMATIC HVAC CONTROL SYSTEMS SERVING THIS AREA OF THE BUILDING. OWNER TO PROVIDE ALL MATERIALS & WIRING INCLUDING DEVICES, ACTUATORS, SENSORS, WIRING, CONDUIT, ETC. TO CONVERT ALL EQUIPMENT OVER TO REPLACEMENT DDC SYSTEM. MECHANICAL CONTRACTOR TO DEMOLISH & INSTALL ALL CONTROL VALVES AND ANY PIPING RELATED ACCESSORIES I.E. PORTS FOR SENSORS, ETC.; FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE START OF WORK.

### Key Notes:

- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING UNIT VENTILATOR AND ALL ASSOCIATED PIPING, ACCESSORIES, CONTROLS, ETC.
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING
  HOT WATER & CHILLED WATER PIPING AND ALL
  ASSOCIATED VALVES, INSULATION, HANGERS, SUPPORTS,
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING THERMOSTAT AND ASSOCIATED WIRING OR PNEUMATIC TUBING; MAINTAIN EXISTING BOX AND CONDUIT FOR
- REPLACEMENT UNIT WHERE COMPATIBLE.

  EXISTING OUTSIDE AIR LOUVER AND WALL SLEEVE TO REMAIN
- EXISTING DRAFT STOP ENCLOSURE TO BE
  DISCONNECTED & REMOVED FROM WALL; ENCLOSURES
  TO BE CUT TO FIT LARGER UV AND REINSTALLED
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING RELIEF AIR TRANSFER GRILLE & DUCTWORK;
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING ROOFTOP MOUNTED RELIEF AIR HOOD & ALL ASSOCIATED DUCTWORK
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING DUCTED HORIZONTAL UNIT VENTILATOR AND ALL ASSOCIATED PIPING, ACCESSORIES, CONTROLS, ETC.
- ) EXISTING SUPPLY AIR GRILLE/DIFFUSER & DUCT TO REMAIN
- EXISTING RETURN AIR GRILLE & DUCT TO REMAIN
- EXISTING OUTSIDE AIR LOUVER & DUCT TO REMAIN

  EXISTING EXHAUST AIR GRILLES & DUCT TO REMAIN
- EXISTING CABINET HEATER TO REMAIN; DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATE PNEUMATIC CONTROLS; PROVIDE ELECTRONICALLY
- CONTROLLED VALVE(S) & DAMPER(S) CONNECTED TO BUILDING AUTOMATION SYSTEM

  EXISTING EXHAUST FAN ON ROOF TO REMAIN
- EXISTING EXHAUST FAN ON ROOF TO REMAIN;
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL
  ASSOCIATE PNEUMATIC CONTROLS; PROVIDE
  ELECTRONICALLY CONTROLLED VALVE(S) CONNECTED
  TO BUILDING AUTOMATION SYSTEM
- REMOVE 3/4" HWS & HWR PIPING DN. THRU FLOOR INTO CRAWL SPACE & CAP AT MAIN; PIPING WILL BE EXTENDED & CONNECTED TO REPLACEMENT UNIT
- REMOVE 1-1/4" CHWS & CHWR PIPING DN. THRU FLOOR INTO CRAWL SPACE & CAP AT MAIN; PIPING WILL BE EXTENDED & CONNECTED TO REPLACEMENT UNIT
- HEATING & CHW COOLING) TO REMAIN; DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING CONTROLS & ASSOCIATED PNEUMATIC CONTROLS, TUBING, ETC.

  EXISTING DUCTED FAN COIL (HW HEATING & CHW COOLING) TO

EXISTING FLOOR MOUNTED VERTICAL UNIT VENTILATOR (HW

PREMAIN; DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING CONTROLS & ASSOCIATED PNEUMATIC CONTROLS, TUBING, ETC.

**KEY PLAN** 

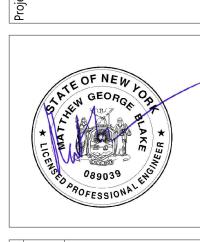
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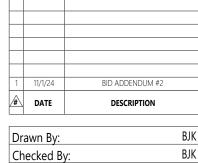
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WORK

- EXISTING FLOOR MOUNTED FAN COIL (HW HEATING & CHW COOLING) TO REMAIN; DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING CONTROLS & ASSOCIATED PNEUMATIC CONTROLS, TUBING, ETC.
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING FINNED TUBE RADIATION AND ALL ASSOCIATED PIPING, ENCLOSURE, ACCESSORIES, CONTROLS, ETC.







 Drawn By:
 BJK

 Checked By:
 BJK

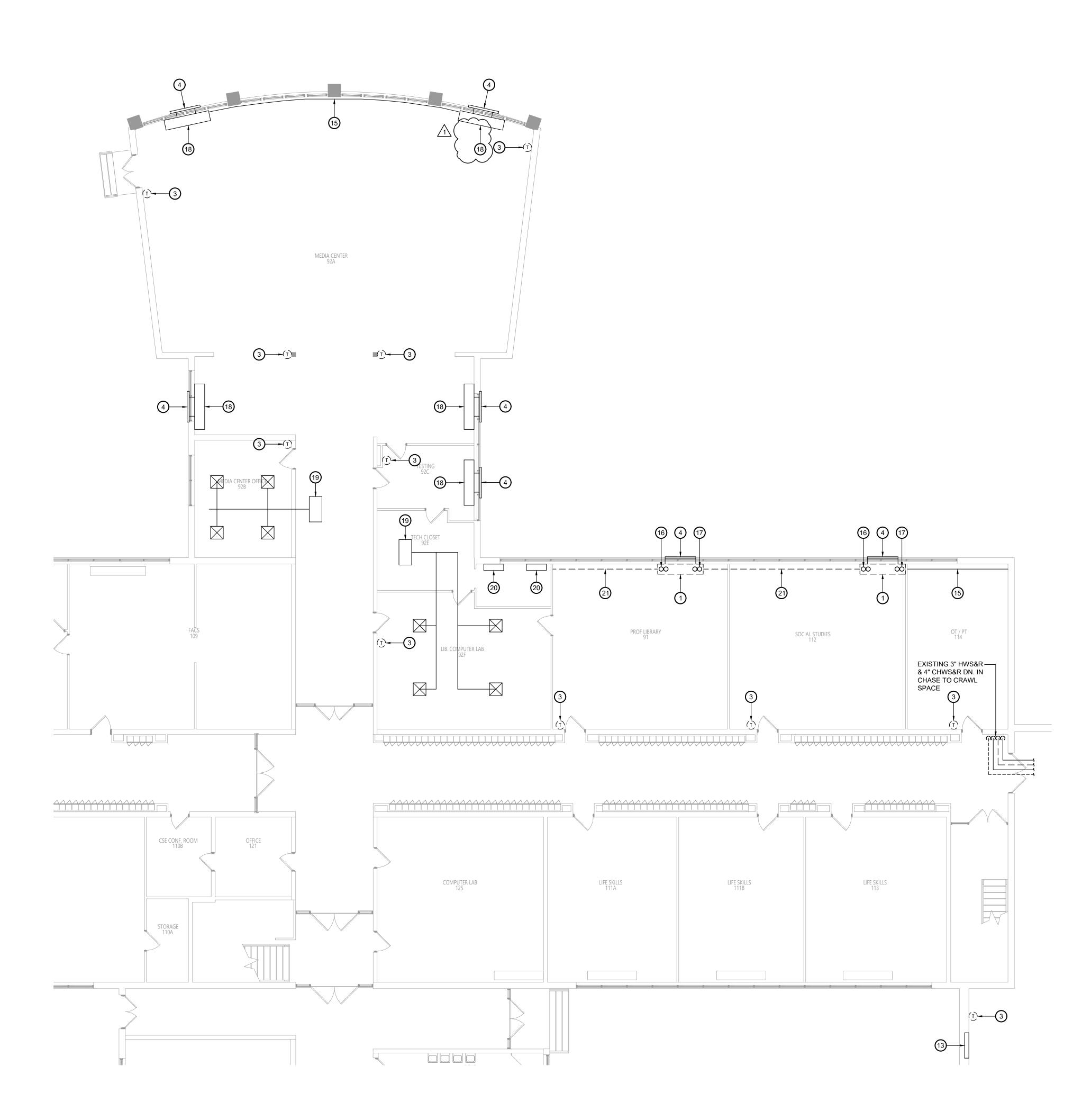
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 10/18/24

MECHANICAL DEMOLITION PLAN - PART 1

VCHS MD211



Mechanical Demolition Plan - Part 2

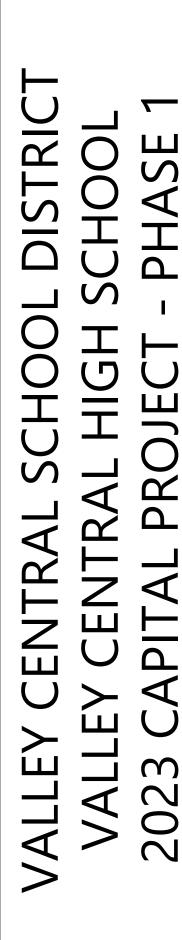
MD212 Scale: 1/8" = 1'-0"

### Sheet Notes:

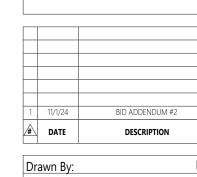
1. TEMPERATURE CONTROLS SCOPE - REMOVE & REPLACE ALL EXISTING PNEUMATIC HVAC CONTROL SYSTEMS SERVING THIS AREA OF THE BUILDING. OWNER TO PROVIDE ALL MATERIALS & WIRING INCLUDING DEVICES, ACTUATORS, SENSORS, WIRING, CONDUIT, ETC. TO CONVERT ALL EQUIPMENT OVER TO REPLACEMENT DDC SYSTEM. MECHANICAL CONTRACTOR TO DEMOLISH & INSTALL ALL CONTROL VALVES AND ANY PIPING RELATED ACCESSORIES I.E. PORTS FOR SENSORS, ETC.; FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE START OF WORK.

### Key Notes:

- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING UNIT VENTILATOR AND ALL ASSOCIATED PIPING, ACCESSORIES, CONTROLS, ETC.
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING HOT WATER & CHILLED WATER PIPING AND ALL ASSOCIATED VALVES, INSULATION, HANGERS, SUPPORTS,
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING THERMOSTAT AND ASSOCIATED WIRING OR PNEUMATIC TUBING; MAINTAIN EXISTING BOX AND CONDUIT FOR REPLACEMENT UNIT WHERE COMPATIBLE.
- EXISTING OUTSIDE AIR LOUVER AND WALL SLEEVE TO
- EXISTING DRAFT STOP TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF;
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING RELIEF AIR TRANSFER GRILLE & DUCTWORK;
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING ROOFTOP MOUNTED RELIEF AIR HOOD & ALL ASSOCIATED DUCTWORK
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING DUCTED HORIZONTAL UNIT VENTILATOR AND ALL ASSOCIATED PIPING, ACCESSORIES, CONTROLS,
- EXISTING SUPPLY AIR GRILLE/DIFFUSER & DUCT TO
- EXISTING RETURN AIR GRILLE & DUCT TO REMAIN
- EXISTING OUTSIDE AIR LOUVER & DUCT TO REMAIN EXISTING EXHAUST AIR GRILLES & DUCT TO REMAIN
- EXISTING CABINET HEATER TO REMAIN; DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATE
- PNEUMATIC CONTROLS; PROVIDE ELECTRONICALLY CONTROLLED VALVE(S) & DAMPER(S) CONNECTED TO BUILDING AUTOMATION SYSTEM
- EXISTING EXHAUST FAN ON ROOF TO REMAIN
- EXISTING FINNED TUBE RADIATION TO REMAIN; DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATE PNEUMATIC CONTROLS; PROVIDE ELECTRONICALLY CONTROLLED VALVE(S) CONNECTED TO BUILDING AUTOMATION SYSTEM
- REMOVE 3/4" HWS & HWR PIPING DN. THRU FLOOR INTO CRAWL SPACE & CAP AT MAIN; PIPING WILL BE EXTENDED & CONNECTED TO REPLACEMENT UNIT
- REMOVE 1-1/4" CHWS & CHWR PIPING DN. THRU FLOOR INTO CRAWL SPACE & CAP AT MAIN; PIPING WILL BE EXTENDED & CONNECTED TO REPLACEMENT UNIT
- EXISTING FLOOR MOUNTED VERTICAL UNIT VENTILATOR (HW HEATING & CHW COOLING) TO REMAIN; DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING CONTROLS & ASSOCIATED PNEUMATIC CONTROLS, TUBING, ETC.
- EXISTING DUCTED FAN COIL (HW HEATING & CHW COOLING) TO REMAIN; DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING CONTROLS & ASSOCIATED PNEUMATIC CONTROLS, TUBING, ETC.
- EXISTING FLOOR MOUNTED FAN COIL (HW HEATING & CHW COOLING) TO REMAIN, DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING CONTROLS & ASSOCIATED PNEUMATIC CONTROLS, TUBING, ETC.
- DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING FINNED TUBE RADIATION AND ALL ASSOCIATED PIPING, ENCLOSURE, ACCESSORIES, CONTROLS, ETC.







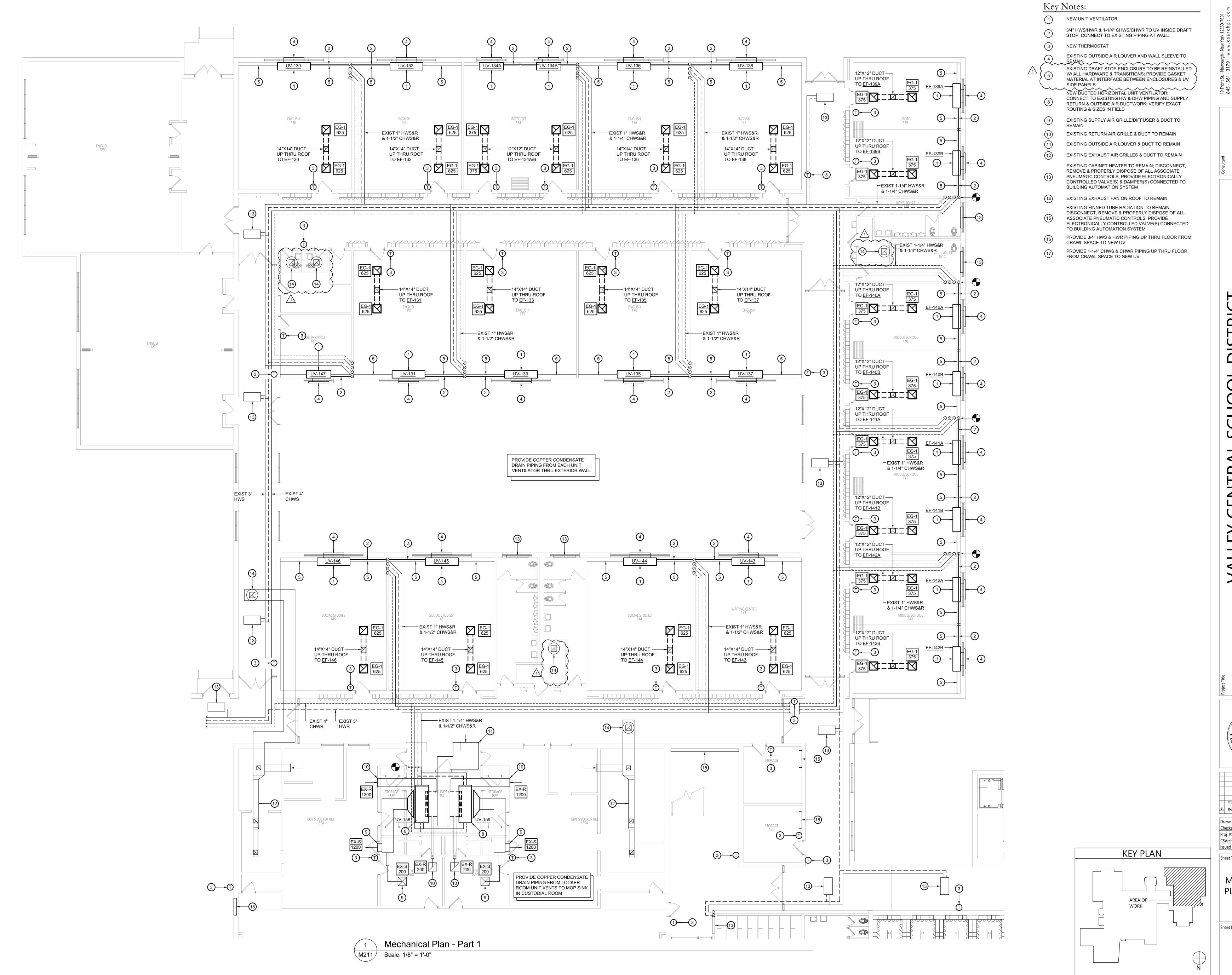
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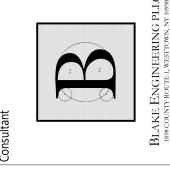
MECHANICAL DEMOLITION

PLAN - PART 2 VCHS

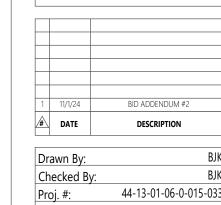
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KEY PLAN





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MECHANICAL PLAN - PART 1



- NEW UNIT VENTILATOR
- 3/4" HWS/HWR & 1-1/4" CHWS/CHWR TO UV INSIDE DRAFT STOP; CONNECT TO EXISTING PIPING AT WALL
- NEW THERMOSTAT
- EXISTING OUTSIDE AIR LOUVER AND WALL SLEEVE TO
- REMAIN

  5)

  NEW DRAFT STOP INSTALLED ON BOTH SIDE OF UV
- NEW DUCTED HORIZONTAL UNIT VENTILATOR;
  CONNECT TO EXISTING HW & CHW PIPING AND SUPPLY,
  RETURN & OUTSIDE AIR DUCTWORK; VERIFY EXACT
  ROUTING & SIZES IN FIELD
- EXISTING SUPPLY AIR GRILLE/DIFFUSER & DUCT TO
- EXISTING RETURN AIR GRILLE & DUCT TO REMAIN
- 1) EXISTING OUTSIDE AIR LOUVER & DUCT TO REMAIN
- EXISTING EXHAUST AIR GRILLES & DUCT TO REMAIN

  EXISTING CABINET HEATER TO REMAIN; DISCONNECT,
- REMOVE & PROPERLY DISPOSE OF ALL ASSOCIATE PNEUMATIC CONTROLS; PROVIDE ELECTRONICALLY CONTROLLED VALVE(S) & DAMPER(S) CONNECTED TO BUILDING AUTOMATION SYSTEM
- EXISTING EXHAUST FAN ON ROOF TO REMAIN
- EXISTING FINNED TUBE RADIATION TO REMAIN;
  DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL
  ASSOCIATE PNEUMATIC CONTROLS; PROVIDE
  ELECTRONICALLY CONTROLLED VALVE(S) CONNECTED
  TO BUILDING AUTOMATION SYSTEM
- PROVIDE 3/4" HWS & HWR PIPING UP THRU FLOOR FROM CRAWL SPACE TO NEW UV
- PROVIDE 1-1/4" CHWS & CHWR PIPING UP THRU FLOOR FROM CRAWL SPACE TO NEW UV

BUILDING AUTOMATION SYSTEM

- EXISTING FLOOR MOUNTED VERTICAL UNIT VENTILATOR
  (HW HEATING & CHW COOLING) TO REMAIN; PROVIDE
  ELECTRONICALLY CONTROLLED VALVE(S) & DAMPER(S)
- EXISTING DUCTED FAN COIL (HW HEATING & CHW COOLING) TO REMAIN; PROVIDE ELECTRONICALLY CONTROLLED VALVE(S) & DAMPER(S) CONNECTED TO
- EXISTING FLOOR MOUNTED FAN COIL (HW HEATING & CHW COOLING) TO REMAIN; PROVIDE ELECTRONICALLY CONTROLLED VALVE(S) & DAMPER(S) CONNECTED TO BUILDING AUTOMATION SYSTEM

BUILDING AUTOMATION SYSTEM

'ALLEY CENTRAL SCHOOL DISTRICT VALLEY CENTRAL HIGH SCHOOL 2023 CAPITAL PROJECT - PHASE 1





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KEY PLAN

MECHANICAL PLAN - PART 2

Sheet No.

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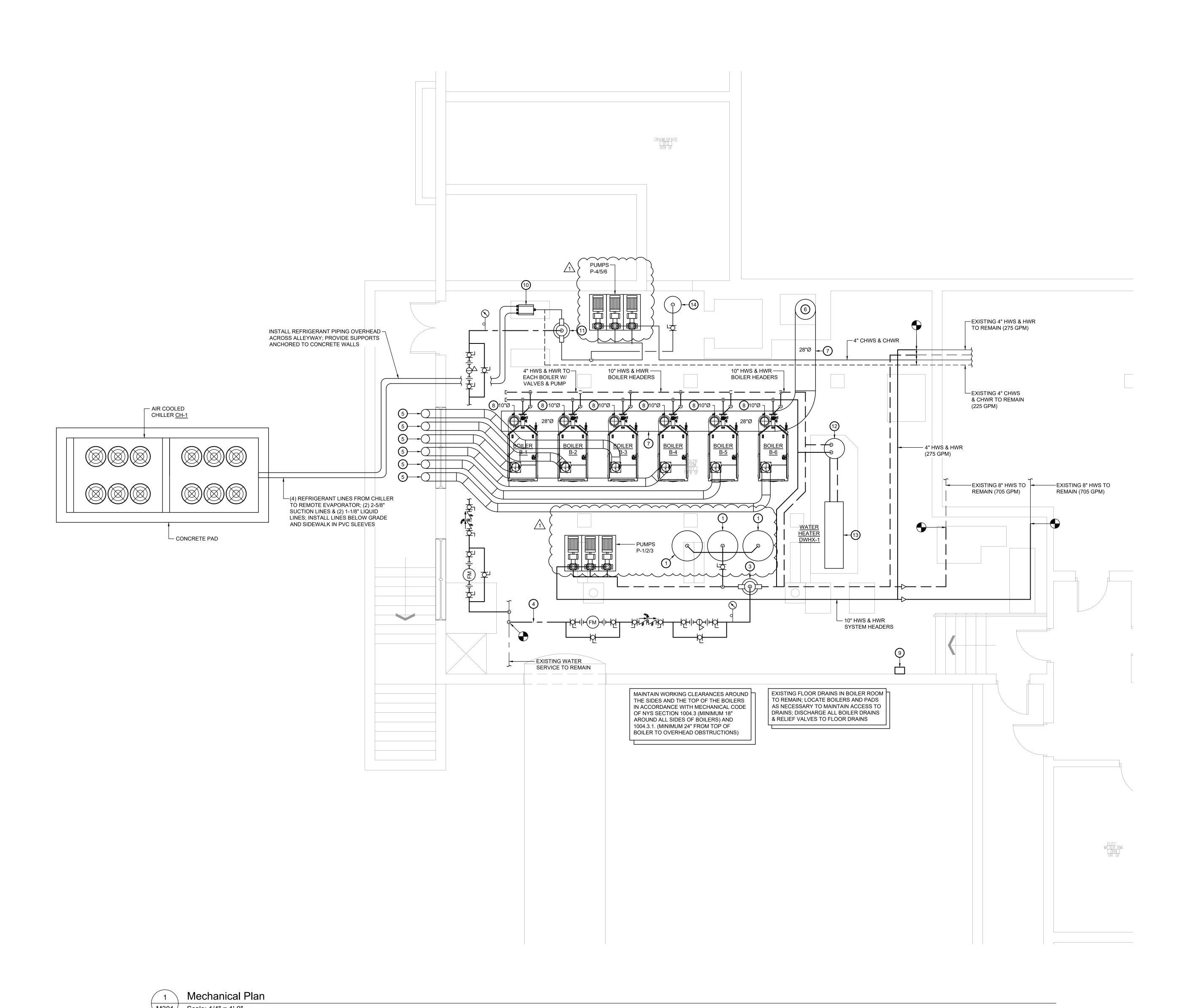
VCHS

M212

CONSTRUCTION DOCUMENT

Mechanical Plan - Part 2

M212 Scale: 1/8" = 1'-0"



Key Notes:

EXPANSION TANK TYPICAL OF JOHN WOODS JOER-22-013 OR ACCEPTABLE EQUAL; 264 GALLON, ASME, BLADDER TYPE; INSTALL ON 4" TALL CONCRETE PAD; TYPICAL OF 3 CHEMICAL TREATMENT FEEDER

MAGNETIC AIR SEPARATOR / DIRT ELIMINATOR TYP. OF SPIROTHERM VDT1000FAM OR EQUAL

3/4" MAKEUP WATER W/ WATER METER W/ BYPASS, PRESSURE REDUCING VALVE W/ BYPASS & RPZ; CONNECT TO CWS MAIN INSIDE BOILER ROOM

PROVIDE 10"Ø COMBUSTION AIR DUCTWORK FOR EACH BOILER; INSTALL PER MANUFACTURER REQUIREMENTS; CONNECT TO TOP OF BOILER AT DESIGNATED LOCATION; COORDINATE EXACT ROUTING IN FIELD W/ ADJACENT INFRASTRUCTURE; EXTEND THRU EXTERIOR WALL TO 90° ELBOW TURNED DOWN W/ INSECT SCREEN PROTECTING OPEN OF TERMINATION

PROVIDE 28"Ø GAS VENT UP INSIDE OF EXISTING MASONRY CHIMNEY; SEE KEYNOTE 7 FOR ADDITIONAL INFORMATION DOUBLE WALL SPECIAL GAS VENT TYPICAL OF HEAT-FAB MODEL CI

PLUS OR ACCEPTABLE EQUAL; UL-1738 LISTED; SEE PLAN FOR SIZES; PROVIDE MOTORIZED DAMPER AT EACH BOILER W/ INLINE DRAIN INSTALLED DIRECTLY ABOVE DAMPER; AL29-4C STAINLESS STEEL; PROVIDE TEE AT BASE OF STACK AT EACH BOILER W/ DRAIN TO FLOOR DRAIN; MAINTAIN CLEARANCE ABOVE BOILER FOR CLEANING AND MAINTENANCE

PROVIDE TEE FITTINGS AT THE BASE OF BREECHING WITH CONDENSATE DRAINS; PROVIDE CONDENSATE PIPING FROM FITTING TO NEAREST FLOOR DRAIN; RUN CONDENSATE THROUGH ACID NEUTRALIZER BEFORE SPILLING TO DRAIN

PROVIDE GAS DETECTION SYSTEM TYPICAL OF HONEYWELL E3POINT OR ACCEPTABLE EQUAL; PROVIDE WITH HORN STROBE FOR LOCAL ALARMING WITHIN BOILER ROOM; CONNECT DETECTION SYSTEM TO BAS FOR MONITORING OF ALARMS; PROVIDE 24VAC POWER SOURCE TO DETECTION SYSTEM; SHUT DOWN BOILERS UPON DETECTION OF CARBON MONOXIDE

BRAZED PLATE HEAT EXCHANGER; CONNECT TO REFRIGERANT & CHILLED WATER PIPING; SEE PIPING DETAILS ON M004, PROVIDE ALL ACCESSORIES AND SENSORS FOR A COMPLETE INSTALLATION; FULLY INSULATE HEAT EXCHANGER, ALL PIPING, PUMPS, VALVES & ACCESSORIES; MAINTAIN CONTINUOUS VAPOR BARRIER

MAGNETIC AIR SEPARATOR / DIRT ELIMINATOR TYP. OF SPIROTHERM VDT400FAM OR EQUAL

STAINLESS STEEL HEAT EXCHANGER

BUFFER TANK HYDRAULIC SEPARATOR TYPICAL OF LOCHINVAR BVU120 OR ACCEPTABLE EQUAL; 120 GALLON, 3" NPT CONNECTION; JACKETED & INSULATED INDIRECT PLATE & FRAME WATER HEATER TYPICAL OF LOCHINVAR

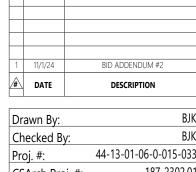
IPW120DW OR ACCEPTABLE EQUAL; ASME DOUBLE WALL 316L

EXPANSION TANK TYPICAL OF JOHN WOODS JOER-22-080 OR ACCEPTABLE EQUAL; 80 GALLON, ASME, BLADDER TYPE; INSTALL ON 4" TALL CONCRETE PAD









44-13-01-06-0-015-033 : 187-2302.01 CSArch Proj. #: Issued for Bid:

Sheet Title MECHANICAL PLAN



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**KEY PLAN** 

			LIGHT	ΓING FIX	ΓURE	SCHED	ULE			
TAG	SYMBOL	MANUFACTURER & MODEL	TYPE	VOLTAGE	# OF LAMPS	LAMP WATTS	FIXTURE WATTS	MOUNTING	SIZE	NOTES
А	<b>⊟</b> <sub>A</sub>	HE WILLIAMS RECESSED DIRECT/INDIRECT DIG-S22-L32/840-AD-DIM-UNV	LED	120	1	25.8	25.8	RECESSED	2'x2'	4000K COLOR TEMPERATURE
B-EM	В-ЕМ	HE WILLIAMS VOLTAIRE ARCHITECTURAL WALL PACK VWPH-L30/740-T3-DBZ-SDGL-EM/10WC-DIM-UNV	LED	120	1	36	36	SURFACE WALL MOUNT	12"x12"	VANDAL RESISTANT; 4000K COLOR TEMPERATURE; W/ LED EMERGENCY 90 MINUTE LOW TEMPERATURE BATTERY BACKUP; UL 924 LISTED FIXTURE
С	c	HE WILLIAMS SURFACE/PENDANT MOUNT WRAP 39-4-L52/840-A	LED	120	1	37	37	PENDANT	4'x10-3/16"	4000K COLOR TEMPERATURE PROVIDE W/ ADJ. Y AIRCRAFT CABLE WITH CANOPIES
D		HE WILLIAMS LIGHTING LED VOLTAIRE ARCH SURFACE/GARAGE VG1-L30/740-T5-SM-BLK-WS-FSP-3111-L120/277	LED	120	1	36	36	SURFACE MTD.	13"x13"	PROVIDE W/ INTEGRATED MOTION & DAYLIGHT SENSOR; IP66 WET LOCATION RATED
-	$\Box$	HE WILLIAMS LED EMERGENCY LIGHT EMER/LED-WHT-SDT-D	LED	120	2	1.0	2.0	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP
-	\$€	HE WILLIAMS LED EXIT & EMERGENCY LIGHT EXIT/EM/LED-R-WHT-RC-SDT-D	LED	120	2	1.5	3.4	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP; PROVIDE W/ REMOTE HEAD MODEL WETRHL-T-WHT-HL-MV
-	⊗	HE WILLIAMS LED EXIT LIGHT EXIT-R-EM-WHT-SDT-D	LED	120	1	3.8	3.8	UNIVERSAL	-	90-MINUTE BATTERY BACKUP

### FIRE ALARM LEGEND:

HORN/STROBE DEVICE, ONE ASSEMBLY; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15 CANDELA UNLESS OTHERWISE NOTED

STROBE DEVICE; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15

CANDELA UNLESS OTHERWISE NOTED

MANUAL PULL STATION; MTD. 48" A.F.F.

WATER FLOW SWITCH

VALVE TAMPER SWITCH

DETECTOR; LETTER INDICATES AS FOLLOWS: BLANK = SMOKE DETECTOR P = PHOTOELECTRIC SMOKE M = MULTIPLE STATION SMOKE ALARM

> D = PHOTOELECTRIC DUCT SMOKE DETECTOR FSD = DUCT SMOKE DETECTOR FOR FIRE SMOKE DAMPER

CARBON MONOXIDE DETECTOR; MTD. 60" A.F.F.

ADDRESSABLE FIRE ALARM CONTROL PANEL

RATE OF RISE HEAT DETECTOR, 135°F

FIRE ALARM ANNUNCIATOR PANEL

REMOTE TEST SWITCH & LED FOR DUCT SMOKE DETECTORS

FIRE ALARM RELAY

### SECURITY LEGEND:

PANIC BUTTON - 18/4 SHIELDED

INTERCOM

DOOR RELEASE BUTTON - 16/2 SHIELDED

WORKSTATION FOR CARD ACCESS & VIDEO SYSTEM CARD READER - 22/6 SHIELDED

REQUEST TO EXIT - 18/4 SHIELDED

MAGNETIC DOOR CONTACT - 16/2 SHIELDED

ELECTRIC LOCK - 16/2 SHIELDED

### ELECTRICAL LEGEND:

MOTOR

EARTH GROUND

JUNCTION BOX

EMERGENCY POWER OFF BUTTON

MOLDED CASE CIRCUIT BREAKER

FUSE WITH RATING

DISCONNECT SWITCH, FUSED

DISCONNECT SWITCH, UNFUSED

STARTER, COMBINATION WITH DISCONNECT SWITCH STARTER OR MOTOR CONTROLLER

M

20A 120V DUPLEX CEILING MOUNTED RECEPTACLE

20A 120V DUPLEX WALL MOUNTED RECEPTACLE; 18" A.F.F. UNLESS OTHERWISE NOTED

20A 120V DUPLEX WALL MOUNTED RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER

20A 120V QUADRAPLEX RECEPTACLE

OUTLET; FLUSH MOUNTED

OUTLET; FLUSH MOUNTED

WALL MOUNTED SPECIAL PURPOSE RECEPTACLE

⇒ 20A 120V WALL MOUNTED USB CHARGER RECEPTACLE TYPICAL OF HUBBELL USB20X OR ACCEPTABLE EQUAL

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE; FLUSH MOUNTED

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE & 2 PORT ETHERNET

FLOOR MOUNTED BOX W/ QUAD RECEPTACLE & 2 PORT ETHERNET

WALL PHONE OUTLET MTD. 48" A.F.F.; 3/4" EMT CDT. IN WALL TO ABOVE CEILING; PROVIDE 1 PORT ETHERNET WALL PLATE; PROVIDE (1) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT CLOSET

WALL BOX FOR TELEVISION CONNECTION; 1-1/4" EMT CDT. IN WALL TO ABOVE CEILING W/ PULL CORD

WALL TO ABOVE CEILING; PROVIDE 2 PORT ETHERNET WALL PLATE; PROVIDE (2) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT BRANCH CIRCUIT HOMERUN; LINES INDICATE NUMBER OF CIRCUITS,

NEUTRAL, AND SWITCH LEG CONDUCTORS; ONE SEPARATE

TELEPHONE/DATA COMMUNICATION BOX W/ (2) 3/4" EMT CDT. IN

GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH HOMERUN; NOT SHOWN 2 = DOUBLE POLE BLANK = SINGLE POLE 3 = THREE-WAY 4 = FOUR-WAY

K = KEY OPERATED

PB= PUSH BUTTON

WP= WEATHER PROOF

X = EXPLOSION PROOF OC= OCCUPANCY SENSOR

DUAL TECHNOLOGY OCCUPANCY SENSOR

DAYLIGHT SENSOR

D = DIMMER

P = WITH PILOT LIGHT

T = TIMER OPERATED

MULTIMEDIA BOX. PROVIDE DEVICE BOX AT 60" ABOVE FINISHED FLOOR WITH DUPLEX RECEPTACLE & (2) CAT6E PORTS. PROVIDE FACEPLATES AND (2) 1-1/4" CONDUITS STUBBED ABOVE CEILING. (1) W/ CAT6E CABLES RUN TO NEAREST IT CLOSET & (1) W/ PULL CORD FOR FUTURE HDMI. RECESS MOUNT BOX TYPICAL OF WIREMOLD EVOLUTION SERIES WITH CONCEALED CONDUITS IN EXISTING FRAMED WALLS AND ALL NEW WALLS. PROVIDE SURFACE MOUNT BOXES WITH DUAL CHANNEL SURFACE MOUNT RACEWAY (LEGRAND WIREMOLD 5400 SERIES) WHERE INSTALLED ON EXISTING MASONRY

WIRELESS ACCESS POINT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE AT CEILING DEVICE & RUN CABLING TO NEAREST DATA CLOSET

COMBINATION WALL MOUNTED CLOCK/SPEAKER UNIT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE TO DEVICE & RUN CABLING TO NEAREST DATA CLOSET

### ELECTRICAL NOTES:

- 1. ALL MATERIALS AND EQUIPMENT ARE TO BE NEW, UNUSED, AND FREE FROM DEFECTS OF ANY KIND. THE BASIS OF QUALITY SHALL BE THE LATEST REVISION OF ASTM, ANSI, OR OTHER ACCEPTABLE STANDARDS.
- 2. THESE DRAWINGS ARE DIAGRAMMATIC, AND INDICATE GENERAL ARRANGEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE REVIEWED THE SITE FOR HIS WORK PRIOR TO HAVING SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF THE CONTRACT.
- 3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER
- 4. ALL WORK INCLUDING LABOR AND MATERIALS SHALL BE FULLY GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PAYMENT AND FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
- 5. ALL CUTTING, PATCHING, FIRE-STOPPING, AND SURFACE RESTORATION IN CONNECTION WITH THIS TRADE SHALL BE COMPLETED BY THIS CONTRACTOR.
- 6. A MINIMUM OF FOUR (4) COPIES OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION OF THE EQUIPMENT AND/OR MATERIALS. BY SUBMITTING SHOP DRAWINGS, THE CONTRACTOR REPRESENTS THAT ACTUAL FIELD CONDITIONS ARE VERIFIED BY HIM AND ARE REFLECTED ON HIS SUBMITTALS.
- 7. THIS CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS, AND OBTAIN ALL PERMITS, INSPECTIONS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT.
- 8. EQUIPMENT AND MATERIALS FOR WHICH UNDERWRITERS LABORATORIES INC. (UL) PROVIDES PRODUCT LISTING SERVICE SHALL BE LISTED AND BEAR THE LISTING MARK.
- ALL WORK IN ASSOCIATION WITH THIS CONTRACT SHALL BE COMPLETED IN STRICT COMPLIANCE WITH THE 2015 NATIONAL ELECTRIC CODE, 2020 BUILDING CODE OF NEW YORK STATE, 2020 FIRE CODE OF NEW YORK STATE & 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.
- 10. ALL NEW LIGHTING FIXTURES SHALL BE INSTALLED FULLY LAMPED AND OPERABLE. THE CONTRACTOR SHALL TURN OVER TO THE OWNER SPARE LAMPS OF EVERY TYPE ON THE PROJECT IN AN AMOUNT NOT LESS THAN 20% OF THE
- TOTAL NUMBER OF EACH TYPE (MINIMUM 1 PER TYPE). 11. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, APPLICATIONS AND FEES OF ALL WORK ASSOCIATED WITH THE LOCAL UTILITY COMPANY AND/OR THE TELEPHONE COMPANY. ALL WORK INVOLVING THE UTILITY COMPANY SHALL BE COMPLETED IN ACCORDANCE WITH THEIR REGULATIONS AND GUIDELINES.
- 12. ALL CONDUCTORS SHALL BE COPPER, SHALL NOT BE LESS THAN #12 AWG, AND SHALL NOT EXCEED 70 FEET FROM PANEL BOARD TO FURTHEST CONNECTION UNLESS OTHERWISE NOTED ON PLANS.
- 13. LIGHTING LOADS SHALL NOT BE COMBINED ON THE SAME CIRCUIT AS ANY OTHER ELECTRICAL LOADS.
- 14. CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH & INSTALL ALL SMALL DETAILS AND INCIDENTAL WORK NOT SHOWN OR SPECIFIED, BUT WHICH CAN BE REASONABLY INFERRED AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM OF HIGH QUALITY MEETING ALL APPLICABLE CODES AND REGULATIONS.
- 15. FOR EACH NEW OR MODIFIED ELECTRICAL PANEL, THE CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD TO REFLECT ALL CIRCUITING. ADDITIONALLY, THE CONTRACTOR SHALL LABEL (WITH A PERMANENT MARKER OR LABEL) EACH RECEPTACLE ON THE INSIDE OF EACH FACE PLATE WITH PANEL AND CIRCUIT NUMBER DESIGNATION.
- 16. MINIMUM REQUIREMENT FOR EQUIPMENT GROUNDING SHALL BE GOVERNED BY THE NEC. ALL GROUNDS, BONDING, ETC. SHALL MEET THESE REQUIREMENTS. THE CONTRACTOR SHALL FURNISH AND INSTALL ANY AND ALL ITEMS NECESSARY TO MEET THESE REQUIREMENTS AT NO EXTRA COST, EVEN IF SUCH ITEMS ARE NOT DETAILED ON THE DRAWINGS.
- 17. ALL CONDUIT AND CABLE SHALL BE PROPERLY SUPPORTED AND ROUTED PARALLEL OR PERPENDICULAR TO BUILDING WALLS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK.
- 18. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, WIRING, DEVICES, AND SYSTEMS INSTALLED UNDER THIS CONTRACT TO ENSURE PROPER OPERATION PRIOR TO FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
- 19. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.

	WII	RE CO	LOR	COD	ING '	TABL	E
PHASE	WIRES	VOLTAGE	L1	L2	L3	NEUTRAL	GROUND
1	2 (1)	120	BLACK	-	-	WHITE	-
1	2 (1)	208	BLACK	RED	-	-	-
1	3	120	BLACK	-	-	WHITE	GREEN (2)
1	3	208	BLACK	RED	-	1	GREEN (2)
3	4	208	BLACK	RED	BLUE	1	GREEN (2)
3	5	208	BLACK	RED	BLUE	WHITE	GREEN (2)
1	3	277	BROWN	-	-	GRAY	GREEN (2)
1	3	480	BROWN	ORANGE	-	-	GREEN (2)
3	4	4 480 BROWN ORANGE YELLOW					GREEN (2)
3	5	480	BROWN	ORANGE	YELLOW	GRAY	GREEN (2)
NOTEO							. ,

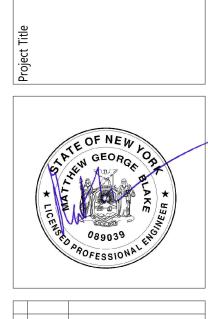
FOR DOUBLE INSULATED EQUIPMENT ONLY.

CONDUCTORS.

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

- GREEN OR GREEN/YELLOW MUST ONLY BE USED FOR GROUNDING

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



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BID ADDENDUM #2 # DATE DESCRIPTION Drawn By: 44-13-01-06-0-015-033 Proj. #:

CSArch Proj. #: Issued for Bid:

ELECTRICAL NOTES, LEGEND DETAILS & SCHEDULES

MLO

CONNECTED LOAD

RKING LOT #4

RKING LOT #4 ARKING LOT #4

ARKING LOT #4

XISTING LOAD

ARKING LOT #5

ARKING LOT #6

ARKING LOT #6

XISTING LOAD

XISTING LOAD

XISTING LOAD

PUMP P-

PUMP P-8

O(0)

BID ADDENDUM #2 # DATE DESCRIPTION

Drawn By: 44-13-01-06-0-015-033 Proj. #: 187-2302.01 CSArch Proj. #:

Issued for Bid: Sheet Title

ELECTRICAL PANEL SCHEDULES

CONSTRUCTION DOCUMENTS

225 <i>A</i>		-		25A	NG: 2	RATIN	BUS	•					120/208V 3Ø 4W+G	MLO					G: 600A	RATING	BUS	<u> </u>				20/208V 3Ø 4W+G
CONNECTED LC	AMPACITY CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L3 KVA		L2 KVA	L1 KVA			CKT. BREAKER	2	CONDUCTORS	CONNECTED LOAD	CONNECTED LOAD		CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L3 KVA	L2 KVA	L1 KVA	POSITION	CKT. BREAKER AMPACITY	CKT. BREAKER	CONDUCTORS	CONNECTED LOAD
			2				7		1									<del>                                     </del>				<del>-  </del> -		+		
AC RTO AD OFFICE	0 EXISTING WIRING	40	4		1	<del>-</del> /.		,	5 3	15	D.	(3) #12 CU & (1) #12 GND.	BOILER #1	CHW PUMPSET P-4/5/6	ND.	(3) #4 CU & (1) #8 GND.	70	2		-/-		1	250	250	(3) #250 CU & (1) #4 GND.	HW PUMPSET P-1/2/3
			6		Ŀ		ĺ	5	5									1	·/.							
			8				<u></u>	, <u> </u>	7												-	·				
BOILE	5 (3) #12 CU & (1) #12 GND.	15			1	<u>-/</u> _		)	9	50		EXISTING WIRING	SUMP PUMPS	SPARE		-	60	4		-/-		3	60	60	-	SPARE
			12					1	11									1	·/.							
			14				<u> </u>	—	13																	
BOILE	5 (3) #12 CU & (1) #12 GND.	15	16	1		<u> </u>			5 15	15	D.	(3) #12 CU & (1) #12 GND.	BOILER #3	SPARE		-	30	6				5	50	50	-	SPARE
			18	1			_	_	17	4							$\sqcup$		<u>'                                    </u>							
DO!! E	5 (0)   40 0   0 (4)   40 0  D	.	20		$\perp$		<u> </u>	9 -																_		
BOILE	5 (3) #12 CU & (1) #12 GND.	15	_		+-	<u>/-</u>			21	30		EXISTING WIRING	SEWER PUMPS				$\sqcup$	↓		·/.				-		
		_	24		+		$\rightarrow$			+	_						$\vdash$		<u> </u>					+		
PUMP E	0 (2) #12 CU & (1) #12 GND.	20	26 28	-	+	- /	<u>-                                    </u>	$-\!$	25 5 27	1,5	$\begin{bmatrix} 1 \end{bmatrix}$	(2) #42 CH 8 (4) #42 CND	DOI				$\vdash$				<u> </u>	_		+	1	
		_	30		+-	<u>/ -</u>			29	15	<sup>D.</sup>	(3) #12 CU & (1) #12 GND.	BOILER #6				$\vdash$	+	- /	<u> </u>				+	+	
PUMP E	0 (2) #12 CU & (1) #12 GND.	20	32		+		$\rightarrow$		31	20		EXISTING WIRING	BOILER ROOM LIGHTS				$\vdash$		<u> </u>			-		+	+	
		+	34		+	-/			33		-	EXISTING WIRING	BOILER ROOM LIGHTS							. /		+				
PUMP E	0 (2) #12 CU & (1) #12 GND.	20	36		-		-+		35		+	EXISTING WIRING	EXISTING LOAD					╁	- /		-+			+		
	+	$\dashv$	38		+		$\nearrow$	_	37	+	$\dashv$						$\vdash \vdash \vdash$					-   -		1		
PUMP E	0 (2) #12 CU & (1) #12 GND.	20	40		+	-/-		$-\!$	39	50		EXISTING WIRING	WELL PUMP				$\vdash$			-		$\top$		1		
		1	42		1-				41								$\Box$	1			-+					
	A TOTAL	VA TC	- k\	-	$\top$	-	- 1	$\top$		-			EXISTING EATON PANEL	<u> </u>		ΓAL	kVA TO	1 -	-	-	-			-	ANEI	EXISTING GE TYPE CCB PA

MLO

CONNECTED LOAD

AB TABLE RECP., & RM 2

PARE CEILING BELOW 2

ANK LEVER CONTROL P

TCHEN HW HEAT

W HEATER ALT

WRC PUMP 1

WRC PUMP 2 WRC PUMP 3

TEMP SHED

PACE

LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

CONDUCTORS

EXISTING WIRING

EXISTING WIRING

EXISTING WIRING

EXISTING WIRING

EXISTING WIRING

EXISTING WIRING

**EXISTING WIRING** 

**EXISTING WIRING** 

PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED

CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND

PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY,

LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

- kVA TOTAL

CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

Existing Panelboard C E002 Scale: None

CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

Existing Panelboard T \ E002 / Scale: None

120/208V 3Ø 4W+G

CONNECTED LOAD

ECH LAB

PARKING LOT #3

PARKING LOT #1

FCU BOILER ROOM

SIEMENS PANEL

PUMP BP-5

PUMP BP-6

WATER HEATER

**EXISTING PANEL** 

RKING LOTS 2 & 3

CONDUCTORS

EXISTING WIRING

**EXISTING WIRING** 

EXISTING WIRING

**EXISTING WIRING** 

EXISTING WIRING

**EXISTING WIRING** 

EXISTING WIRING

(2) #12 CU & (1) #12 GND.

(2) #12 CU & (1) #12 GND.

(3) #12 CU & (1) #12 GND.

NATURAL GAS DETECTION (3) #12 CU & (1) #12 GND.

120/208V 3Ø 4W+G		
	BREAKER ACITY	TION

CONNECTED LOAD	CONDUCTORS	CKT. BREAKEF AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKEF AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LOAD	EXISTING WIRING	20	1	·/.			2	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	3		·/.		4	20	-	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	5			·/.	6	20	-	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	7	-/-			8	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	-	20	9		·/.		10	20	-	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	11			·/.	12	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	13	-/.			14	20	-	EXISTING LOAD
EXISTING LOAD	-	20	15		·/.		16	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	-	20	17			·/.	18	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	19	·/.			20	20	EXISTING WIRING	EXISTING LOAD
UV 139 A&B	(2) #12 CU & (1) #12 GND.	20	21		·/.		22	20	(2) #12 CU & (1) #12 GND.	UV 136 & 138
UV 135 & 137	(2) #12 CU & (1) #12 GND.	20	23			·/.	24	20	(2) #12 CU & (1) #12 GND.	UV 140 A&B
UV 141 A&B	(2) #12 CU & (1) #12 GND.	20	25	-/-			26	20	(2) #12 CU & (1) #12 GND.	UV 142 A&B
EXISTING LOAD	EXISTING WIRING	20	27		-		28	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	-	20	29 31	. /		-/-	30 32	20	EXISTING WIRING	EXISTING LOAD
EF 139 A&B	(2) #12 CU & (1) #12 GND.	20	33	<u> </u>	. /		34	20	(2) #12 CU & (1) #12 GND.	EF 136 & 138
	(2) #12 CU & (1) #12 GND.	20	35		<u> </u>	. /	36	20	(2) #12 CU & (1) #12 GND.	EF 130 & 130
EF 135 & 137		20				<u>/                                     </u>	38	20	. , , , ,	EF 140 A&B
EF 141 A&B	(2) #12 CU & (1) #12 GND.	20	37	<u> </u>	. /			20	(2) #12 CU & (1) #12 GND.	
SPACE	-		39		<u> </u>		40		-	SPACE
SPACE	-		41			/-	42		-	SPACE

BUS RATING: 225A

BUS RATING: 225A

CONDUCTORS

EXISTING WIRING

**EXISTING WIRING** 

EXISTING WIRING

EXISTING WIRING

**EXISTING WIRING** 

EXISTING WIRING

**EXISTING WIRING EXISTING WIRING** 

EXISTING WIRING

EXISTING WIRING

**EXISTING WIRING** 

(3) #12 CU & (1) #12 GND.

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND

PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY,

LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

28 20 (3) #12 CU & (1) #12 GND.

 kVA TOTAL PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

Existing Panelboard B E002 Scale: None

EXISTING GE A SERIES PANEL

20/208V 3Ø 4W+G				BUS	RATING	G: 100A				MLC
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
IGHTS RMS. 104, 105, 112	EXISTING WIRING	20	1	-/.			2	20	EXISTING WIRING	LIGHTS RM. 128, 145
IGHTS RM. 127	EXISTING WIRING	20	3		·/.		4	20	-	LIGHTS RM. 129
IGHTS RM. 130	EXISTING WIRING	20	5			-/-	6	20	-	SPARE
IGHTS CORR. 131	EXISTING WIRING	20	7	·/.			8	20	EXISTING WIRING	LIGHTS CORR. 131
IGHTS COURTYARD	-	20	9		·/.		10	20	-	LIGHTS RM156, 157&COR 13
IGHTS CORR. 132	EXISTING WIRING	20	11				12	20	EXISTING WIRING	RECP. 104,105,112,129
RECP. 127, 128	EXISTING WIRING	20	13	·/.			14	20	-	RECP. 128, 129
RECP. 127, 128	-	20	15		·/.		16	20	EXISTING WIRING	RECP. 129, 130
RECP. 129, 130	-	20	17				18	20	EXISTING WIRING	POOL LOBBY, CORR. 131
SPARE	EXISTING WIRING	20	19	·/.			20	20	LAISTING WINING	TOOL LODDT, CORR. 101
JV 143 & 144	(2) #12 CU & (1) #12 GND.	20	21		·/.		22	20	(2) #12 CU & (1) #12 GND.	UV 145 & 146
E.F. #1	EXISTING WIRING	20	23			./.	24	20	EXISTING WIRING	RECP. 156, 157 & CH#10
CH# 1&7	EXISTING WIRING	20	25	./.			26	20	EXISTING WIRING	CH#2 & 11, 12
FIRE ALARM SYSTEM-156	EXISTING WIRING	20	27		-/-		28	20	EXISTING WIRING	SPARE
RECP. CORR. 132, 133	-	20	29 31	·/.		-/-	30 32	20	EXISTING WIRING	RECP. CORR. 131, 132
ROOM 143		20	33		-/-		34	20	EXISTING WIRING	EXISTING
(OOM 143	-	20	35			-/.	36	20	(2) #12 CU & (1) #12 GND.	UV 91 & 112
F 143 & 144	(2) #12 CU & (1) #12 GND.	20	37	·/.			38	20	(2) #12 CU & (1) #12 GND.	EF 91 & 112
F 145 & 146	(2) #12 CU & (1) #12 GND.	20	39		·/.		40		-	SPACE
SPACE	-		41			-/-	42		-	SPACE
XISTING GE A SERIES PAN	EL			-	-	-	-	kVA T	OTAL	

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

5 Existing Panelboard H

( 5 \	Existing Panelboard I
\E002 /	Scale: None

20/208V 3Ø 4W+G				BUS	S RATIN	G: 225A				ML
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LOAD	EXISTING WIRING	20	1	·/.			2	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	3		·/.		4	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	5			-/-	6	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	7	·/.			8	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	9		·/.		10	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	11			-/-	12	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	13	·/.			14	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	15		-/-		16	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	17			-/-	18	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	19	·/.			20	20	(2) #12 CU & (1) #12 GND.	UV 134 A&B
UV 130 & 132	(2) #12 CU & (1) #12 GND.	20	21		·/.		22	20	(2) #12 CU & (1) #12 GND.	UV 131 & 133
UV 147	(2) #12 CU & (1) #12 GND.	20	23			-/.	24	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	25	·/.			26	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	27		·/.		28	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	-	20	29 31	·/.		·/.	30 32	20	EXISTING WIRING	EXISTING LOAD
EF 130 & 132	(2) #12 CU & (1) #12 GND.	20	33		-/-		34	20	(2) #12 CU & (1) #12 GND.	EF 134 A & B
SPACE	-		35			-/-	36	20	(2) #12 CU & (1) #12 GND.	EF 131 & 133
SPACE	-		37	·/.			38			
SPACE	-		39		·/.		40		-	SPACE
SPACE	_		41		r	- /	42		_	SPACE

BUS RATING: 225A

Existing Panelboard BP

CONDUCTORS

**EXISTING WIRING** 

EXISTING WIRING

**EXISTING WIRING** 

**EXISTING WIRING** 

EXISTING WIRING

**EXISTING WIRING** 

**EXISTING WIRING** 

EXISTING WIRING

**EXISTING WIRING EXISTING WIRING** 

EXISTING WIRING

**EXISTING WIRING** 

**EXISTING WIRING** 

**EXISTING WIRING** 

Existing Panelboard HA1

Existing Panelboard C

Scale: None

\E002 /

\ E002 / Scale: None

120/208V 3Ø 4W+G

CONNECTED LOAD

YM SOUND BOARD

TUME HOOD TO RM 210

FUME HOOD UNDER RM

IRE ALARM PANEL PL

UME HOOD FAN

UME HOOD FAN

UME HOOD FAN

IVAC CONT. PANEL

SYM HALLWAY

GYM HALLWAY

BOOSTER PUMP,

CONTROL PANEL

EXISTING GE SERIES A PANEL

E002 Scale: None

SPACE

AN ROOM 210

- PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND
- PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

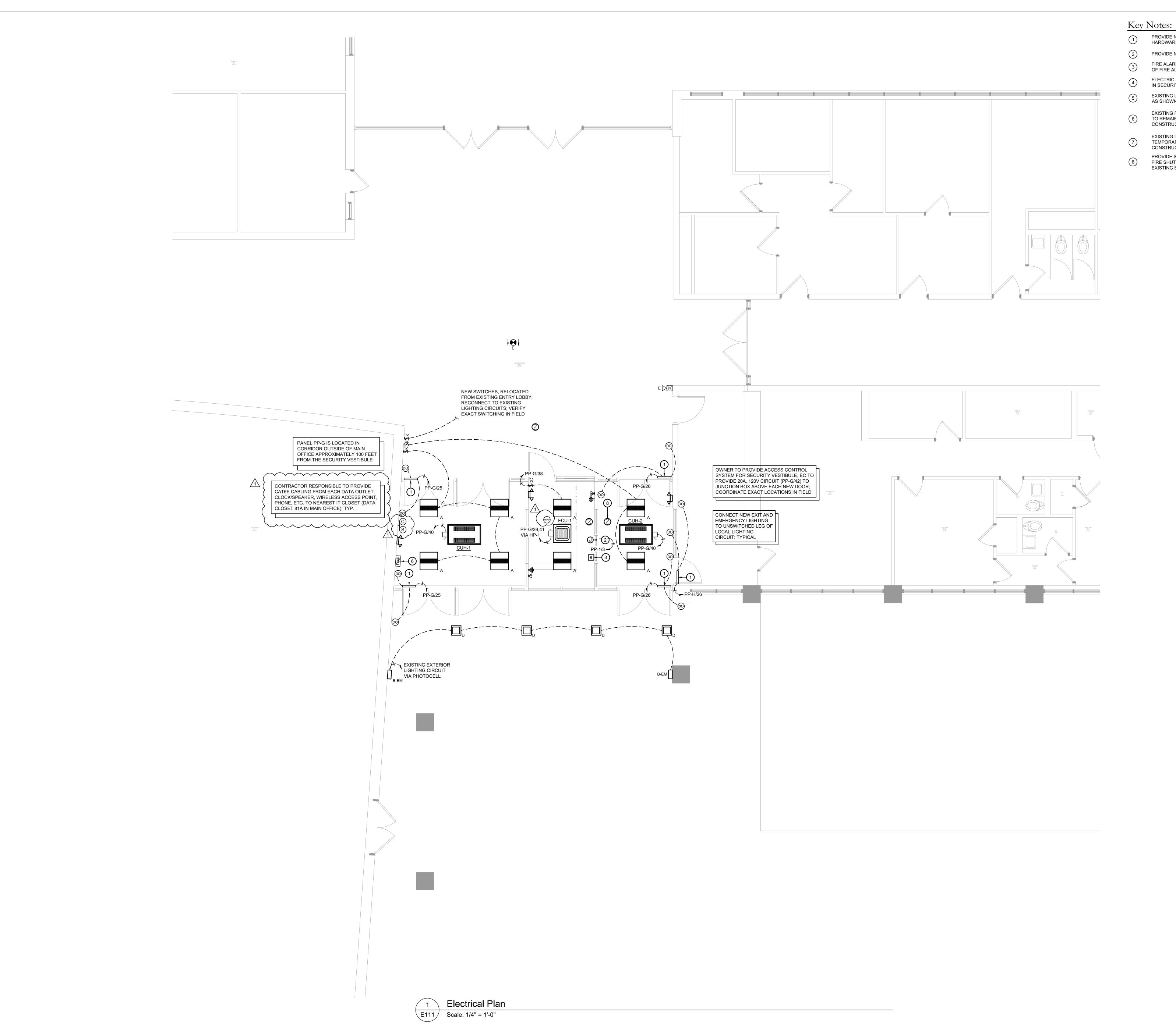
20/208V 3Ø 4W+G				BU	S RATIN	G: 225A				<u> </u>
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOA
EXISTING LOAD	EXISTING WIRING	20	1	-/-			2	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	3		·/.		4	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	5			·/.	6	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	7	-/-			8	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	9		-/-		10	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	11			·/.	12	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	13	·/.			14	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	15		-/-		16	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	17			·/.	18	20	EXISTING WIRING	EXISTING LOA
UV 158	(2) #12 CU & (1) #12 GND.	20	19	-/-			20	20	(2) #12 CU & (1) #12 GND.	UV 15
EXISTING LOAD	EXISTING WIRING	20	21		-/-		22	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	23			·/.	24	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	25	-/-			26	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	EXISTING WIRING	20	27		-/-		28	20	EXISTING WIRING	EXISTING LOA
EXISTING LOAD	-	20	29 31	-/.		<u>-</u> /	30 32	20	EXISTING WIRING	EXISTING LOA
SPACE	-		33		1.		34		-	SPACE
SPACE	-		35			·/.	36		-	SPACE
SPACE	-		37	-/-	1		38		-	SPACE
SPACE	-		39		-/-		40		-	SPACE
SPACE	-		41		ĺ		42		-	SPACE

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

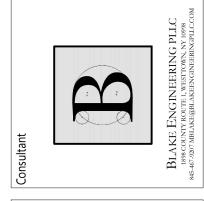
Existing Panelboard D

E002 Scale: None

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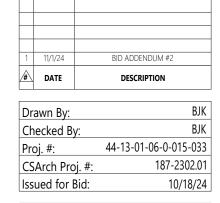


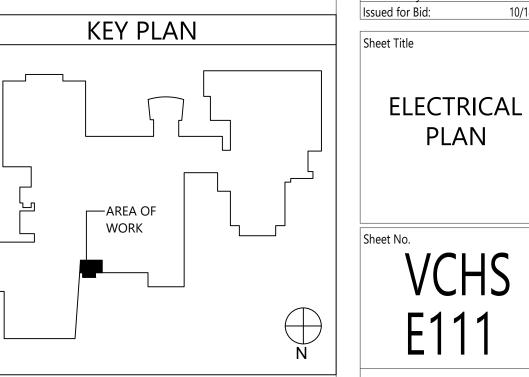
- PROVIDE NEW 120V ELECTRICAL CONNECTION FOR DOOR HARDWARE, INCLUDING MAGNETIC DOOR HOLDERS
- PROVIDE NEW 120V ELECTRICAL CONNECTION FOR FIRE SHUTTER
- FIRE ALARM RELAY; FIRE SHUTTER TO CLOSE UPON ACTIVATION OF FIRE ALARM
- ELECTRIC STRIKE TO BE CONTROLLED BY DOOR RELEASE BUTTON IN SECURITY BOOTH
- EXISTING LIGHT FIXTURE TO REMAIN; PROVIDE NEW SWITCH(ES) AS SHOWN; CONNECT TO EXISTING CIRCUIT
- EXISTING FIRE ALARM ANNUNCIATOR PANEL & GRAPHIC DISPLAY TO REMAIN; TEMPORARILY REMOVE, PROTECT & STORE DURING CONSTRUCTION; REINSTALL AFTER COMPLETION OF VESTIBULE
- EXISTING INTERCOM & CARD ACCESS CONTROL TO REMAIN; TEMPORARILY REMOVE, PROTECT & STORE DURING
- CONSTRUCTION; REINSTALL AFTER COMPLETION OF VESTIBULE
- PROVIDE SMOKE DETECTORS ON BOTH SIDES OF THE AUTOMATIC FIRE SHUTTER AT THE TRANSACTION WINDOW; CONNECT TO THE EXISTING BUILDING FIRE ALARM SYSTEM

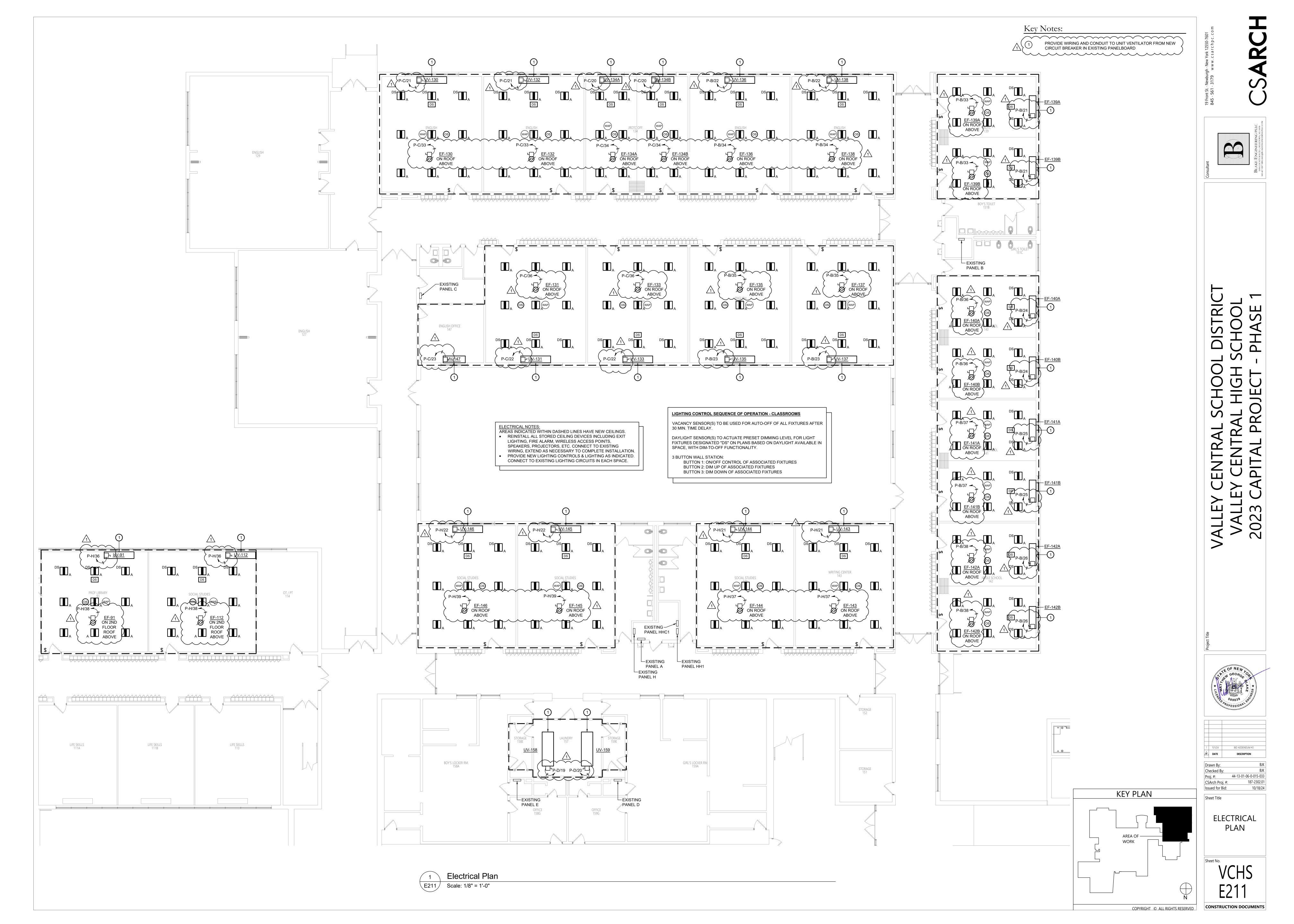


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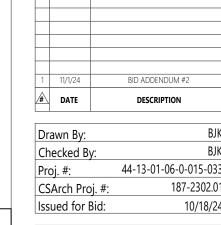








Key Notes:



44-13-01-06-0-015-033 #: 187-2302.01

### VALLEY CENTRAL SCHOOL DISTRICT VALLEY CENTRAL MIDDLE SCHOOL 2023 CAPITAL PROJECT - PHASE 1

**ISSUED FOR BID:** 10/18/24

CSARCH - ARCHITECTS

BLAKE ENGINEERING, PLLC - M.E.P. ENGINEERS PASSERO ASSOCIATES - SITE/CIVIL AND STRUCTURAL ENGINEERS AECC ENVIRONMENTAL CONSULTING - HAZARDOUS MATERIALS DESIGNERS

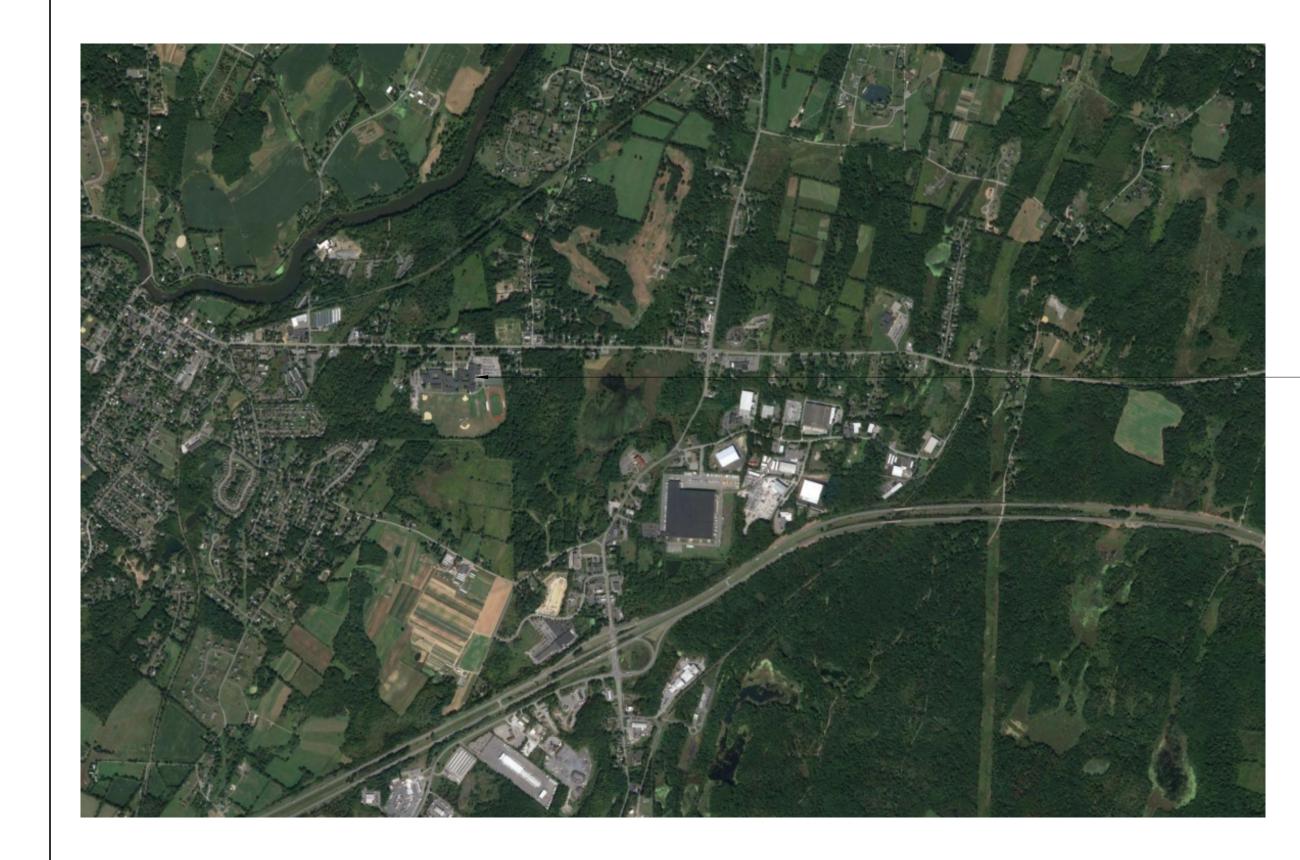
### STATE EDUCATION DEPARTMENT PROJECT CONTROL NUMBER:

2023 CAPITAL PROJECT - PHASE 1

44-13-01-06-0-016-023

THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT.

CSArch PROJECT NO. 187-2302.01



Valley Central Middle School 1175 NY-17K Montgomery, NY 12549

DRAWING LIST

**GENERAL DRAWINGS** 

VCMS G000 COVER & SHEET INDEX

VCMS G001 SYMBOLS, ABBREVIATIONS, MISC, AND PARTITION TYPES VCMS G111 OVERALL FLOOR PLAN - FIRST FLOOR

LIFE SAFETY DRAWINGS

VCMS LS102 SMOKE ZONE PLANS

VCMS LS101 LIFE SAFETY PLANS

ARCHITECTURAL DEMOLITION DRAWINGS VCMS AD111 ENLARGED REMOVAL PLAN - FIRST FLOOR - AREA A

VCMS A111 ENLARGED FLOOR PLANS AND SECTION - AREA A

VCMS A201 EXTERIOR ELEVATIONS

VCMS A202 EXTERIOR ELEVATIONS VCMS A811 REFLECTED CEILING PLAN - FIRST FLOOR - AREA A

VCMS A901 DOOR, WINDOW, & STOREFRONT DETAILS

**MECHANICAL GENERAL DRAWINGS** 

ARCHITECTURAL FINISH DRAWINGS

VCMS M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

MECHANICAL DEMOLITION DRAWINGS

VCMS MD111 MECHANICAL DEMOLITION PLAN

MECHANICAL DRAWINGS

VCMS M111 MECHANICAL PLAN

**ELECTRICAL GENERAL DRAWINGS** 

VCMS E001 ELECTRICAL NOTES, LEGENDS, & SCHEDULES

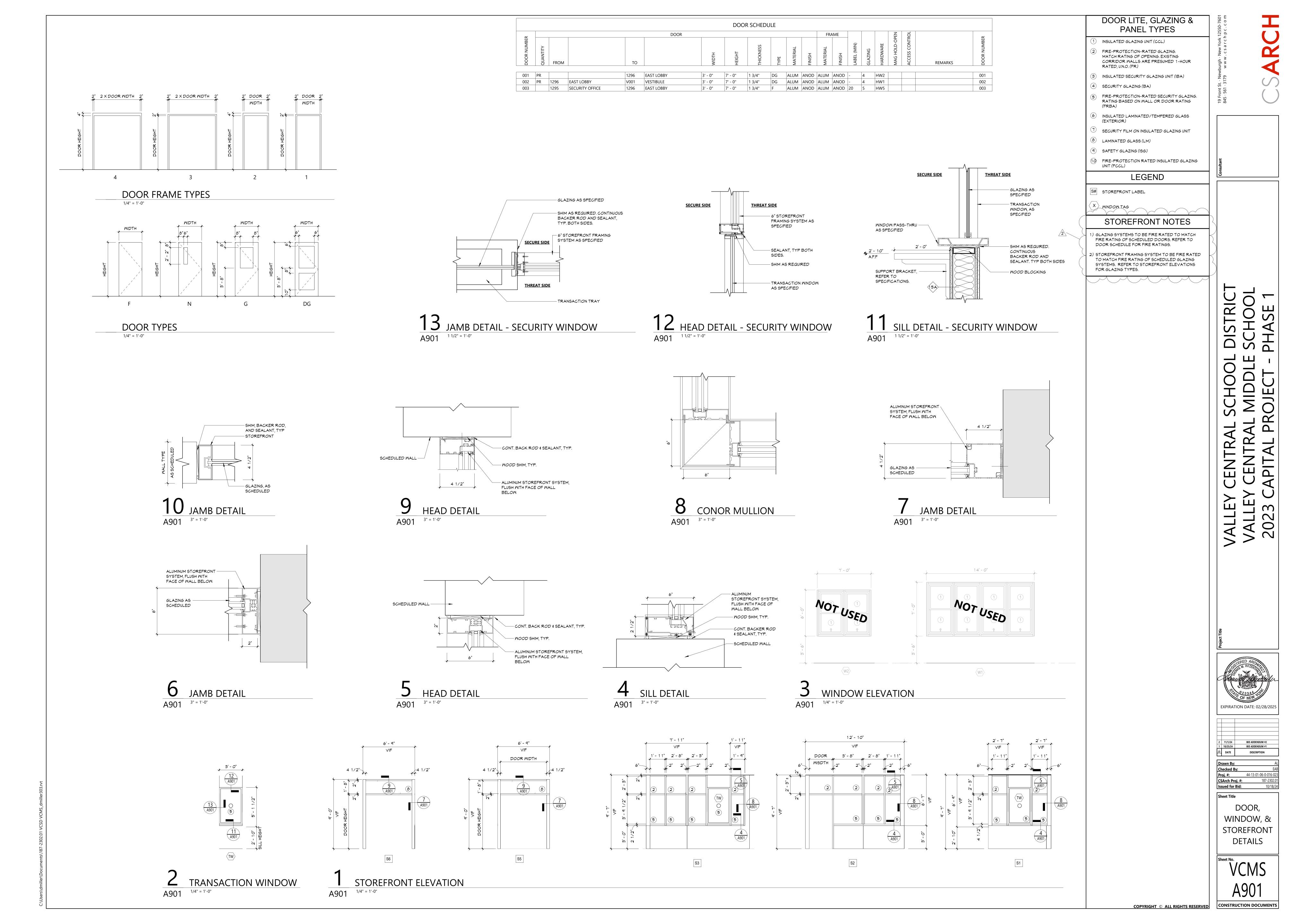
**ELECTRICAL DEMOLITION DRAWINGS** VCMS ED111 ELECTRICAL DEMOLITION PLAN

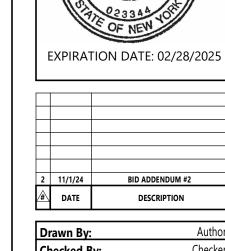
**ELECTRICAL DRAWINGS** 

VCMS E111 ELECTRICAL PLAN

VICINITY MAP



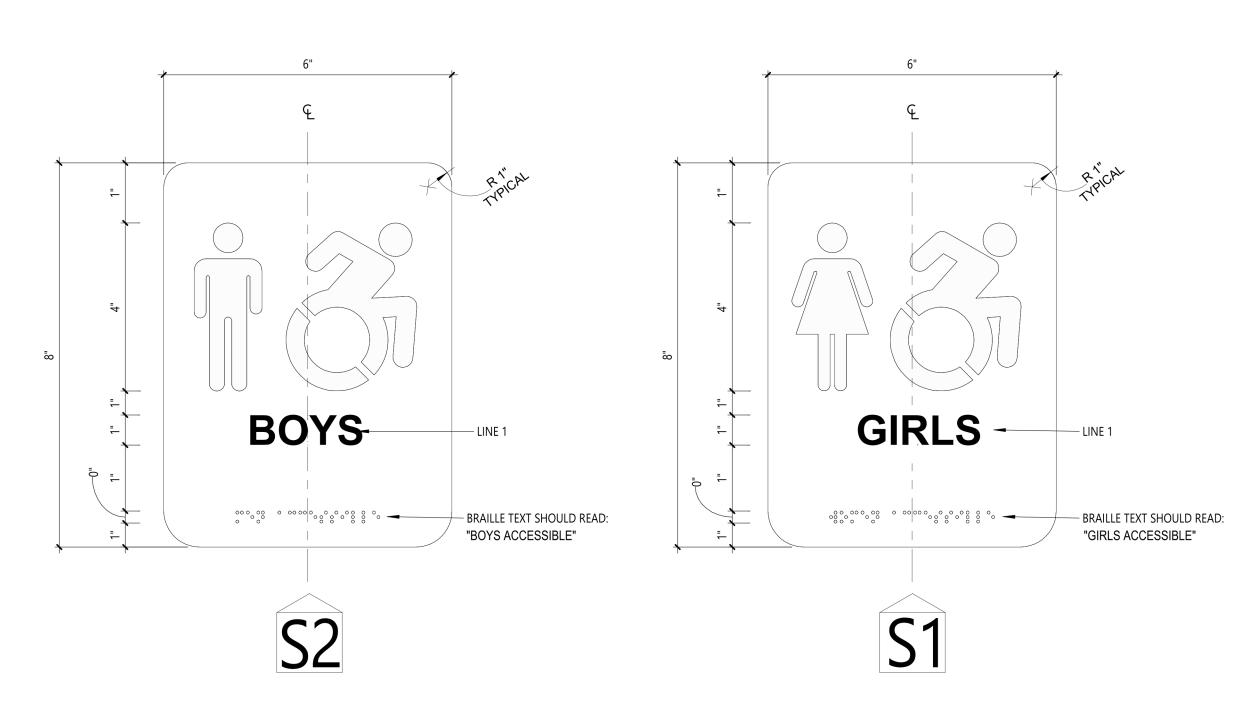


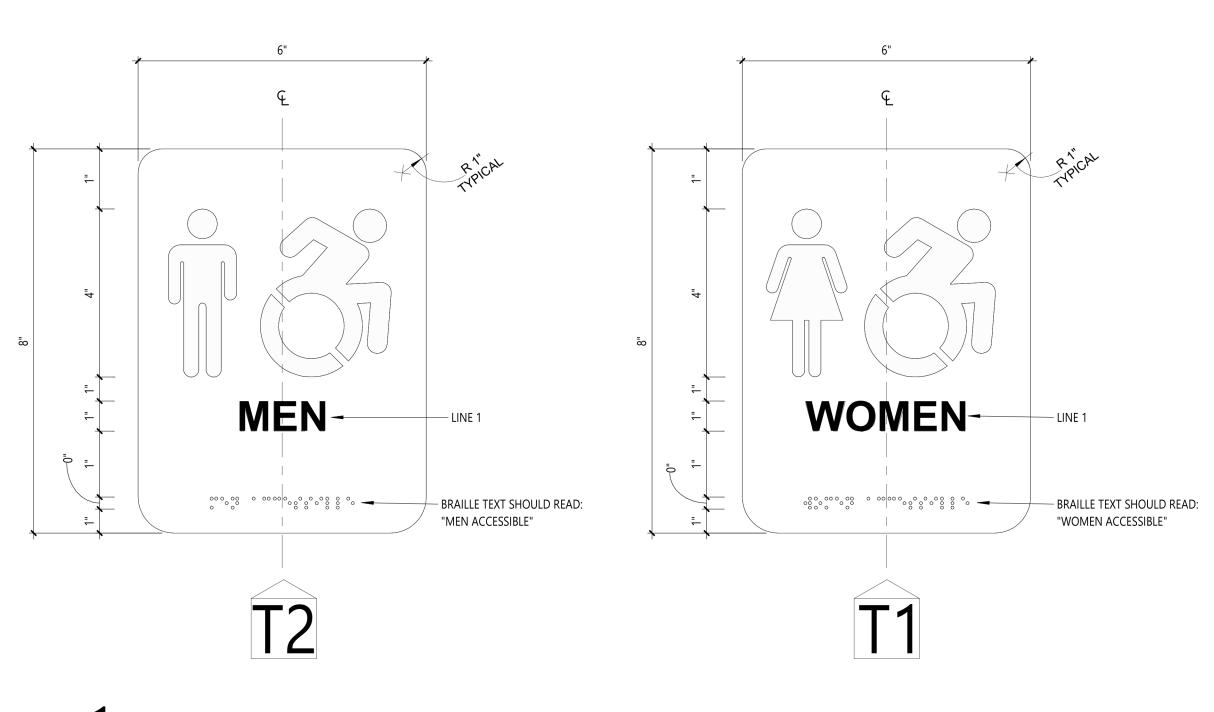


SIGNAGE TYPES AND SCHEDULE

Sheet No.
VCMS
AF001

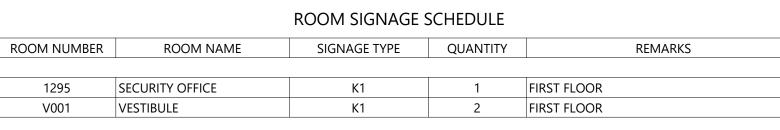
1" 1/2" MINIMUM BORDER
(NO LETTERING OR
GRAPHIC), TYPICAL ALL
SIDES — LINE 2 — BRAILLE TEXT BRAILLE TEXT SHOULD READ: "ALL GENDER RESTROOM ACCESSIBLE" N1



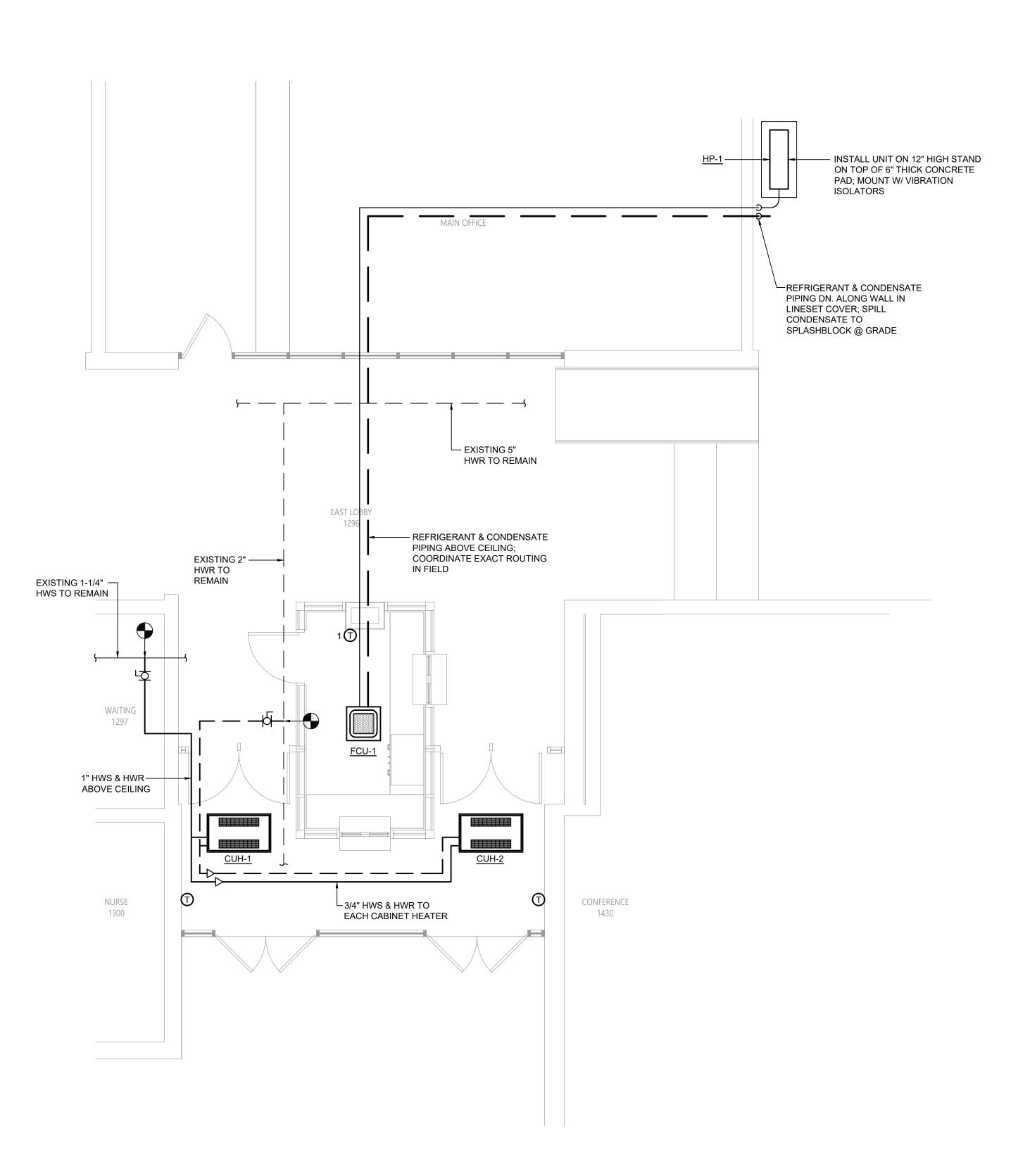


PANEL SIGNAGE ELEVATIONS

AF001 1/4" = 1'-0"



1) REFER TO PANEL SIGNAGE ELEVATIONS FOR SIGNAGE TYPES. 2) REFER TO SPECIFICATION SECTION 101423 - "INTERIOR PANEL SIGNAGE" FOR ADDITIONAL INFORMATION. 3) ALL EXISTING PANEL SIGNAGE FOR ROOMS NOTED ABOVE SHALL BE REMOVED AND REPLACED WITH NEW.
4) FINAL NUMBERING AND NAMING OF ROOMS TO BE DETERMINED BY OWNER DURING THE SUBMITTAL AND SHOP DRAWING REVIEW.



1 Mechanical Plan
M111 Scale: 1/4" = 1'-0"

DDC Temperature Control Notes:

1. HVAC CONTROLS SHALL BE FURNISHED & INSTALLED BY THE OWNER TO MATCH THE EXISTING BUILDING AUTOMATION SYSTEM IN EACH BUILDING (SIEMENS AT THE MIDDLE SCHOOL). ALL HARDWARE, WIRING AND PROGRAMMING TO BE PROVIDED BY OWNER. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER'S VENDOR THROUGHOUT THE PROJECT TO SUPPORT INSTALLATION, TESTING AND COMMISSIONING. MECHANICAL CONTRACTOR TO INSTALL ALL DEVICES MOUNTED IN OR ON THE PIPING AND/OR DUCTWORK INCLUDING BUT NOT LIMITED TO HYDRONIC CONTROL VALVES, TEMPERATURE SENSORS, FLOW SENSORS, ETC. MECHANICAL CONTRACTOR TO PROVIDE ALL NECESSARY PORTS/THERMOWELLS FOR SENSORS, GAUGES, ETC. COORDINATE WITH OWNER'S VENDOR FOR QUANTITY AND LOCATIONS.

 OWNER SHALL EXPAND EXISTING BUILDING AUTOMATION SYSTEM TO PROVIDE THE CONTROL SEQUENCES SPECIFIED ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE SYSTEM SHALL PROVIDE CONTROL AND MONITORING OF THE EQUIPMENT INDICATED.

3. OWNER SHALL PROVIDE CONTROLLERS AND COMMUNICATIONS INFRASTRUCTURE TO MATCH EXISTING CAMPUS-WIDE BUILDING AUTOMATION SYSTEM. PROVIDE SEAMLESS INTEGRATION WITH EXISTING CONTROL NETWORK AND USER INTERFACES. NETWORK GATEWAYS AND PROTOCOL INTERFACE EQUIPMENT ARE NOT ACCEPTABLE UNLESS OTHERWISE NOTED.

 OWNER SHALL PROVIDE INSTRUMENTATION, SENSORS, VALVES, DAMPERS, ACTUATORS AND WIRING AS REQUIRED TO PROVIDE SPECIFIED OPERATING SEQUENCES.

5. OWNER SHALL MODIFY EXISTING GRAPHIC USER INTERFACES TO INCLUDE ALL EQUIPMENT AND SYSTEMS INCLUDED IN THIS PROJECT.

6. OWNER SHALL REPLACE THE EXISTING BAS SERVER HARDWARE AND UPGRADE THE SOFTWARE TO THE LATEST VERSION OF WEB-ENABLED GRAPHICAL USER INTERFACE WITH A SEAMLESS INTEGRATION OF THE NEW AND EXISTING CONTROL POINTS.

7. OWNER SHALL BE RESPONSIBLE FOR POWER THAT IS NOT SHOWN ON THE ELECTRICAL DRAWINGS, TO CONTROLS FURNISHED BY THIS CONTRACTOR. IF POWER CIRCUITS ARE SHOWN ON THE ELECTRICAL DRAWINGS, OWNER SHALL CONTINUE THE POWER RUN TO THE CONTROL DEVICE. IF POWER CIRCUITS ARE NOT SHOWN, OWNER SHALL PROVIDE BREAKERS AT DISTRIBUTION PANELS FOR POWER TO CONTROLS AND PROVIDE POWER FROM THE DISTRIBUTION PANEL TO THE CONTROL DEVICES.

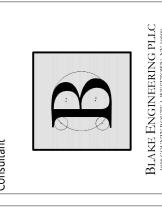
 OWNER SHALL FURNISH & INSTALL ALL REQUIRED END DEVICES, POWER SUPPLY, LOW VOLTAGE TRANSFORMERS, CONTROL WIRING & CONDUITS, ETC. FOR A COMPLETE & OPERATIONAL DDC CONTROL SYSTEM.

 NEW WIRING & CONDUITS SHALL BE RUN CONCEALED ABOVE CEILING. ALL EXPOSED WIRING & CONDUITS SHALL BE RUN CONCEALED IN EMT IN UTILITY SPACES AND WIREMOLD IN FINISHED AREAS.

10.OWNER TO FIELD INSTALL SENSORS, CONTROLLERS, ETC. WHICH ARE NOT FACTORY-INSTALLED BY EQUIPMENT MANUFACTURERS.

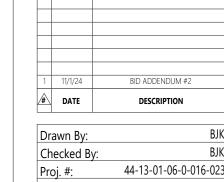
11.ANY EQUIPMENT FURNISHED WITH FACTORY CONTROLS SHALL BE PROVIDED WITH BACNET MSTP INTEGRATION CAPABILITIES AND INCLUDE ON-SITE FACTORY CONTROLS INTEGRATION START-UP IN COORDINATION WITH OWNER'S BUILDING AUTOMATION SYSTEM.

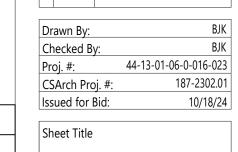
## CSARC

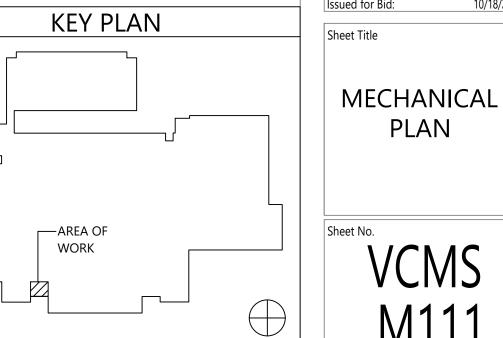


# VALLEY CENTRAL SCHOOL DISTRIC VALLEY CENTRAL MIDDLE SCHOOL 2023 CAPITAL PROJECT - PHASE 1









			LIGHT	TING FIX	ГURE	SCHED	ULE			
TAG	SYMBOL	MANUFACTURER & MODEL	TYPE	VOLTAGE	# OF LAMPS	LAMP WATTS	FIXTURE WATTS	MOUNTING	SIZE	NOTES
А	<b>O</b> A	HE WILLIAMS 6" LED DOWNLIGHT - ROUND 6DR-TL-L30/840-DIM-UNV-LW-OF-WH-R	LED	120	1	26.9	26.9	RECESSED	6"Ø	4000K COLOR TEMPERATURE; REMODEL KIT
В	В-ЕМ	HE WILLIAMS VOLTAIRE ARCHITECTURAL WALL PACK VWPH-L30/740-T3-DBZ-SDGL-EM/10WC-DIM-UNV	LED	120	1	36	36	SURFACE WALL MOUNT	12"x12"	VANDAL RESISTANT; 4000K COLOR TEMPERATURE; W/ LED EMERGENCY 90 MINUTE LOW TEMPERATURE BATTERY BACKUP; UL 924 LISTED FIXTURE
-	4	HE WILLIAMS LED EMERGENCY LIGHT EMER/LED-WHT-SDT-D	LED	120	2	1.0	2.0	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP
-	\$	HE WILLIAMS LED EXIT & EMERGENCY LIGHT EXIT/EM/LED-R-WHT-RC-SDT-D	LED	120	2	1.5	3.4	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP; PROVIDE W/ REMOTE HEAD MODEL WETRHL-T-WHT-HL-MV
-	⊗	HE WILLIAMS LED EXIT LIGHT EXIT-R-EM-WHT-SDT-D	LED	120	1	3.8	3.8	UNIVERSAL	-	90-MINUTE BATTERY BACKUP

120/208V 3Ø 4W+G				BU	S RATIN	G: 100A				MI
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXISTING LOAD	EXISTING WIRING	20	1	·/.			2	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	3		·/.		4	20	-	SPARE
SPARE	-	20	5			·/.	6	20	-	SPARE
SPARE	-	20	7	·/.			8	20	-	SPARE
SPARE	-	20	9		·/.		10	20	-	SPARE
EXISTING LOAD	EXISTING WIRING	20	11			·/	12	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	13	·/.			14	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	15		·/.		16	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	17			-/-	18	20	EXISTING WIRING	EXISTING LOAD
EXISTING LOAD	EXISTING WIRING	20	19	·/.			20	20	(2) #12 CU & (1) #12 GND.	ACCESS CONTROL
SPARE	-	20	21		-/-		22	20	(2) #12 CU & (1) #12 GND.	FIRE SHUTTERS
			23			·/.	24	20	(2) #12 CU & (1) #12 GND.	CABINET UNIT HEATERS
EXISTING LOAD	EXISTING WIRING	20	25	·/.			26	20	(2) #12 CU & (1) #12 GND.	DOOR OPERATORS
			27		-/-		28	20	(2) #12 CU & (1) #12 GND.	RECEPTACLES
UD 4 0 FOUL 4	(0)   40 011 0 (4)   40 0110		29			-/-	30	20	(2) #12 CU & (1) #12 GND.	LIGHTING
HP-1 & FCU-1	(2) #12 CU & (1) #12 GND.	25	31	-/-			32	20	(2) #12 CU & (1) #12 GND.	EXTERIOR LIGHTING
SPARE	-	20	33		-/-		34	20	-	SPARE
SPARE	-	20	35			-/-	36	20	-	SPARE
SPARE	-	20	37	·/.			38	20	-	SPARE
SPARE	-	20	39		-/-		40	20	-	SPARE
SPARE	_	20	41			· /	42	20		SPARE

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

Existing Panelboard PP-H (Section 1) Scale: None

### FIRE ALARM LEGEND:

HORN/STROBE DEVICE, ONE ASSEMBLY; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15 CANDELA UNLESS OTHERWISE NOTED

STROBE DEVICE; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15

CANDELA UNLESS OTHERWISE NOTED

MANUAL PULL STATION; MTD. 48" A.F.F.

WATER FLOW SWITCH

VALVE TAMPER SWITCH

DETECTOR; LETTER INDICATES AS FOLLOWS: BLANK = SMOKE DETECTOR P = PHOTOELECTRIC SMOKE M = MULTIPLE STATION SMOKE ALARM

RATE OF RISE HEAT DETECTOR, 135°F

FSD = DUCT SMOKE DETECTOR FOR FIRE SMOKE DAMPER

D = PHOTOELECTRIC DUCT SMOKE DETECTOR

CARBON MONOXIDE DETECTOR; MTD. 60" A.F.F.

ADDRESSABLE FIRE ALARM CONTROL PANEL

FIRE ALARM ANNUNCIATOR PANEL

REMOTE TEST SWITCH & LED FOR DUCT SMOKE DETECTORS

FIRE ALARM RELAY

### SECURITY LEGEND:

PANIC BUTTON - 18/4 SHIELDED

INTERCOM

DOOR RELEASE BUTTON - 16/2 SHIELDED

WORKSTATION FOR CARD ACCESS & VIDEO SYSTEM

CARD READER - 22/6 SHIELDED

REQUEST TO EXIT - 18/4 SHIELDED

MAGNETIC DOOR CONTACT - 16/2 SHIELDED

ELECTRIC LOCK - 16/2 SHIELDED

ELECTRICAL LEGEND:

MOTOR

EARTH GROUND

JUNCTION BOX

EMERGENCY POWER OFF BUTTON FUSE WITH RATING

MOLDED CASE CIRCUIT BREAKER

DISCONNECT SWITCH, FUSED

DISCONNECT SWITCH, UNFUSED

STARTER, COMBINATION WITH DISCONNECT SWITCH

STARTER OR MOTOR CONTROLLER

M

20A 120V DUPLEX CEILING MOUNTED RECEPTACLE

20A 120V DUPLEX WALL MOUNTED RECEPTACLE; 18" A.F.F. UNLESS OTHERWISE NOTED

20A 120V DUPLEX WALL MOUNTED RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER

20A 120V QUADRAPLEX RECEPTACLE

WALL MOUNTED SPECIAL PURPOSE RECEPTACLE

⇒ USB 20A 120V WALL MOUNTED USB CHARGER RECEPTACLE TYPICAL OF HUBBELL USB20X OR ACCEPTABLE EQUAL

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE; FLUSH MOUNTED

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE & 2 PORT ETHERNET OUTLET; FLUSH MOUNTED

FLOOR MOUNTED BOX W/ QUAD RECEPTACLE & 2 PORT ETHERNET OUTLET; FLUSH MOUNTED

WALL PHONE OUTLET MTD. 48" A.F.F.; 3/4" EMT CDT. IN WALL TO ABOVE CEILING; PROVIDE 1 PORT ETHERNET WALL PLATE; PROVIDE (1) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT CLOSET

WALL BOX FOR TELEVISION CONNECTION; 1-1/4" EMT CDT. IN WALL TO ABOVE CEILING W/ PULL CORD

PROVIDE (2) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT BRANCH CIRCUIT HOMERUN; LINES INDICATE NUMBER OF CIRCUITS, NEUTRAL, AND SWITCH LEG CONDUCTORS; ONE SEPARATE

GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH

TELEPHONE/DATA COMMUNICATION BOX W/ (2) 3/4" EMT CDT. IN

WALL TO ABOVE CEILING; PROVIDE 2 PORT ETHERNET WALL PLATE;

HOMERUN; NOT SHOWN 2 = DOUBLE POLE BLANK = SINGLE POLE 3 = THREE-WAY 4 = FOUR-WAY D = DIMMER K = KEY OPERATED P = WITH PILOT LIGHT PB= PUSH BUTTON T = TIMER OPERATED WP= WEATHER PROOF

DUAL TECHNOLOGY OCCUPANCY SENSOR

DAYLIGHT SENSOR

X = EXPLOSION PROOF

MULTIMEDIA BOX. PROVIDE DEVICE BOX AT 60" ABOVE FINISHED FLOOR WITH DUPLEX RECEPTACLE & (2) CAT6E PORTS. PROVIDE FACEPLATES AND (2) 1-1/4" CONDUITS STUBBED ABOVE CEILING. (1) W/ CAT6E CABLES RUN TO NEAREST IT CLOSET & (1) W/ PULL CORD FOR FUTURE HDMI. RECESS MOUNT BOX TYPICAL OF WIREMOLD EVOLUTION SERIES WITH CONCEALED CONDUITS IN EXISTING FRAMED WALLS AND ALL NEW WALLS. PROVIDE SURFACE MOUNT BOXES WITH DUAL CHANNEL SURFACE MOUNT RACEWAY (LEGRAND WIREMOLD 5400 SERIES) WHERE INSTALLED ON EXISTING MASONRY

OC= OCCUPANCY SENSOR

WIRELESS ACCESS POINT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE AT CEILING DEVICE & RUN CABLING TO NEAREST DATA CLOSET

COMBINATION WALL MOUNTED CLOCK/SPEAKER UNIT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE TO DEVICE & RUN CABLING TO NEAREST DATA CLOSET

ELECTRICAL NOTES:

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

	WII	RE CO	LOR	COD	ING '	TABL	E
PHASE	WIRES	VOLTAGE	L1	L2	L3	NEUTRAL	GROUND
1	2 (1)	120	BLACK	-	-	WHITE	-
1	2 (1)	208	BLACK	RED	-	-	-
1	3	120	BLACK	-	-	WHITE	GREEN (2)
1	3	208	BLACK	RED	-	ı	GREEN (2)
3	4	208	BLACK	RED	BLUE	-	GREEN (2)
3	5	208	BLACK	RED	BLUE	WHITE	GREEN (2)
1	3	277	BROWN	-	-	GRAY	GREEN (2)
1	3	480	BROWN	ORANGE	-	-	GREEN (2)
3	4	480	BROWN	ORANGE	YELLOW	-	GREEN (2)
3	5	480	BROWN	ORANGE	YELLOW	GRAY	GREEN (2)

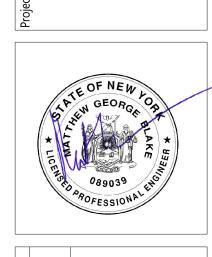
FOR DOUBLE INSULATED EQUIPMENT ONLY.

CONDUCTORS.

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

- GREEN OR GREEN/YELLOW MUST ONLY BE USED FOR GROUNDING

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



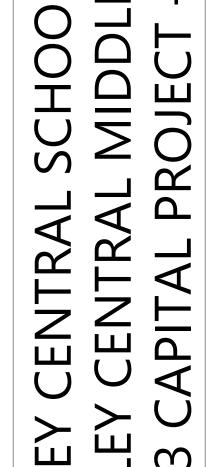
BID ADDENDUM #2 # DATE DESCRIPTION Drawn By: Proj. #:

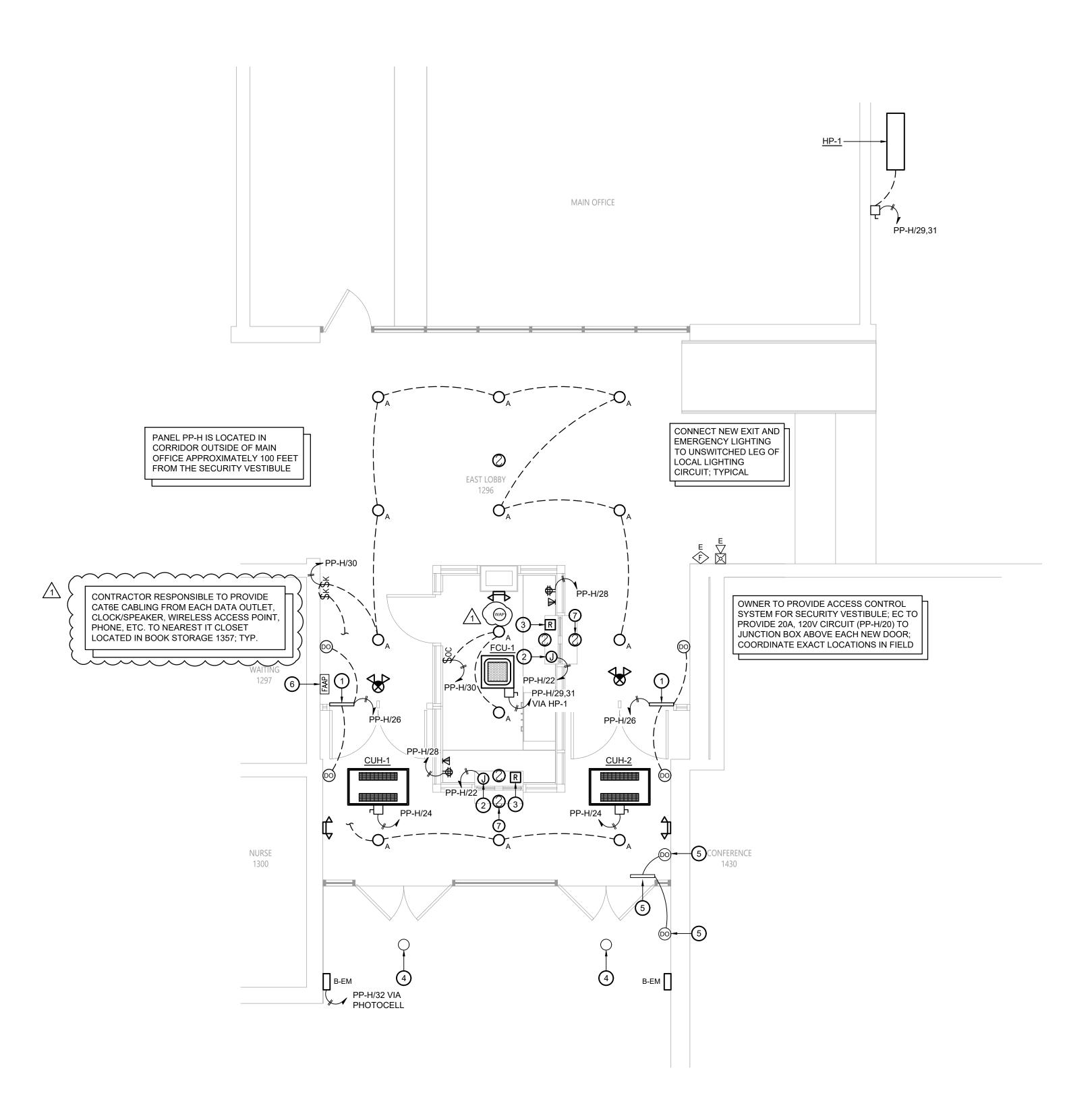
> ELECTRICAL NOTES,

LEGENDS &

CSArch Proj. #: Issued for Bid:

**SCHEDULES** 



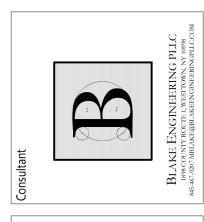


1 Electrical Plan
E111 Scale: 1/4" = 1'-0"

### Key Notes:

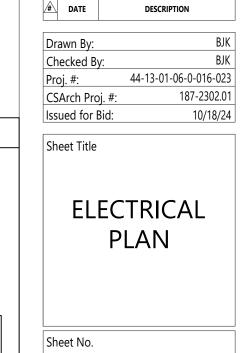
- ADA DOOR OPERATORS PROVIDED BY GC; EC TO PROVIDE ALL 120V LINE VOLTAGE POWER TO OPERATOR & CONTROL DEVICES; GC TO PROVIDE ALL LOW VOLTAGE CONTROLS
- 2 PROVIDE NEW 120V ELECTRICAL CONNECTION FOR FIRE SHUTTER
- FIRE ALARM RELAY; FIRE SHUTTER TO CLOSE UPON ACTIVATION OF FIRE ALARM
- (4) EXISTING LIGHT FIXTURE TO REMAIN
- (5) EXISTING DOOR OPERATOR & ADA PADDLE SWITCH TO REMAIN
- 6 EXISTING FIRE ALARM ANNUNCIATOR PANEL & GRAPHIC DISPLAY TO REMAIN; TEMPORARILY REMOVE, PROTECT & STORE DURING CONSTRUCTION; REINSTALL AFTER COMPLETION OF VESTIBULE
- PROVIDE SMOKE DETECTORS ON BOTH SIDES OF THE AUTOMATIC FIRE SHUTTER AT THE TRANSACTION WINDOW; CONNECT TO THE EXISTING BUILDING FIRE ALARM SYSTEM

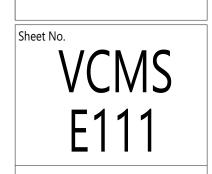




# VALLEY CENTRAL SCHOOL DISTRICT VALLEY CENTRAL MIDDLE SCHOOL 2023 CAPITAL PROJECT - PHASE 1









KEY PLAN

## VALLEY CENTRAL SCHOOL DISTRICT WALDEN ELEMENTARY SCHOOL 2023 CAPITAL PROJECT - PHASE 1

-ADD ALTERNATE ALT-GAC-1-01-001

**ISSUED FOR BID:** 10/18/24

CSARCH - ARCHITECTS

BLAKE ENGINEERING, PLLC - M.E.P. ENGINEERS PASSERO ASSOCIATES - SITE/CIVIL AND STRUCTURAL ENGINEERS AECC ENVIRONMENTAL CONSULTING - HAZARDOUS MATERIALS DESIGNERS

STATE EDUCATION DEPARTMENT PROJECT CONTROL NUMBER:

THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT

2023 CAPITAL PROJECT - PHASE 1 44-13-01-06-0-009-021 -ADD ALTERNATE ALT-GAC-1-01-001 THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND

CSArch PROJECT NO. 187-2302.01

VICINITY MAP



Walden Elementary School 75 Orchard St Walden, NY 12586



PLUMBING GENERAL DRAWINGS WES P001 PLUMBING NOTES, SCHEDULE, LEGEND & DETAILS

**ADD ALTERNATE ALT-GAC-1-01-001** 

PLUMBING GENERAL DRAWINGS

WES P111 PLUMBING PLANS

**GENERAL DRAWINGS** 

LIFE SAFETY DRAWINGS

STRUCTURAL DRAWINGS

ARCHITECTURAL DRAWINGS

WES A651 CASEWORK DETAILS

WES A701 PARTITION TYPES WES A702 PARTITION TYPES

WES LS101 LIFE SAFETY PLANS WES LS102 SMOKE ZONE PLANS

ARCHITECTURAL DEMOLITION DRAWINGS

WES A601 ELEVATIONS AND SECTIONS

ARCHITECTURAL FINISH DRAWINGS

WES AFOO1 SIGNAGE TYPES AND SCHEDULE

WES AD111 REMOVAL PLANS - FIRST & SECOND FLOOR

WES S100 STRUCTURAL NOTES, PLANS, AND DETAILS

WES A901 DOOR, WINDOW, & STOREFRONT DETAILS

WES A111 NEW WORK PLANS - FIRST AND SECOND FLOOR

WES A811 REFLECTED CEILING PLANS, DEMO PLANS, AND DETAILS

WES AF1 11 MATERIAL SCHEDULE, FURNITURE, AND FLOOR FINISH PLANS

WES G000 COVER & SHEET INDEX

WES G001 SYMBOLS, ABBREVIATIONS, AND MISC WES G111 OVERALL FLOOR PLAN - FIRST FLOOR WES G121 OVERALL FLOOR PLAN - SECOND FLOOR

MECHANICAL GENERAL DRAWINGS

WES M001 MECHANICAL NOTES, LEGENDS, SCHEDULES & DETAILS

**DRAWING LIST** 

MECHANICAL DEMOLITION DRAWINGS WES MD111 MECHANICAL DEMOLITION PLANS

**MECHANICAL DRAWINGS** 

WES M111 MECHANICAL PLANS

**ELECTRICAL GENERAL DRAWINGS** 

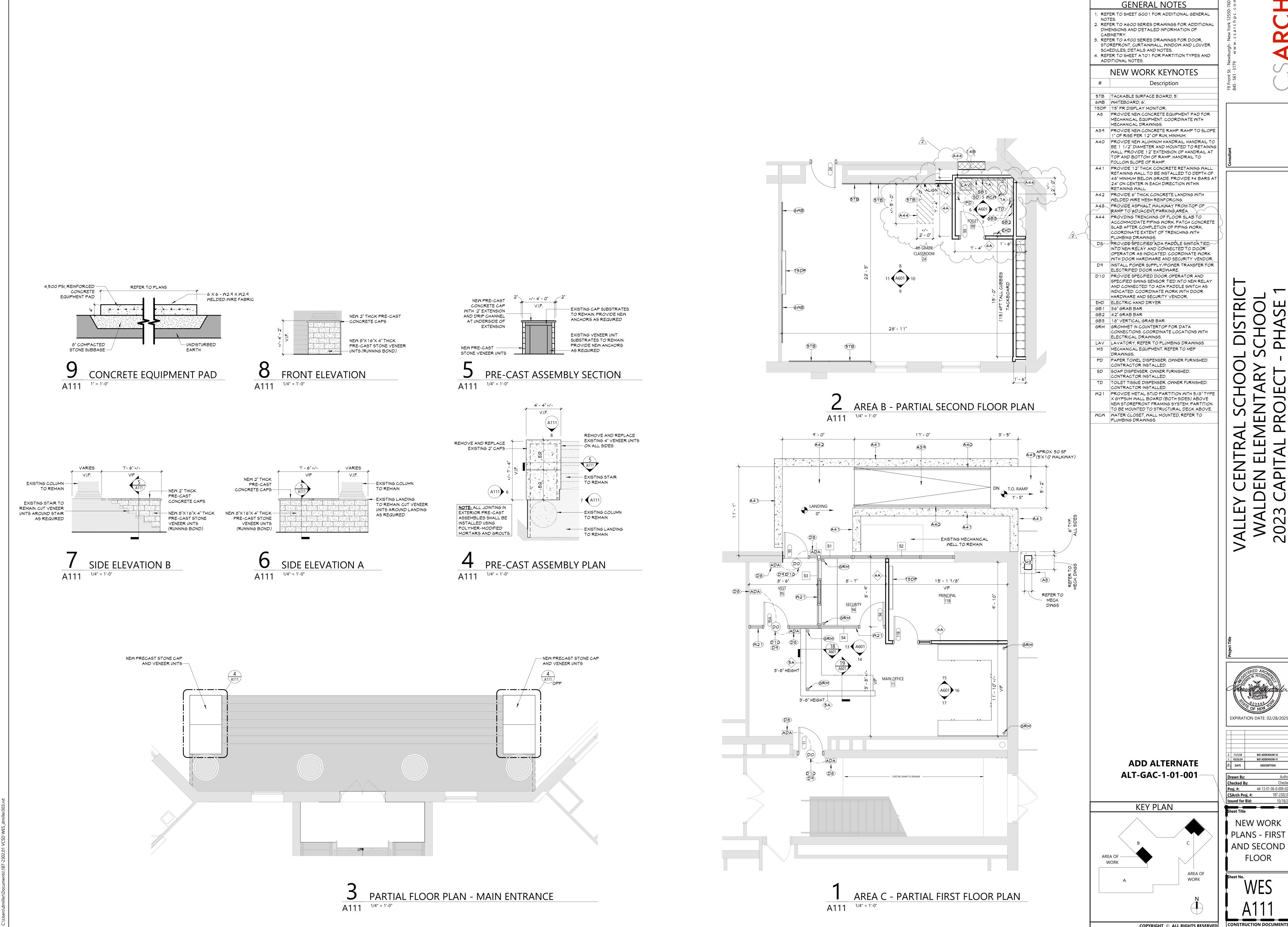
WES E001 ELECTRICAL NOTES, LEGENDS, SCHEDULES & DETAILS

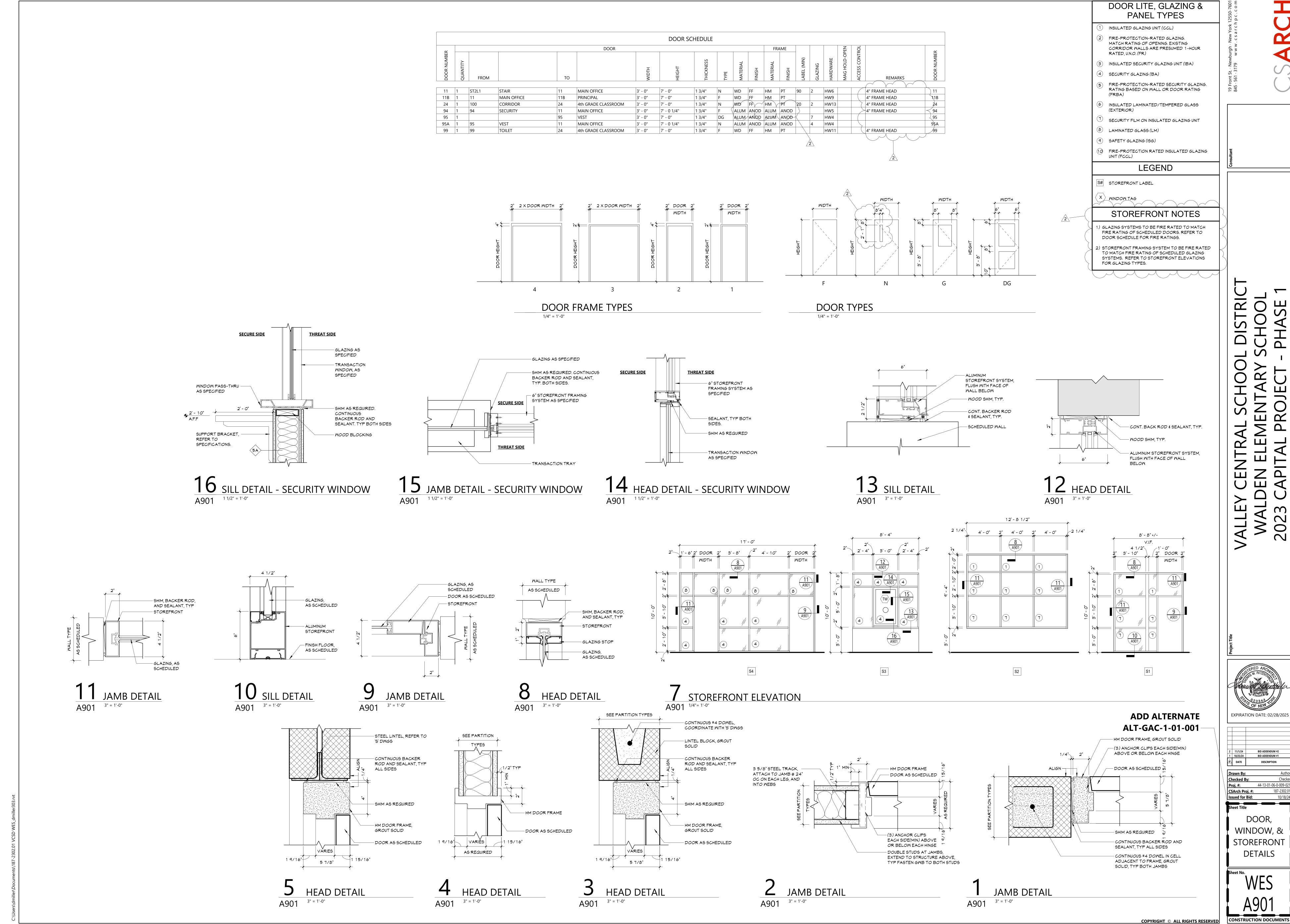
**ELECTRICAL DEMOLITION DRAWINGS** WES ED111 ELECTRICAL DEMOLITION PLANS

**ELECTRICAL DRAWINGS** 

WES E111 ELECTRICAL PLANS

**ADD ALTERNATE ALT-GAC-1-01-001** 

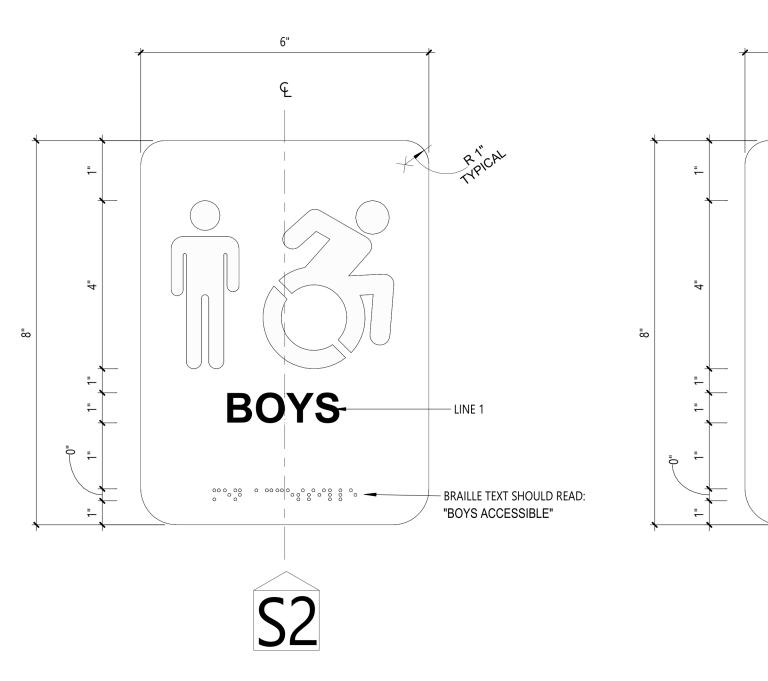


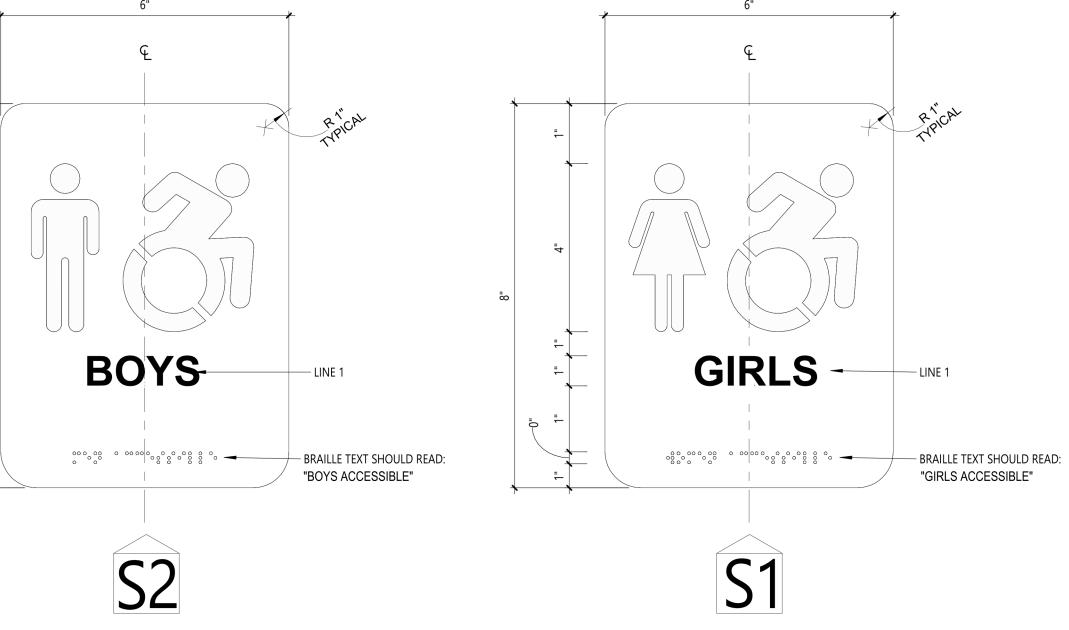


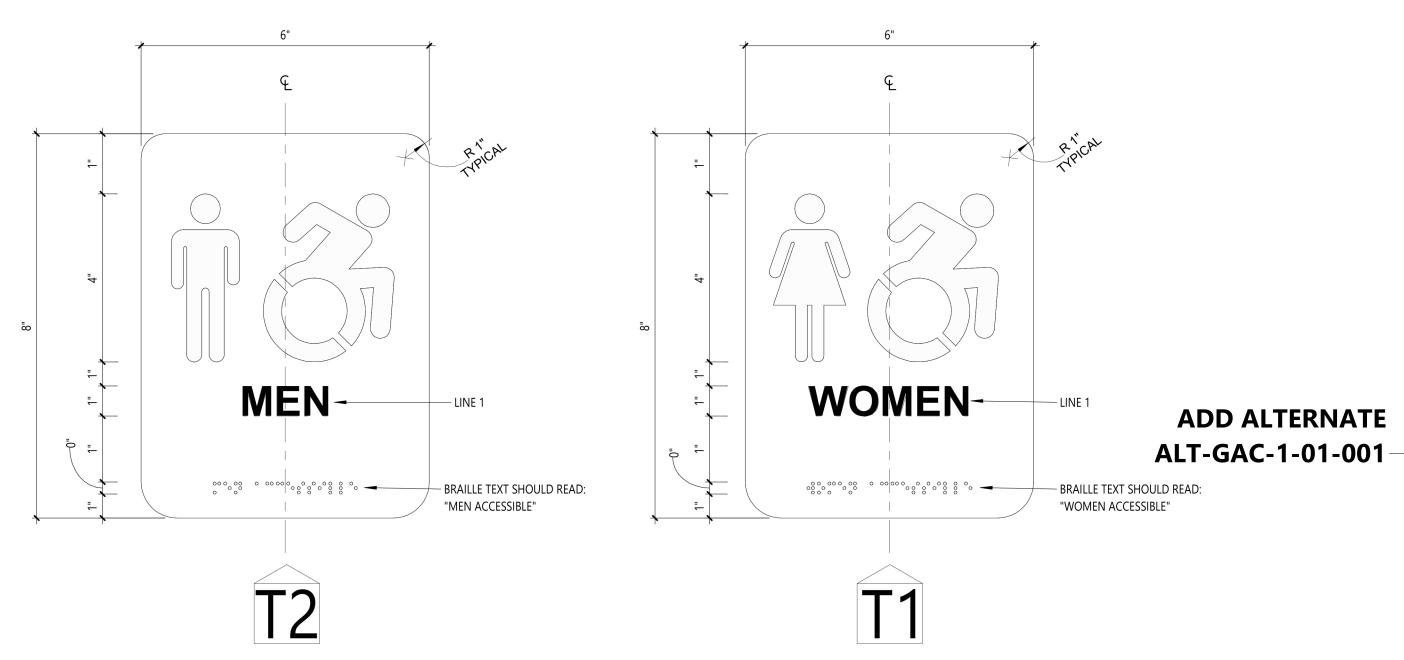
SIGNAGE TYPES AND SCHEDULE

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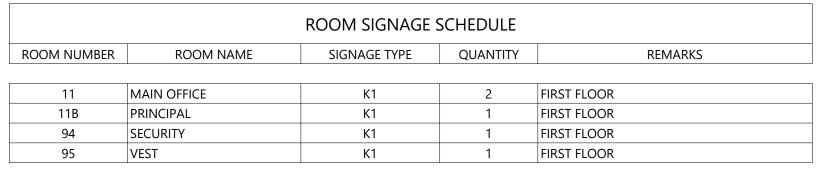
1/2" MINIMUM BORDER (NO LETTERING OR GRAPHIC), TYPICAL ALL — BRAILLE TEXT 







1	
	PANEL SIGNAGE ELEVATIONS
AF001	1/4" = 1'-0"



ROOM SIGNAGE SCHEDULE									
ROOM NUMBER	ROOM NAME	SIGNAGE TYPE	QUANTITY	REMARKS					
24	4th GRADE CLASSROOM	K1	1	SECOND FLOOR					
99	TOILET	N1	1	SECOND FLOOR					

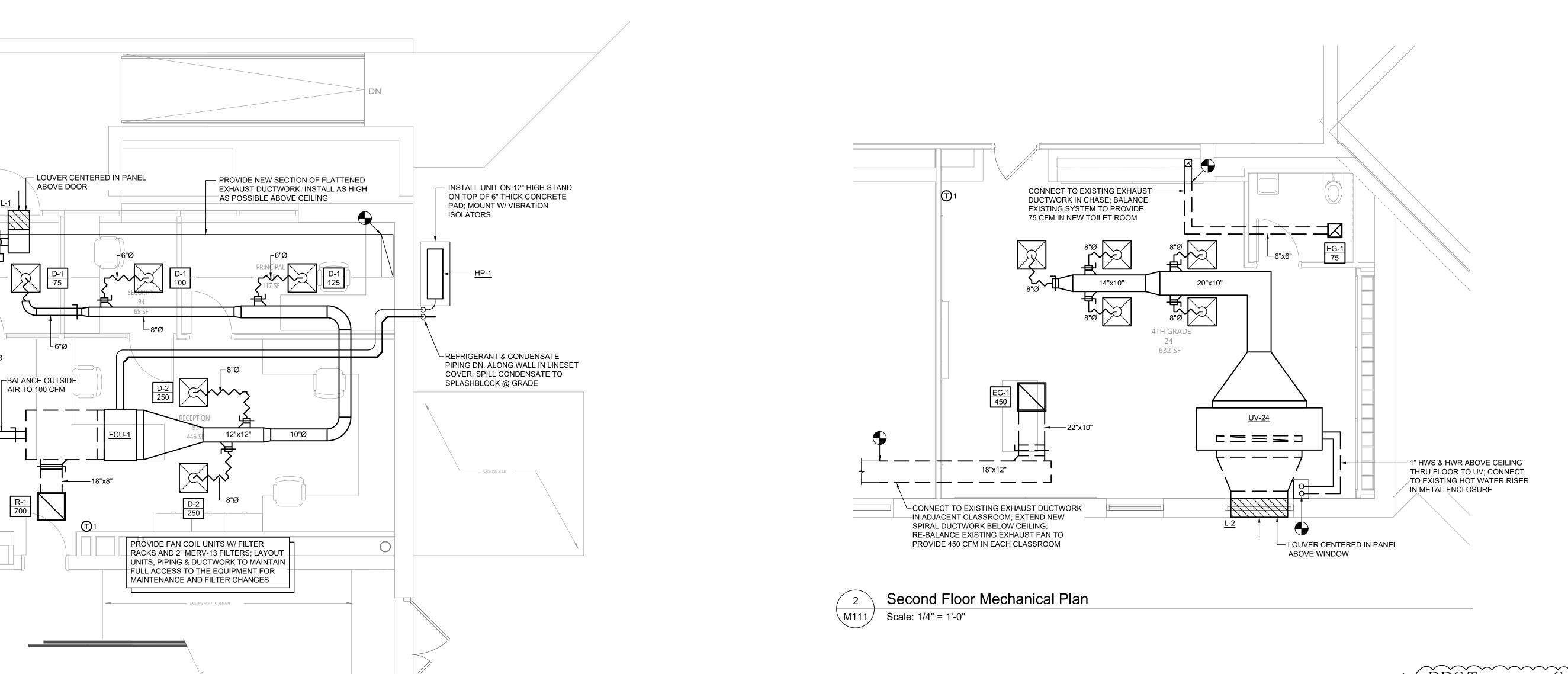
1) REFER TO PANEL SIGNAGE ELEVATIONS FOR SIGNAGE TYPES.

2) REFER TO SPECIFICATION SECTION 101423 - "INTERIOR PANEL SIGNAGE" FOR ADDITIONAL INFORMATION.

3) ALL EXISTING PANEL SIGNAGE FOR ROOMS NOTED ABOVE SHALL BE REMOVED AND REPLACED WITH NEW. 4) FINAL NUMBERING AND NAMING OF ROOMS TO BE DETERMINED BY OWNER DURING THE SUBMITTAL AND SHOP DRAWING REVIEW.

BID ADDENDUM #2 # DATE DESCRIPTION Drawn By:

44-13-01-06-0-009-021 CSArch Proj. #: Issued for Bid: \_\_\_\_\_\_



First Floor Mechanical Plan

EQUIPMENT

FCU-1

(OR ACCEPT.

EQUAL)

MITSUBISHI

M111 Scale: 1/4" = 1'-0"

KINDERGARDEN -

2ND GRADE

931 SF

UNIT VENTILATORS & SPLIT SYSTEMS WITH

DUCTED FAN COIL & HEAT PUMP FURNISHED

CONTRACTOR IS RESPONSIBLE TO RECEIVE

THE EQUIPMENT DELIVERY AT THE PROJECT

SITE, MOVE EQUIPMENT FROM TRUCK(S) TO

A DESIGNATED STORAGE LOCATION ON THE

INSTALLATION LOCATION; CONTRACTOR IS

COMPONENTS, I.E., DUCTWORK, PIPING.

OTHERWISE NOTED IN THE PROJECT

DOCUMENTS; REFER TO FRONT END

CONTROLS, ACCESSORIES, ETC. UNLESS

DOCUMENTS FOR ADDITIONAL INFORMATION

SITE & RIG THE UNIT INTO THE FINAL

TO PROVIDE ALL ASSOCIATED

BY OWNER, INSTALLED BY CONTRACTOR;

TRANSITION TO EXISTING EXHAUST -DUCT; RE-BALANCE EXHAUST FAN

TO PROVIDE 450 CFM IN EACH

CLASSROOM ON RESPECTIVE FAN

CONTROL DAMPER TO OPEN DURING SCHEDULED OCCUPANCY HOURS

4TH GRADE

640 SF

						UN	V TIV	VENTI)	LATO	R SCH	EDU	JLE									
			AREA OF	TOTAL	OUTSIDE AIR			HEATING	COIL DATA	1				EL	ECTRIC	AL DATA	4			TOTAL	
EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	BUILDING	SUPPLY AIRFLOW	SUPPLIED	EFT	LFT	CAPACITY	E.A.T. DB			FLOW RATE	BLOWER	MOTOR		UNI	ΓPOWE	R		WEIGHT	NOTES
-			SERVED	(CFM)	(CFM)	(°F)	(°F)	(MBH)	(°F)	(°F)	(FT)	(GPM)	TYPE H	P RPM	VOLT.	PHASE	Hz.	MCA	МОСР	(LB)	
UV-24	TRANE	HUVE1250	CLASSROOM 24	1,250	450	180	160	75	40	95	4.0	7.5	VAR. SPEED 1,	2 1116	120	1	60	9	15	675	1-5

2. FURNISH WITH FACTORY INSTALLED DISCONNECT SWITCH PROVIDE WITH FACE & BYPASS DAMPERS AND HOT WATER CONTROL VALVE FURNISH & INSTALL 2" MERV-13 FILTERS

4TH GRADE

665 SF

INDOOR MINI-SPLIT UNIT SCHEDULE MINI-SPLIT UNIT STATIC WEIGHT MODEL BUILDING CAPACITY EDB EWB CAPACITY EDB EWB OUTDOOR NOTES REQUIREMENTS PRESSURE SERVED UNIT (°F) (°F) (MBH) (°F) (°F) (IN. W.C.) VOLT. PHASE Hz. W DUCTED MEDIUM HYPER HEATING UNIT; SEE VRF SYSTEM NOTES PEAD-A30AA8 MAIN OFFICE 800 80.0 67.0 32.0 70.0 60.0 HP-1 0.50 30.0 208 | 1 60 | 121 | STATIC

	AIR-COOLED HEAT PUMP SCHEDULE													
EQUIPMENT TAG	MANUFACTURER (OR ACCEPT. EQUAL)	MODEL	INDOOR UNITS SERVED	COMPRESSOR TYPE	NOM. COOL CAPACITY (MBH)	CAPACITY (MBH)	OUTDOOR OPERATING TEMP. RANGE (°F) COOLING HEATING	AHRI EFFICIENC RATINGS EER SEER CC	REFRIGERANT	SOUND PRESSURE LEVEL COOLING/ HEATING (dBA)	ELECTRICAL POWER REQUIREMENTS  VOLT. PHASE Hz. MCA	МОСР	WEIGHT (LB)	NOTES
HP-1	MITSUBISHI	SUZ-KA30NAHZ	FCU-1	INVERTER SCROLL HERMETIC	30.0	32.0	0 TO 115 -13 TO 75	12.5 15.0 3.	R410A	52/53	208 1 60 24	40	261	FURNISH W/ REQUIRED PIPING ACCESSORIES

	AIR GRILLE/DIFFUSER SCHEDULE												
EQUIPMENT	EQUIPMENT MANUFACTURER (OR ACCEPT.	MODEL	AIR DEVICE	AIRFLOW (CFM)		MAX AIR PRESS.	MOUNTING	PANEL/FRAME SIZE			DAMPER	FINISH	NOTES
TAG	EQUAL)		(IN.)	NC	DI WII LIX	1 1111011	NOTEO						
D-1	KRUEGER	PLQ-6-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	50	175	0.10	LAY-IN	24"x24"	6"Ø	20	OBD	WHITE	PROVIDE W/ INSULATED BLANKET ON BACKPAN
D-2	KRUEGER	PLQ-8-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	176	300	0.10	LAY-IN	24"x24"	8"Ø	20	OBD	WHITE	PROVIDE W/ INSULATED BLANKET ON BACKPAN
R-1	KRUEGER	S80P-20x20-F23-24x24-00-00-00-44	PERFORATED FACE RETURN GRILLE	0	1,600	0.10	LAY-IN	24"x24"	20"x20"	25	-	WHITE	FURNISH & INSTALL FULL-SIZE SHEET METAL PLENUM BOX ON REAR OF GRILLE, PAINT INSIDE FLAT BLACK

EQUIPMENT TAG QTY.	OTV	MANUFACTURER (OR ACCEPT.	MODEL	AIR DEVICE TYPE	LOUVER SIZE			FREE AREA	AIRFLOW	VELOCITY	MOUNTING	SCREEN	FINISH	NOTES
	QII.	EQUAL)	MODEL		WIDE	HIGH	DEPTH	(SQ. FT.)	(CFM)	(FT./MIN.)	MOONTING	SUREEN	LIMOU	NOTES
L-1	1	RUSKIN	ELF6375DX	STATIONARY LOUVER	18"	12"	6"	0.63	100	158.7	EXTERIOR WALL	YES	TBD	1, 2 & 3
L-2	1	RUSKIN	ELF6375DX	STATIONARY LOUVER	48"	12"	6"	1.65	1250	757.6	EXTERIOR WALL	YES	TBD	1, 2 & 3

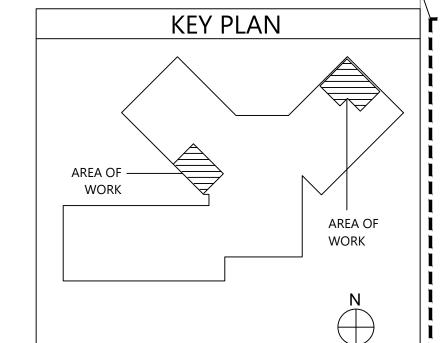
### VRF System Notes:

- WIRED 7 DAY PROGRAMMABLE THERMOSTAT SHALL BE FURNISHED BY OWNER FOR EACH INDOOR UNIT. THERMOSTATS SHIP LOOSE FOR FIELD INSTALLATION AND WIRING BY THE MECHANICAL CONTRACTOR.
- 2. OWNER TO FURNISH CENTRAL CONTROLLER FOR LOCAL SET POINT CONTROL AND SYSTEM VIEWING. CONTROLLER TO BE INSTALLED AND WIRING BY MECHANICAL CONTRACTOR. 24V POWER BY ELECTRICAL CONTRACTOR.
- DISCONNECT SWITCHES FOR CONDENSING UNITS AND INDOOR UNITS SHALL BE FURNISHED BY THE OWNER AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- 4. EXTERNAL SUPPORTS FOR INDOOR AND CONDENSING UNITS SHALL BE FURNISHED BY OWNER AND INSTALLED BY THE MECHANICAL CONTRACTOR.
- FILTER RACK AND 2" PLEATED MERV-13 FILTERS FOR DUCTED UNITS SHALL FURNISHED BY OWNER AND INSTALLED BY THE MECHANICAL CONTRACTOR. FILTER RACK SHALL BE GALVANIZED STEEL, FULLY INSULATED & FACTORY ASSEMBLED. TYPICAL OF FLT-H SERIES OR EQUAL
- CONDENSATE PUMPS SHIP FOR FIELD INSTALLATION BY MECHANICAL CONTRACTOR FOR WALL MOUNTED UNITS. DUCTED UNITS FURNISHED WITH FACTORY MOUNTED CONDENSATE PUMP. MECHANICAL CONTRACTOR TO PROVIDE CONDENSATE PIPING FROM ALL UNITS TO SANITARY DRAIN. FIELD VERIFY EXACT ROUTING AND TERMINATION POINT IN BUILDING.
- 7. PROVIDE REFRIGERANT ISOLATION VALVES ON LIQUID AND GAS LINES AT EVERY FAN COIL UNIT.

### DDC Temperature Control Notes:

- 1. HVAC CONTROLS SHALL BE FURNISHED & INSTALLED BY THE OWNER TO MATCH THE EXISTING BUILDING AUTOMATION SYSTEM IN EACH BUILDING (TRANE AT WALDEN ELEMENTARY). ALL HARDWARE, WIRING AND PROGRAMMING TO BE PROVIDED BY OWNER. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER'S VENDOR THROUGHOUT THE PROJECT TO SUPPORT INSTALLATION, TESTING AND COMMISSIONING. MECHANICAL CONTRACTOR TO INSTALL ALL DEVICES MOUNTED IN OR ON THE PIPING AND/OR DUCTWORK INCLUDING BUT NOT LIMITED TO HYDRONIC CONTROL VALVES, TEMPERATURE SENSORS, FLOW SENSORS, ETC. MECHANICAL CONTRACTOR TO PROVIDE ALL NECESSARY PORTS/THERMOWELLS FOR SENSORS, GAUGES, ETC. COORDINATE WITH OWNER'S VENDOR FOR QUANTITY AND LOCATIONS.
- 2. OWNER SHALL EXPAND EXISTING BUILDING AUTOMATION SYSTEM TO PROVIDE THE CONTROL SEQUENCES SPECIFIED ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE SYSTEM SHALL PROVIDE CONTROL AND MONITORING OF THE EQUIPMENT INDICATED.
- 3. OWNER SHALL PROVIDE CONTROLLERS AND COMMUNICATIONS INFRASTRUCTURE TO MATCH EXISTING CAMPUS-WIDE BUILDING AUTOMATION SYSTEM. PROVIDE SEAMLESS INTEGRATION WITH EXISTING CONTROL NETWORK AND USER INTERFACES. NETWORK GATEWAYS AND PROTOCOL INTERFACE EQUIPMENT ARE NOT ACCEPTABLE UNLESS OTHERWISE NOTED.
- 4. OWNER SHALL PROVIDE INSTRUMENTATION, SENSORS, VALVES, DAMPERS, ACTUATORS AND WIRING AS REQUIRED TO PROVIDE SPECIFIED OPERATING SEQUENCES.
- 5. OWNER SHALL MODIFY EXISTING GRAPHIC USER INTERFACES TO INCLUDE ALL EQUIPMENT AND SYSTEMS INCLUDED IN THIS PROJECT.
- 6. OWNER SHALL REPLACE THE EXISTING BAS SERVER HARDWARE AND UPGRADE THE SOFTWARE TO THE LATEST VERSION OF WEB-ENABLED GRAPHICAL USER INTERFACE WITH A SEAMLESS INTEGRATION OF THE NEW AND EXISTING CONTROL POINTS.
- 7. OWNER SHALL BE RESPONSIBLE FOR POWER THAT IS NOT SHOWN ON THE ELECTRICAL DRAWINGS, TO CONTROLS FURNISHED BY THIS CONTRACTOR. IF POWER CIRCUITS ARE SHOWN ON THE ELECTRICAL DRAWINGS, OWNER SHALL CONTINUE THE POWER RUN TO THE CONTROL DEVICE. IF POWER CIRCUITS ARE NOT SHOWN, OWNER SHALL PROVIDE BREAKERS AT DISTRIBUTION PANELS FOR POWER TO CONTROLS AND PROVIDE POWER FROM THE DISTRIBUTION PANEL TO THE CONTROL DEVICES.
- 8. OWNER SHALL FURNISH & INSTALL ALL REQUIRED END DEVICES, POWER SUPPLY, LOW VOLTAGE TRANSFORMERS, CONTROL WIRING & CONDUITS, ETC. FOR A COMPLETE & OPERATIONAL DDC CONTROL
- 9. NEW WIRING & CONDUITS SHALL BE RUN CONCEALED ABOVE CEILING. ALL EXPOSED WIRING & CONDUITS SHALL BE RUN CONCEALED IN EMT IN UTILITY SPACES AND WIREMOLD IN FINISHED AREAS.
- 10.OWNER TO FIELD INSTALL SENSORS, CONTROLLERS, ETC. WHICH ARE NOT FACTORY-INSTALLED BY EQUIPMENT MANUFACTURERS.
- 11.ANY EQUIPMENT FURNISHED WITH FACTORY CONTROLS SHALL BE PROVIDED WITH BACNET MSTP INTEGRATION CAPABILITIES AND INCLUDE ON-SITE FACTORY CONTROLS INTEGRATION START-UP IN COORDINATION WITH OWNER'S BUILDING AUTOMATION SYSTEM.

### ADD ALTERNATE NO. ALT-MPC-1-02-001



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3. FURNISH W/ PROPER MOUNTING HARDWARE.

	LIGHTING FIXTURE SCHEDULE									
TAG	SYMBOL	MANUFACTURER & MODEL	TYPE	VOLTAGE	# OF LAMPS	LAMP WATTS	FIXTURE WATTS	MOUNTING	SIZE	NOTES
А	$\blacksquare_{A}$	HE WILLIAMS RECESSED DIRECT/INDIRECT DIG-S22-L32/840-AD-DIM-UNV	LED	120	1	25.8	25.8	RECESSED	2'x2'	4000K COLOR TEMPERATURE
В	B-EM	HE WILLIAMS VOLTAIRE ARCHITECTURAL WALL PACK VWPH-L30/740-T3-DBZ-SDGL-EM/10WC-DIM-UNV	LED	120	1	36	36	SURFACE WALL MOUNT	12"x12"	VANDAL RESISTANT; 4000K COLOR TEMPERATURE; W/ LED EMERGENCY 90 MINUTE LOW TEMPERATURE BATTERY BACKUP; UL 924 LISTED FIXTURE
-	$\Box$	HE WILLIAMS LED EMERGENCY LIGHT EMER/LED-WHT-SDT-D	LED	120	2	1.0	2.0	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP
-	\$⊗	HE WILLIAMS LED EXIT & EMERGENCY LIGHT EXIT/EM/LED-R-WHT-RC-SDT-D	LED	120	2	1.5	3.4	UNIVERSAL	-	UL 924 LISTED FIXTURE; 90-MINUTE BATTERY BACKUP; PROVIDE W/ REMOTE HEAD MODEL WETRHL-T-WHT-HL-MV
-	⊗	HE WILLIAMS LED EXIT LIGHT EXIT-R-EM-WHT-SDT-D	LED	120	1	3.8	3.8	UNIVERSAL	-	90-MINUTE BATTERY BACKUP

### FIRE ALARM LEGEND:

HORN/STROBE DEVICE, ONE ASSEMBLY; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15 CANDELA UNLESS OTHERWISE NOTED

STROBE DEVICE; MTD. 80" A.F.F. UNLESS OTHERWISE NOTED; 15

CANDELA UNLESS OTHERWISE NOTED

MANUAL PULL STATION; MTD. 48" A.F.F.

WATER FLOW SWITCH

VALVE TAMPER SWITCH

DETECTOR; LETTER INDICATES AS FOLLOWS: BLANK = SMOKE DETECTOR P = PHOTOELECTRIC SMOKE M = MULTIPLE STATION SMOKE ALARM D = PHOTOELECTRIC DUCT SMOKE DETECTOR

FSD = DUCT SMOKE DETECTOR FOR FIRE SMOKE DAMPER RATE OF RISE HEAT DETECTOR, 135°F

CARBON MONOXIDE DETECTOR; MTD. 60" A.F.F.

ADDRESSABLE FIRE ALARM CONTROL PANEL

FIRE ALARM ANNUNCIATOR PANEL

REMOTE TEST SWITCH & LED FOR DUCT SMOKE DETECTORS

FIRE ALARM RELAY

### SECURITY LEGEND:

PANIC BUTTON - 18/4 SHIELDED

INTERCOM

DOOR RELEASE BUTTON - 16/2 SHIELDED

WORKSTATION FOR CARD ACCESS & VIDEO SYSTEM

CARD READER - 22/6 SHIELDED

REQUEST TO EXIT - 18/4 SHIELDED

MAGNETIC DOOR CONTACT - 16/2 SHIELDED

ELECTRIC LOCK - 16/2 SHIELDED

### ELECTRICAL LEGEND:

MOTOR

EARTH GROUND

JUNCTION BOX

EMERGENCY POWER OFF BUTTON

FUSE WITH RATING

MOLDED CASE CIRCUIT BREAKER

DISCONNECT SWITCH, FUSED

DISCONNECT SWITCH, UNFUSED

STARTER, COMBINATION WITH DISCONNECT SWITCH

STARTER OR MOTOR CONTROLLER M

20A 120V DUPLEX CEILING MOUNTED RECEPTACLE

20A 120V DUPLEX WALL MOUNTED RECEPTACLE; 18" A.F.F. UNLESS OTHERWISE NOTED

20A 120V DUPLEX WALL MOUNTED RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER

20A 120V QUADRAPLEX RECEPTACLE

WALL MOUNTED SPECIAL PURPOSE RECEPTACLE

⇒ 20A 120V WALL MOUNTED USB CHARGER RECEPTACLE TYPICAL OF HUBBELL USB20X OR ACCEPTABLE EQUAL

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE; FLUSH MOUNTED

FLOOR MOUNTED BOX W/ DUPLEX RECEPTACLE & 2 PORT ETHERNET OUTLET; FLUSH MOUNTED

FLOOR MOUNTED BOX W/ QUAD RECEPTACLE & 2 PORT ETHERNET OUTLET; FLUSH MOUNTED

WALL PHONE OUTLET MTD. 48" A.F.F.; 3/4" EMT CDT. IN WALL TO ABOVE CEILING; PROVIDE 1 PORT ETHERNET WALL PLATE; PROVIDE (1) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT CLOSET

WALL BOX FOR TELEVISION CONNECTION; 1-1/4" EMT CDT. IN WALL TO ABOVE CEILING W/ PULL CORD

PROVIDE (2) CAT 6E CABLES FROM WALL PLATE TO NEAREST IT BRANCH CIRCUIT HOMERUN; LINES INDICATE NUMBER OF CIRCUITS, NEUTRAL, AND SWITCH LEG CONDUCTORS; ONE SEPARATE

GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH

TELEPHONE/DATA COMMUNICATION BOX W/ (2) 3/4" EMT CDT. IN

WALL TO ABOVE CEILING; PROVIDE 2 PORT ETHERNET WALL PLATE;

2 = DOUBLE POLE BLANK = SINGLE POLE 3 = THREE-WAY 4 = FOUR-WAY D = DIMMER K = KEY OPERATED P = WITH PILOT LIGHT PB= PUSH BUTTON T = TIMER OPERATED WP= WEATHER PROOF

DUAL TECHNOLOGY OCCUPANCY SENSOR

HOMERUN; NOT SHOWN

X = EXPLOSION PROOF

DAYLIGHT SENSOR

MULTIMEDIA BOX. PROVIDE DEVICE BOX AT 60" ABOVE FINISHED FLOOR WITH (2) DUPLEX RECEPTACLES & (2) CAT6E PORTS. PROVIDE FACEPLATES AND (2) 1-1/4" CONDUITS STUBBED ABOVE CEILING. (1) W/ CAT6E CABLES RUN TO NEAREST IT CLOSET & (1) W/ PULL CORD FOR FUTURE HDMI. RECESS MOUNT BOX TYPICAL OF WIREMOLD EVOLUTION SERIES WITH CONCEALED CONDUITS IN EXISTING FRAMED WALLS AND ALL NEW WALLS. PROVIDE SURFACE MOUNT BOXES WITH DUAL CHANNEL SURFACE MOUNT RACEWAY (LEGRAND WIREMOLD 5400 SERIES) WHERE INSTALLED ON EXISTING MASONRY

OC= OCCUPANCY SENSOR

WIRELESS ACCESS POINT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE AT CEILING DEVICE & RUN CABLING TO NEAREST DATA CLOSET

> COMBINATION WALL MOUNTED CLOCK/SPEAKER UNIT PROVIDED BY OWNER; CONTRACTOR TO PROVIDE CAT6E CABLE TO DEVICE & RUN CABLING TO NEAREST DATA CLOSET

### ELECTRICAL NOTES:

THE COURSE OF THE CONTRACT.

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

PARALLEL OR PERPENDICULAR TO BUILDING WALLS. THE CONTRACTOR SHALL

AND SYSTEMS INSTALLED UNDER THIS CONTRACT TO ENSURE PROPER

FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK. 18. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, WIRING, DEVICES,

OPERATION PRIOR TO FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.

17. ALL CONDUIT AND CABLE SHALL BE PROPERLY SUPPORTED AND ROUTED

19. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.

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

FOR DOUBLE INSULATED EQUIPMENT ONLY.

CONDUCTORS.

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

- GREEN OR GREEN/YELLOW MUST ONLY BE USED FOR GROUNDING

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

r-----**ADD ALTERNATE NO. ALT-EC-1-03-001** 

## Шμ



BID ADDENDUM #2 # DATE DESCRIPTION

Drawn By: 44-13-01-06-0-009-021 Proj. #: CSArch Proj. #:

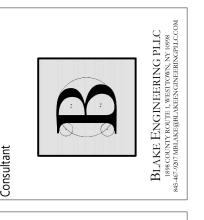
Sheet Title **ELECTRICAL** NOTES, LEGENDS, SCHEDULES &

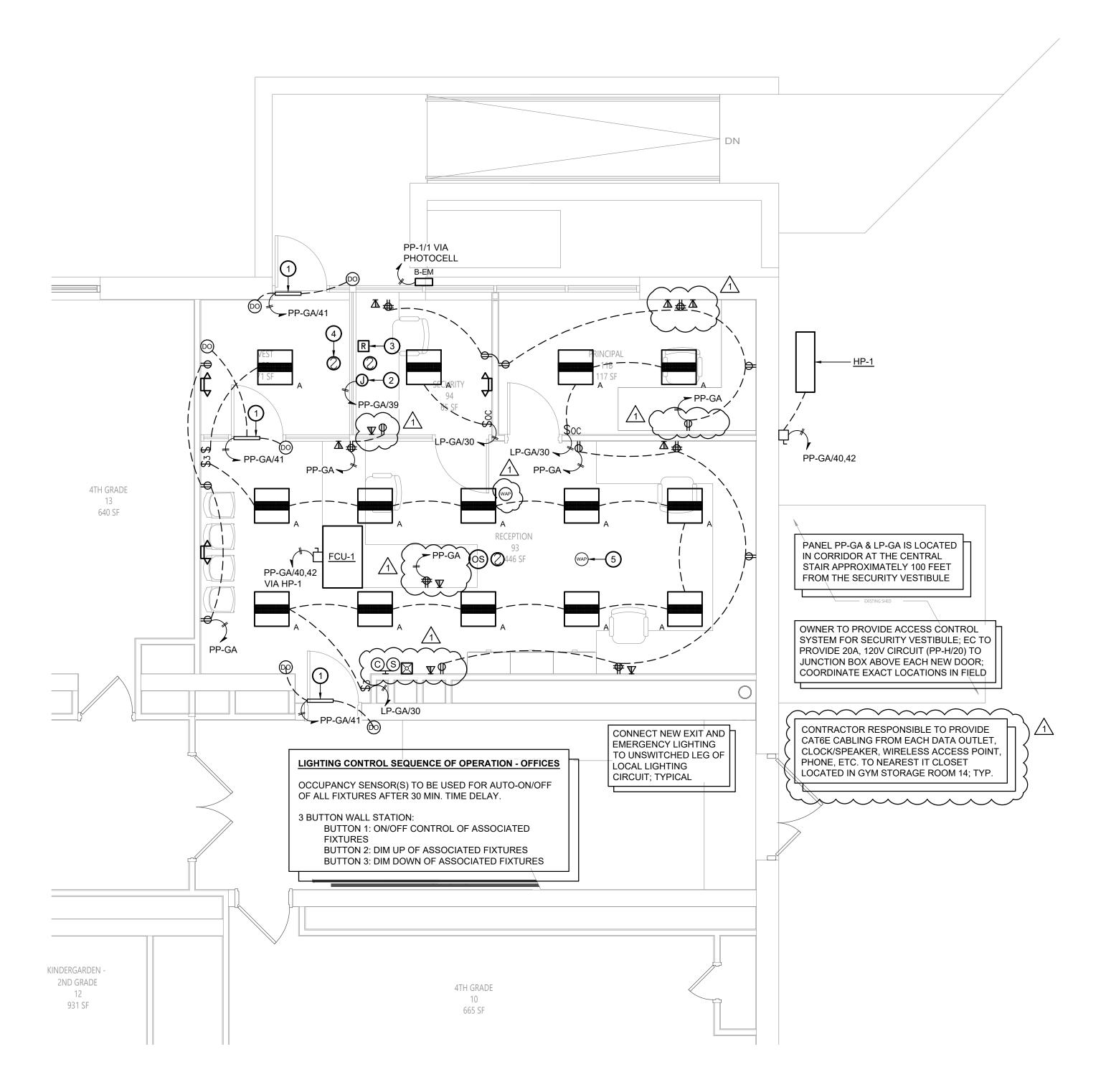
DETAILS

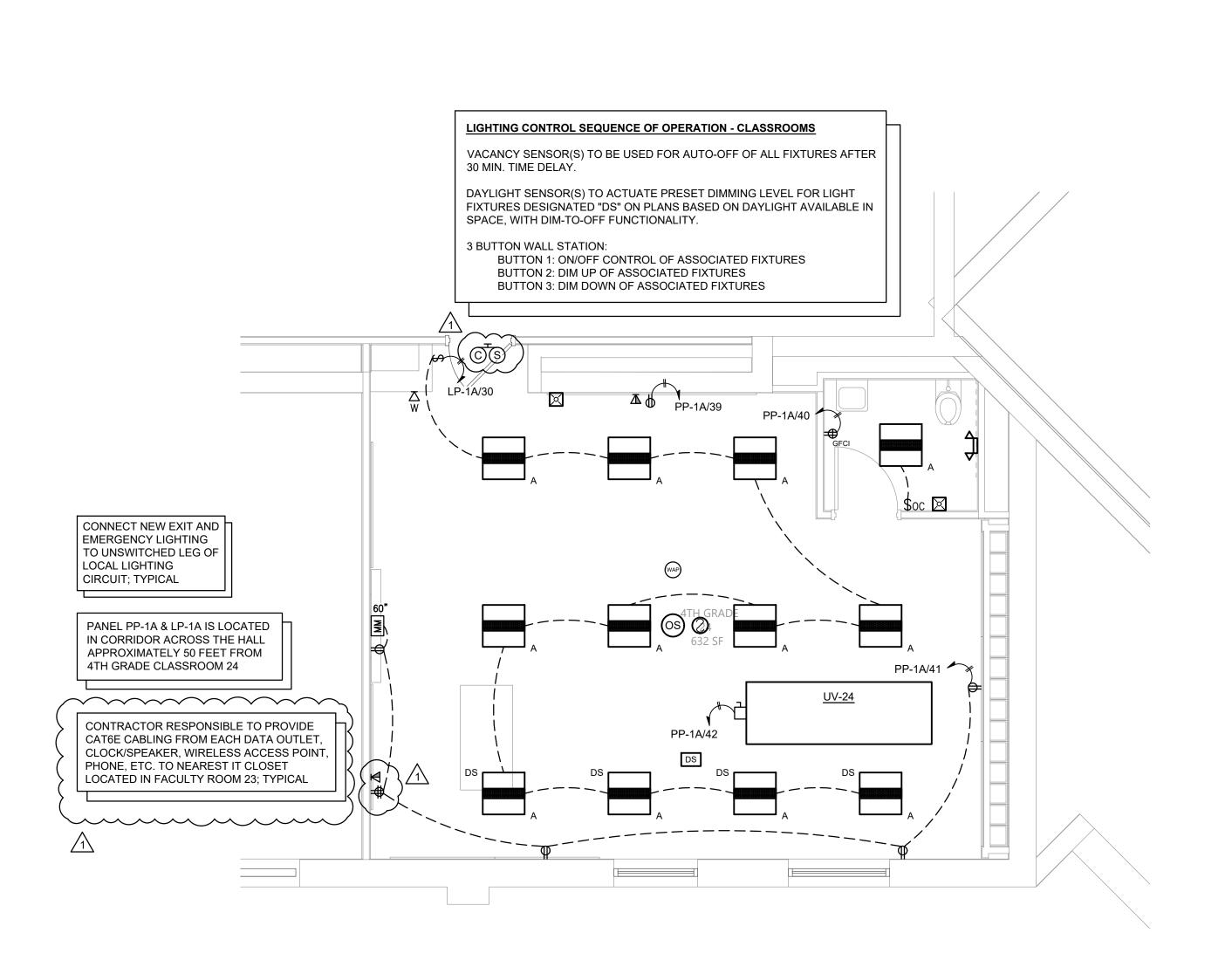
- ADA DOOR OPERATORS PROVIDED BY GC; EC TO PROVIDE ALL 120V LINE VOLTAGE POWER TO OPERATOR & CONTROL DEVICES; GC TO PROVIDE ALL LOW VOLTAGE CONTROLS
- PROVIDE NEW 120V ELECTRICAL CONNECTION FOR FIRE SHUTTER
- FIRE ALARM RELAY; FIRE SHUTTER TO CLOSE UPON ACTIVATION OF FIRE ALARM
- PROVIDE SMOKE DETECTORS ON BOTH SIDES OF THE AUTOMATIC FIRE SHUTTER AT THE TRANSACTION WINDOW; CONNECT TO THE EXISTING BUILDING FIRE ALARM SYSTEM

Key Notes:

REINSTALL EXISTING WIRELESS ACCESS POINT; CONNECT TO EXISTING DATA CABLING



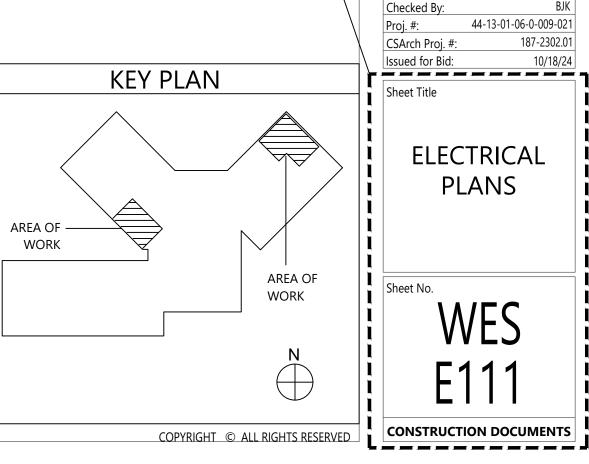




First Floor Electrical Plan E111 Scale: 1/4" = 1'-0"

Second Floor Electrical Plan E111 Scale: 1/4" = 1'-0"

ADD ALTERNATE NO. ALT-EC-1-03-001



# DATE

DESCRIPTION

Drawn By: