



November 24, 2021

Aedis Architects
387 S. First St., Suite 300
San Jose, CA 95113

Subject: Laurel Elementary School HVAC Replacement
San Mateo - Foster City School District
Aedis Project No. 2021005.03
DSA Application #01-119551

ADDENDUM NO. 1

CHANGES AND/OR CLARIFICATIONS OF THE DRAWINGS AND SPECIFICATIONS ARE AS FOLLOWS:

SPECIFICATIONS

ITEM NO. 1.1: TABLE OF CONTENTS

Add: 07 31 13 ASPHALT SHINGLES
Add: 09 91 14 EXTERIOR PAINTING
Add: 26 24 13 SWITCHCHBOARDS, 600 VOLTS AND BELOW
Add: 31 23 16 TRENCHING

ITEM NO. 1.2: SECTION 07 31 13 – ASPHALT SHINGLES

Replace: Remove specification 07 31 13 Asphalt Shingles and replace in its entirety per attached 07 31 13 Asphalt Shingles.

ITEM NO. 1.3: SECTION 09 91 14 – EXTERIOR PAINTING

Add: The specification in its entirety per 09 91 14 Exterior Painting.

ITEM NO. 1.4: SECTION 31 23 16 - TRENCHING

Add: The specification in its entirety per 31 23 16 Trenching.

ITEM NO. 1.5: SECTION 32 31 13 - CHAIN LINK FENCES AND GATES

Revise: 2.2 CHAIN-LINK FENCE FABRIC Item 2 subparagraph b. to read as:
Zinc- Coated Fabric: ASTM A392, Type II, Class 1, 1.2 oz/sq. ft with zinc coating applied after weaving.

Add: 2.4 SWING GATES D. Hardware
Item 5.: Panic Hardware: CD 990AX-L-WH-6280 SNB with Gate closer/Hinge:
SureClose Pivot: SM AT90W”

ADDENDUM NO. 1

11/24/2021

Laurel Elementary School HVAC Replacement
San Mateo – Foster City School District
Aedis Project No. 2021005.03

DRAWINGS**ARCHITECTURAL****ITEM NO. 1.6: DRAWING SHEET T1 – TITLE SHEET**

Revise: General Note 7 to read as “ALL EXISTING FINISHES OR MATERIALS DAMAGED OR DEMOLISHED DUE TO NEW CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL STATE, INCLUDING BUT NOT LIMITED TO REINSTALLING OR REPLACING EXISTING CHAINLINK FENCING AS REQUIRED AND RESTRIPIING PAVING IN KIND. S.E.D. FOR TRENCH ROUTING. VERIFY IN FIELD AND SEE ARCHITECTURAL SITE PLAN FOR STRIPING AT EXISTING PAVING.”

ITEM NO. 1.7: DRAWING SHEET A1.02 – SITE PLAN

Add: Trench area to New Site Plan 1/A1.02 & Graphic Key per AD1-A1.02

Add: General Sheet Note #G per AD1-A1.02

Add: Site Plan Keynotes #17 to New Site Plan 1/A1.02 per AD1-A1.02

Add: Enlarged plan call outs to 2/A2.02 & 4/A3.02 in New Site Plan 1/A1.02 per AD1-A1.02

ITEM NO. 1.8: DRAWING SHEET A2.01 – DEMOLITION FLOOR PLANS - BLDG B & C

Add: General Sheet Note #J per AD1-A2.01

Revise: Demolition Floor Plan Keynote #1 per AD1-A2.01

Add: Filler panel removal keynote #8 to Demolition Floor Plans 1/A2.01 and 2/A2.01 per AD1-A2.01

Add: Partial ceiling demolition keynote #9 to Demolition Floor Plans 1/A2.01 and 2/A2.01 per AD1-A2.01

ITEM NO. 1.9: DRAWING SHEET A2.02 – DEMOLITION FLOOR PLAN - BLDG A

Add: General Sheet Note #J per AD1-A2.02

Revise: Demolition Floor Plan Keynote #1 per AD1-A2.02

Add: Filler panel removal keynote #8 to Demolition Floor Plans 1/A2.02 per AD1-A2.01

Add: Partial ceiling demolition keynote #9 to Demolition Floor Plans 1/A2.02 per AD1-A2.01

Add: View 2/A2.02 Demolition Partial Floor Plan – Bldg D per AD1-A2.02

ITEM NO. 1.10: DRAWING SHEET A3.01 – NEW FLOOR PLANS - BLDGS B & C

Add: Door tags 15ab & 7ab to 1/A3.01 and 2/A3.01 per AD1-A3.01

Add: Ceiling patching keynote #4 in New Floor Plans 1/A3.01 and 2/A3.01 per AD1-A3.01

Revise: New Floor Plan Keynote #3 per AD1-A3.01

ADDENDUM NO. 1

11/24/2021

Laurel Elementary School HVAC Replacement
San Mateo – Foster City School District
Aedis Project No. 2021005.03

ITEM NO. 1.11: DRAWING SHEET A3.02 – NEW FLOOR PLANS - BLDG A

Add: View 4/A3.02 New Partial Floor Plan - Bldg. D per AD1-A3.02
Revise: New Floor Plan Keynote #6 per AD1-A3.02
Add: New Floor Plan Keynote #13 @ per AD1-A3.02

ITEM NO. 1.12: DRAWING SHEET A5.01 – SITE ROOF PLAN

Add: Exhaust fans per AD1-A5.01
Add: General Note #C per AD1-A5.01
Revise: Site Roof Plan Keynote #2 per AD1-A5.01
Add: Site Roof Plan Keynote #4 per AD1-A5.01

ITEM NO. 1.13: DRAWING SHEET A8.10 – EXTERIOR DETAILS

Revise: Detail 9 per AD1-A8.10

ITEM NO. 1.14: DRAWING SHEET A9.10 – INTERIOR ELEVATIONS & DETAILS

Revise: Details 1 & 4 per AD1-A9.10A
Revise: Detail 6 per AD1-A9.10A

ITEM NO. 1.15: DRAWING SHEET A11.01 – FINISH SCHEDULE & OPENING SCHEDULE, LEGENDS, & DETAILS

Add: Doors 7ab, 15ab & 41ab to Door Schedule per AD1-11.01
Add: Door Schedule Comments per AD1-11.01
Add: Door Type B per AD1-11.01

MECHANICAL**ITEM NO. 1.16: DRAWING MP0.02 – SCHEDULES – MECHANICAL & PLUMBING**

Revise: Classroom split system heat pump schedule per AD1-MP0.02.
Add: Roof exhaust fan schedule added per AD1-MP0.02.

ITEM NO. 1.17: DRAWING SHEET MP2.03 – FLOOR PLAN – NEW – BLDG B, C, & TYPICAL CLASSROOM – MECHANICAL & PLUMBING

Revise: General notes #4 & #5 per AD1-MP2.03a.
Add: New Sheet Notes #28 per AD1-MP2.03a.
Add: Roof exhaust fan added to plan per AD1-MP2.03a.
Add: Roof exhaust fan added to plan per AD1-MP2.03b.

ITEM NO. 1.18: DRAWING SHEET MP2.04 – FLOOR PLAN – NEW – BLDG A– MECHANICAL & PLUMBING

Revise: General notes #4 & #5 per AD1-MP2.04

ADDENDUM NO. 1

11/24/2021

Laurel Elementary School HVAC Replacement
San Mateo – Foster City School District
Aedis Project No. 2021005.03

Add: Multi-Purpose Floor Plan per AD1-MP2.04
Add: New Sheet Notes #14 per AD1-MP2.04

ITEM NO. 1.19: DRAWING SHEET MP6.01 – DETAILS – MECHANICAL & PLUMBING

Revise: Detail 4 per AD1-MP6.01a
Add: Detail 6 per AD1-MP6.01a
Revise: Detail 14 as shown clouded on AD1-MP6.01b

ELECTRICAL**ITEM NO. 1.20: DRAWING SHEET E1.1 – ELECTRICAL SITE PLAN**

Revise: Conduit Tag #9 per AD1-E1.1
Revise: Sheet Notes #10 & 11 per AD1-E1.1
Add: Conduit Tag #22 and #23 per AD1-E1.1
Add: Power for exhaust fan at building D per AD1-E1.1
Revise: Conduit tag callouts per AD1-E1.1

ITEM NO. 1.21: DRAWING SHEET E3.1 – ELECTRICAL NEW FLOOR PLANS – BLDGS B & C

Add: General Note #7 per AD1-E3.1
Add: Sheet Note #12 and #13 per ad1-E3.1
Add: Conduit Tag #4 per AD1-E3.1
Add: Solar Conduit stub ups at each wing per AD1-E3.1
Revise: Sheet notes #1, #2, and #4 per AD1-E3.1
Revise: Classroom power plans per AD1-E3.1

ITEM NO. 1.22: DRAWING SHEET E3.2 – ELECTRICAL NEW FLOOR PLANS – BLDG A

Add: General Note #7 per AD1-E3.2
Add: Sheet Note #11 per AD1-E3.2
Add: Conduit Tag #2 per AD1-E3.2
Add: Solar Conduit stub ups at each wing per AD1-E3.2
Revise: Classroom power plans per AD1-E3.2

ITEM NO. 1.23: DRAWING SHEET E4.2 – NEW SINGLE LINE DIAGRAM

Revise: Feeders to existing panel P1 and P2 per AD1-E4.2
Add: Conduit Tag #15 per AD1-E4.2
Revise: Switchboard to be OFCI per AD1-E4.2

ITEM NO. 1.24: DRAWING SHEET E4.3 – PANEL SCHEDULES

Revise: Main Circuit breakers on the panels per AD1-E4.3
Revise: Panel Schedule per AD1-E4.3

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ADDENDUM NO. 1

11/24/2021

Laurel Elementary School HVAC Replacement
San Mateo – Foster City School District
Aedis Project No. 2021005.03

Attachments:

Specifications:

07 31 13 Asphalt Shingles (12 pages)

09 91 14 Exterior Painting (8 pages)

31 23 16 Trenching (5 pages)

Drawing:

ARCHITECTURAL:

SHEET AD1-A1.02

SHEET AD1-A2.01

SHEET AD1-A2.02

SHEET AD1-A3.01

SHEET AD1-A3.02

SHEET AD1-A5.01

SHEET AD1-A8.10

SHEET AD1-A9.10A

SHEET AD1-A9.10B

SHEET AD1-A11.01

MECHANICAL:

SHEET AD1-MP0.02

SHEET AD1-MP2.03a

SHEET AD1-MP2.03b

SHEET AD1-MP2.04

SHEET AD1-MP6.01a

SHEET AD1-MP6.01b

ELECTRICAL:

SHEET AD1-E1.1

SHEET AD1-E3.1

SHEET AD1-E3.2

SHEET AD1-E4.2

SHEET AD1-E4.3

SECTION 073113 - ASPHALT SHINGLES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Glass-fiber-reinforced asphalt shingles.
 - 2. Underlayment materials.

1.2 DEFINITIONS

- A. Roofing Terminology: See ASTM D1079 for definitions of terms related to roofing Work in this Section.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Asphalt shingles.
 - 2. Underlayment materials.
 - 3. Asphalt roofing cement.
 - 4. Elastomeric flashing sealant.
- B. Shop Drawings: For metal flashing and trim.
- C. Samples for Initial Selection:
 - 1. For each type of asphalt shingle indicated.
 - 2. For each type of accessory involving color selection.
- D. Samples for Verification: For the following products, in sizes indicated:
 - 1. Asphalt Shingles: Full size.
 - 2. Ridge and Hip Cap Shingles: Full size.
 - 3. Ridge Vent: 12-inch- (305-mm-) long Sample.
 - 4. Exposed Valley Lining: 12 inches (305 mm) square.

LAUREL ELEMENTARY SCHOOL HVAC REPLACEMENT
San Mateo-Foster City School District
Project No 2021005.03

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: For each type of asphalt shingle and underlayment product indicated, for tests performed by manufacturer and witnessed by a qualified testing agency.
- C. Research Reports: For synthetic underlayment, from ICC-ES, indicating that product is suitable for intended use under applicable building codes.
- D. Sample Warranty: For manufacturer's materials warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For asphalt shingles to include in maintenance manuals.
- B. Materials warranties.
- C. Roofing Installer's warranty.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized installer who is trained and approved by manufacturer.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store roofing materials in a dry, well-ventilated location protected from weather, sunlight, and moisture in accordance with manufacturer's written instructions.
- B. Store underlayment rolls on end, on pallets or other raised surfaces. Do not double-stack rolls.
- C. Protect unused roofing materials from weather, sunlight, and moisture when left overnight or when roofing Work is not in progress.
- D. Handle, store, and place roofing materials in a manner to prevent damage to roof deck or structural supporting members.

1.9 FIELD CONDITIONS

- A. Environmental Limitations: Proceed with installation only when existing and forecasted weather conditions permit product installation and related Work to be performed in accordance with manufacturer's written instructions and warranty requirements.

1. Install self-adhering, polymer-modified bitumen sheet underlayment within the range of ambient and substrate temperatures recommended in writing by manufacturer.

1.10 WARRANTY

- A. Materials Warranty: Manufacturer agrees to repair or replace asphalt shingles that fail within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Manufacturing defects.
 2. Materials Warranty Period: 40 years from date of Substantial Completion, prorated, with first 20 years nonprorated.
 3. Wind-Speed Warranty Period: Asphalt shingles will resist blow-off or damage caused by wind speeds of up to 110 mph (49 m/s) 130 mph (58 m/s) for 15 years from date of Substantial Completion.
 4. Algae-Resistance Warranty Period: Asphalt shingles will not discolor for 10 years from date of Substantial Completion.
 5. Workmanship Warranty Period: 20 years from date of Substantial Completion.
- B. Roofing Installer's Warranty: On warranty form at end of this Section, signed by Installer, in which Installer agrees to repair or replace components of asphalt shingle roofing that fail in materials or workmanship within specified warranty period.
 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

- A. Obtain each type of product from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Exterior Fire-Test Exposure: Provide asphalt shingles and related roofing materials identical to those of assemblies tested for Class A fire resistance in accordance with ASTM E108 or UL 790 by Underwriters Laboratories or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing agency.
- B. Wind Resistance: Provide asphalt shingles that comply with requirements of ASTM D3161/D3161M, Class F, and with ASTM D7158/D7158M, Class H.
- C. Energy Performance, ENERGY STAR: Provide asphalt shingles that are listed on the DOE's "ENERGY STAR Roof Product List" for steep-slope roof products.

2.3 GLASS-FIBER-REINFORCED ASPHALT SHINGLES

- A. Laminated-Strip Asphalt Shingles: ASTM D3462/D3462M, laminated, multi-ply overlay construction; glass-fiber reinforced, mineral-granule surfaced, and self-sealing.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. CertainTeed; Landmark.
 - 2. Butt Edge: Straight cut.
 - 3. Strip Size: Manufacturer's standard.
 - 4. Algae Resistance: Granules resist algae discoloration.
 - 5. Color and Blends: As selected by Architect from manufacturer's full range.
- B. Hip and Ridge Shingles: Manufacturer's standard units to match asphalt shingles.

2.4 UNDERLAYMENT MATERIALS

- A. Organic Felt: Asphalt-saturated organic felts, nonperforated and complying with the following:
 - 1. ASTM D4869/D4869M: Type II.
- B. Synthetic Underlayment: UV-resistant polypropylene, polyolefin, or polyethylene polymer fabric with surface coatings or treatments to improve traction underfoot and abrasion resistance; evaluated and documented to be suitable for use as a roof underlayment under applicable codes by a testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. CertainTeed; Diamond Deck
- C. Self-Adhering, Polymer-Modified Bitumen Sheet: ASTM D1970/D1970M, minimum **40-mil- (1.0-mm-)** thick sheet; glass-fiber-mat-reinforced, polymer-modified asphalt; with slip-resistant top surface and release backing; cold applied.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. CertainTeed; WinterGuard
 - 2. Top Surface: Textured polymer film.
- D. Granular-Surfaced Valley Lining: ASTM D3909/D3909M, mineral-granular-surfaced, glass-felt-based, asphalt roll roofing; **36 inches (914 mm)** wide.

2.5 ACCESSORIES

- A. Asphalt Roofing Cement: ASTM D4586/D4586M Type II, asbestos free.

- B. Elastomeric Flashing Sealant: ASTM C920, Type S, Grade NS, one-part, non-sag, elastomeric polymer sealant; of class and use classifications required to seal joints and remain watertight; recommended in writing by manufacturer for installation of flashing systems.
- C. Roofing Nails: ASTM F1667, aluminum, stainless steel, copper, or hot-dip galvanized-steel wire shingle nails, minimum **0.120-inch- (3-mm-)** diameter, sharp-pointed, with a **3/8- to 7/16-inch- (10- to 11-mm-)** diameter flat head and of sufficient length to penetrate **3/4 inch (19 mm)** into solid wood decking or extend at least **1/8 inch (3 mm)** through sheathing less than **3/4 inch (19 mm)** thick.
 - 1. Where nails are in contact with metal flashing, use nails made from same metal as flashing.
- D. Underlayment Nails: Aluminum, stainless steel, or hot-dip galvanized-steel wire nails with low-profile metal or plastic caps, **1-inch- (25-mm-)** minimum diameter.
 - 1. Provide with minimum **0.0134-inch- (0.34-mm-)** thick metal cap, **0.010-inch- (0.25-mm-)** thick power-driven metal cap, or **0.035-inch- (0.89-mm-)** thick plastic cap; and with minimum **0.083-inch- (2.11-mm-)** thick ring shank or **0.091-inch- (2.31-mm-)** thick smooth shank of length to penetrate at least **3/4 inch (19 mm)** into roof sheathing or to penetrate through roof sheathing less than **3/4 inch (19 mm)** thick.

2.6 METAL FLASHING AND TRIM

- A. Comply with requirements in Section 076200 "Sheet Metal Flashing and Trim."
 - 1. Sheet Metal: Stainless steel.
- B. Fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of the item unless otherwise specified in this Section or indicated on Drawings.
 - 1. Apron Flashings: Fabricate with lower flange a minimum of **4 inches (102 mm)** over and **4 inches (102 mm)** beyond each side of downslope asphalt shingles and **6 inches (152 mm)** up the vertical surface.
 - 2. Step Flashings: Fabricate with a headlap of **2 inches (51 mm)** and a minimum extension of **4 inches (102 mm)** over the underlying asphalt shingle and up the vertical surface.
 - 3. Counterflashings: Fabricate to cover **4 inches (102 mm)** of base flashing measured vertically; and in lengths required so that no step exceeds **8 inches (203 mm)** and overall length is no more than **10 feet (3 m)**.
 - a. Provide metal reglets for installation.
 - 4. Open-Valley Flashings: Fabricate from metal sheet not less than **24 inches (610 mm)** wide in lengths not exceeding **10 feet (3 m)**, with **1-inch- (25-mm-)** high, inverted-V

profile water diverter at center of valley and equal flange widths of not less than 11 inches (279 mm).

- a. Hem flange edges for fastening with metal cleats.
 - b. Add stiffening ribs in flashings to promote drainage.
5. Drip Edges: Fabricate in lengths not exceeding 10 feet (3 m) with minimum 2-inch (51-mm) roof-deck flange and 1-1/2-inch (38-mm) fascia flange with 3/8-inch (10-mm) drip at lower edge.
 6. Vent-Pipe Flashings: ASTM B749, Type L51121, at least 1/16 inch (1.6 mm) thick. Provide lead sleeve sized to slip over and turn down into pipe, soldered to skirt at slope of roof, and extending at least 4 inches (102 mm) from pipe onto roof.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 1. Examine roof sheathing to verify that sheathing joints are supported by framing and blocking or metal clips and that installation is within flatness tolerances.
 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and completely anchored and that provisions have been made for flashings and penetrations through asphalt shingles.
 3. Verify that vent stacks and other penetrations through roofing are installed and securely fastened.
- B. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF UNDERLAYMENT MATERIALS

- A. Comply with asphalt shingle and underlayment manufacturers' written installation instructions and with recommendations in NRCA's "The NRCA Roofing Manual: Steep-Slope Roof Systems" applicable to products and applications indicated unless more stringent requirements are specified in this Section or indicated on Drawings.
- B. Asphalt-Saturated Felt: Install on roof deck parallel with and starting at eaves and fasten with underlayment nails.
 1. Single-Layer Installation:

- a. Lap sides a minimum of [2 inches (51 mm)] [4 inches (102 mm)] over underlying course.
- b. Lap ends a minimum of 4 inches (102 mm).
- c. Stagger end laps between succeeding courses at least 72 inches (1829 mm).

2. Double-Layer Installation:

- a. Install a 19-inch- (483-mm-) wide starter course at eaves and completely cover with a 36-inch- (914-mm-) wide second course.
 - b. Install succeeding 36-inch- (914-mm-) wide courses lapping previous courses 19 inches (483 mm) in shingle fashion.
 - c. Lap ends a minimum of 4 inches (102 mm). Stagger end laps between succeeding courses at least 72 inches (1829 mm).
 - d. Apply a continuous layer of asphalt roofing cement over starter course and on felt surface to be concealed by succeeding courses as each felt course is installed. Apply at locations indicated on Drawings.
3. Install felt underlayment on roof deck not covered by self-adhering, polymer-modified bitumen sheet unless otherwise specified in this Section or indicated on Drawings.
- a. Lap sides of felt over self-adhering sheet not less than 4 inches (102 mm) in direction that sheds water.
 - b. Lap ends of felt not less than 6 inches (152 mm) over self-adhering sheet.
4. Install fasteners in a grid pattern of 12 inches (305 mm) between side laps with 6-inch (152-mm) spacing at side and end laps.
5. Terminate felt extended up not less than 4 inches (102 mm) against sidewalls, curbs, chimneys, and other roof projections.

C. Synthetic Underlayment:

1. Install on roof deck parallel with and starting at the eaves.
 - a. Lap sides and ends as recommended in writing by manufacturer, but not less than 4 inches (102 mm) for side laps and 6 inches (152 mm) for end laps.
 - b. Stagger end laps between succeeding courses at interval recommended in writing by manufacturer, but not less than 72 inches (1829 mm).
 - c. Fasten with underlayment nails in accordance with manufacturer's written instructions.
 - d. Cover underlayment within period recommended in writing by manufacturer.
2. Install in single layer on roofs sloped at 4:12 and greater.
3. Install in double layer on roofs sloped at less than 4:12.
4. Install synthetic underlayment on roof deck not covered by self-adhering, polymer-modified bitumen sheet unless otherwise specified in this Section or indicated on Drawings.
 - a. Lap sides of underlayment over self-adhering sheet not less than 4 inches (102 mm) in direction to shed water.

LAUREL ELEMENTARY SCHOOL HVAC REPLACEMENT
San Mateo-Foster City School District
Project No 2021005.03

- b. Lap ends of underlayment not less than 6 inches (152 mm) over self-adhering sheet.
 5. Install fasteners in a grid pattern of 12 inches (305 mm) between side laps with 6-inch (152-mm) spacing at side and end laps.
 6. Terminate synthetic underlayment extended up not less than 4 inches (102 mm) against sidewalls, curbs, chimneys, and other roof projections.
- D. Granular-Surfaced, Concealed Valley Lining: For woven valleys. Comply with recommendations in NRCA's "NRCA Guidelines for Asphalt Shingle Roof Systems."
 1. Lap roof-deck underlayment over valley lining at least 6 inches (152 mm).
 2. Install a 36-inch- (914-mm-) wide strip of granular-surfaced valley lining, with granular-surface face up, centered in valley and fastened to roof deck.
 3. Lap ends of strips at least 12 inches (305 mm) in direction to shed water, and seal with asphalt roofing cement.
 4. Fasten to roof deck.
- E. Metal-Flashed, Open-Valley Underlayment: Install two layers of minimum 36-inch- (914-mm-) wide underlayment centered in valley.
 1. Use same underlayment as installed on field of roof.
 2. Stagger end laps between layers at least 72 inches (1829 mm).
 3. Lap ends of each layer at least 12 inches (305 mm) in direction that sheds water, and seal with asphalt roofing cement.
 4. Fasten each layer to roof deck with underlayment nails located as far from valley center as possible and only to extent necessary to hold underlayment in place until installation of valley flashing.
 5. Lap roof-deck underlayment over first layer of valley underlayment at least 6 inches (152 mm).
- F. Granular-Surfaced, Open-Valley Lining: Before installing valley lining, install 36-inch- (914-mm-) wide felt underlayment centered in valley. Fasten to roof deck with underlayment nails.
 1. Lap roof-deck felt underlayment over valley felt underlayment at least 6 inches (152 mm).
 2. Install an 18-inch- (457-mm-) wide strip of valley lining centered in valley, with granular-surface face down.
 3. Install a second 36-inch- (914-mm-) wide strip of valley lining centered in valley, with granular-surface face up.
 4. Lap ends of each strip at least 12 inches (305 mm) in direction to shed water, and seal with asphalt roofing cement.
 5. Stagger end laps between succeeding strips at least 72 inches (1829 mm).
 6. Fasten each strip to roof deck.

3.3 INSTALLATION OF METAL FLASHING AND TRIM

- A. Install metal flashings and trim to comply with requirements in Section 076200 "Sheet Metal Flashing and Trim."
 - 1. Install metal flashings in accordance with recommendations in NRCA's "NRCA Guidelines for Asphalt Shingle Roof Systems."
 - 2. Bed flanges of metal flashings using asphalt roofing cement or elastomeric flashing sealant.
- B. Apron Flashings: Extend lower flange over and beyond each side of downslope asphalt shingles and up the vertical surface.
- C. Step Flashings: Install with a headlap of **2 inches (51 mm)** and extend over underlying shingle and up the vertical face.
 - 1. Install with lower edge of flashing just upslope of, and concealed by, butt of overlying shingle.
 - 2. Fasten to roof deck only.
- D. Cricket and Backer Flashings: Install against roof-penetrating elements extending concealed flange beneath upslope asphalt shingles and beyond each side.
- E. Counterflashings: Coordinate with installation of base flashing and fit tightly to base flashing. Lap joints a minimum of **4 inches (102 mm)** secured in a waterproof manner.
 - 1. Install in reglets or receivers.
- F. Open-Valley Flashings: Install centered in valleys, lapping ends at least **8 inches (203 mm)** in direction that sheds water. Fasten upper end of each length to roof deck beneath overlap.
 - 1. Secure hemmed flange edges into metal cleats spaced **24 inches (610 mm)** apart and fastened to roof deck.
 - 2. Adhere minimum **9-inch- (229-mm-)** wide strips of self-adhering, polymer-modified bitumen sheet to metal flanges and to underlying self-adhering sheet, polymer-modified bitumen sheet.
 - a. Place strips parallel to and over flanges so that they will be just concealed by installed shingles.
 - 3. Provide a closure at the end of the inverted-V profile of the valley metal to minimize water and ice infiltration.
- G. Rake Drip Edges: Install over underlayment materials and fasten to roof deck.
- H. Eave Drip Edges: Install below underlayment materials and fasten to roof deck.
- I. Pipe Flashings: Form flashing around pipe penetrations and asphalt shingles. Fasten and seal to asphalt shingles as recommended by manufacturer.

3.4 INSTALLATION OF ASPHALT SHINGLES

- A. Install asphalt shingles in accordance with manufacturer's written instructions and recommendations in NRCA's "NRCA Guidelines for Asphalt Shingle Roof Systems."
- B. Install starter strip along lowest roof edge, consisting of an asphalt shingle strip at least **7 inches (178 mm)** wide with self-sealing strip face up at roof edge.
 - 1. Extend asphalt shingles **1/2 inch (13 mm)** over fasciae at eaves and rakes.
 - 2. Install starter strip along rake edge.
- C. Install first and remaining courses of laminated asphalt shingles stair-stepping diagonally across roof deck with manufacturer's recommended offset pattern at succeeding courses, maintaining uniform exposure.
- D. Install first and remaining courses of three-tab-strip asphalt shingles stair-stepping diagonally across roof deck with manufacturer's recommended offset pattern at succeeding courses, maintaining uniform exposure.
- E. Fasten asphalt shingle strips with a minimum of four roofing nails, but not less than the number indicated in manufacturer's written instructions for roof slope and design wind speed indicated on Drawings and for warranty requirements specified in this Section.
 - 1. Locate fasteners in accordance with manufacturer's written instructions.
 - 2. Where roof slope exceeds 18:12, hand seal self-sealing asphalt shingles to improve the shingles' positive bond by applying asphalt roofing cement spots between course overlaps after nailing the upper course.
 - 3. Where roof slope is less than 4:12, hand seal self-sealing asphalt shingles to improve the shingles' positive bond by applying asphalt roofing cement spots between course overlaps after nailing the upper course.
 - 4. When ambient temperature during installation is below **50 deg F (10 deg C)**, hand seal self-sealing asphalt shingles by applying asphalt roofing cement spots between course overlaps after nailing the upper course.
- F. Open Valleys: Cut and fit asphalt shingles at open valleys, trimming upper concealed corners of shingle strips.
 - 1. Maintain uniform width of exposed open valley from highest to lowest point.
 - 2. Extend shingle a minimum of **4 inches (102 mm)** over valley metal.
 - 3. Set valley edge of asphalt shingles in a **3-inch- (76-mm-)** wide bed of asphalt roofing cement.
 - 4. Do not nail asphalt shingles to metal open-valley flashings.
- G. Ridge Vents: Install continuous ridge vents over asphalt shingles in accordance with manufacturer's written instructions. Fasten with roofing nails of sufficient length to penetrate sheathing.
- H. Hip and Ridge Shingles: Maintain same exposure of cap shingles as roofing-shingle exposure. Lap cap shingles at ridges to shed water away from direction of prevailing winds.

1. Fasten with roofing nails of sufficient length to penetrate sheathing.
2. Fasten ridge cap asphalt shingles to cover ridge vent without obstructing airflow.

3.5 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS **<Insert name>** of **<Insert address>**, herein called the "Roofing Installer," has performed roofing and associated work ("the work") on the following project:
1. Owner: **<Insert name of Owner>**.
 2. Owner Address: **<Insert address>**.
 3. Building Name/Type: **<Insert information>**.
 4. Building Address: **<Insert address>**.
 5. Area of the Work: **<Insert information>**.
 6. Acceptance Date: **<Insert date>**.
 7. Warranty Period: **<Insert time>**.
 8. Expiration Date: **<Insert date>**.
- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant the work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that, during Warranty Period, Roofing Installer will, at Roofing Installer's own cost and expense, make or cause to be made such repairs to or replacements of the work as are necessary to correct faulty and defective work and as are necessary to maintain the work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
1. Specifically excluded from this Warranty are damages to the work and other parts of the building, and to building contents, caused by:
 - a. Lightning;
 - b. Peak gust wind speed exceeding **90 mph**
 - c. Fire;
 - d. Failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - e. Faulty construction of copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - f. Vapor condensation on bottom of roofing; and
 - g. Activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
 2. When the work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.

LAUREL ELEMENTARY SCHOOL HVAC REPLACEMENT
San Mateo-Foster City School District
Project No 2021005.03

3. Roofing Installer is responsible for damage to the work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of the work.
4. During Warranty Period, if Owner allows alteration of the work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of the alterations, but only to the extent the alterations affect the work covered by this Warranty. If Owner engages Roofing Installer to perform the alterations, Warranty shall not become null and void unless Roofing Installer, before starting the alterations, notified Owner in writing, showing reasonable cause for claim, that the alterations would likely damage or deteriorate the work, thereby reasonably justifying a limitation or termination of this Warranty.
5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a use or service more severe than originally specified, this Warranty shall become null and void on date of the change, but only to the extent the change affects the work covered by this Warranty.
6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect the work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Roofing Installer on the work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of the work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

END OF SECTION 073113

SECTION 099114 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Surface preparation and application of paint systems on exterior substrates.
 - a. Concrete.
 - b. Galvanized metal.
 - c. Aluminum (not anodized or otherwise coated).
 - d. Wood.
 - e. Portland cement plaster (stucco).

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include preparation requirements and application instructions.
2. Indicate VOC content.

B. Samples: For each type of topcoat product.

C. Samples for Initial Selection: For each type of topcoat product.

D. Samples for Verification: For each type of paint system and each color and gloss of topcoat.

1. Submit Samples on rigid backing, 8 inches (200 mm) square.
2. Apply coats on Samples in steps to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

E. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in the Exterior Painting Schedule to cross-reference paint systems specified in this Section. Include color designations.

1.3 MAINTENANCE MATERIAL SUBMITTALS

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

1. Paint: 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

1.4 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
 - b. Other Items: Architect will designate items or areas required.
 - 2. Final approval of color selections will be based on mockups.
 - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
 - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.6 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Kelly-Moore Paint Company Inc.: District Standard
- B. Source Limitations: Obtain paint from single source from single manufacturer.

2.2 PAINT GENERAL

- A. Material Compatibility:
 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. For each coat in a paint system, provide products recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
- B. Colors: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 1. Concrete: 12 percent.
 2. Wood: 15 percent.
 3. Portland Cement Plaster: 12 percent.
- C. Portland Cement Plaster Substrates: Verify that plaster is fully cured.
- D. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
- E. Proceed with coating application only after unsatisfactory conditions have been corrected.
 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

LAUREL ELEMENTARY SCHOOL HVAC REPLACEMENT
San Mateo-Foster City School District
Project No. 2021005.03

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer but not less than the following:
 1. SSPC-SP 2.
 2. SSPC-SP 3.
 3. SSPC-SP 7/NACE No. 4.
 4. SSPC-SP 11.
- F. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- A. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal with Krud Kutter Metal Clean and Etch to dissolve passivator and use mechanical methods as necessary, to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- B. Aluminum Substrates: Remove loose surface oxidation.
- C. Wood Substrates:
 1. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
 2. Sand surfaces that will be exposed to view, and remove sanding dust.
 3. Prime edges, ends, faces, undersides, and backsides of wood.
 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 INSTALLATION

- A. Apply paints in accordance with manufacturer's written instructions.
 1. Use applicators and techniques suited for paint and substrate indicated.
 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.

LAUREL ELEMENTARY SCHOOL HVAC REPLACEMENT
San Mateo-Foster City School District
Project No. 2021005.03

3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
 4. Paint entire exposed surface of window frames and sashes.
 5. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 6. Primers specified in the Exterior Painting Schedule may be omitted on items that are factory primed or factory finished if compatible with intermediate and topcoat coatings and acceptable to intermediate and topcoat paint manufacturers.
 7. For previously painted or factory primed surfaces where bare substrate is exposed, spot prime with manufacturer recommended primer.
 8. Previously painted surfaces may require full prime and is subject to field inspection recommendation.
- B. Tint undercoats same color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
1. Paint the following work where exposed to view:
 - a. Equipment, including panelboards.
 - b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.
 - e. Metal conduit.
 - f. Plastic conduit.
 - g. Tanks that do not have factory-applied final finishes.

3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
1. Contractor shall touch up and restore painted surfaces damaged by testing.
 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written instructions, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written instructions.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
 - 1. Do not clean equipment with free-draining water and prevent solvents, thinners, cleaners, and other contaminants from entering into waterways, sanitary and storm drain systems, and ground.
 - 2. Dispose of contaminants in accordance with requirements of authorities having jurisdiction.
 - 3. Allow empty paint cans to dry before disposal.
 - 4. Collect waste paint by type and deliver to recycling or collection facility.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 EXTERIOR PAINTING SCHEDULE

- A. Concrete Substrates, Nontraffic Surfaces:
 - 1. Latex System:
 - a. Prime Coat: Primer, alkali resistant, water based.
 - 1) KM 247 Acryshield Masonry Primer
 - 2) Or approved equal
 - b. Prime Coat, Latex: Exterior, matching topcoat.
 - c. Intermediate Coat: Latex, exterior, matching topcoat.
 - d. Low-Sheen Topcoat: Latex, exterior, low sheen
 - 1) KM 1210 Premium Professional Exterior 100% Acrylic Low Sheen
 - 2) Or approved equal
- B. Steel and Iron Substrates:
 - 1. Alkyd System:
 - a. Alkyd Prime Coat: Primer, alkyd, anticorrosive, for metal.

- 1) Rust-Oleum CV740 Alkyd Metal Primer Low VOC
- 2) Or approved equal
- b. Shop Prime Coat: Shop primer specified in Section where substrate is specified.
- c. Surface-Tolerant Prime Coat: Primer, metal, surface tolerant.
 - 1) Rust-Oleum CV740 Alkyd Metal Primer Low VOC
 - 2) Or approved equal
- d. Intermediate Coat: Exterior, alkyd enamel, matching topcoat.
- e. Semigloss Topcoat: Alkyd, exterior, semigloss
 - 1) KM 1998 Epic Water Urethane Modified Alkyd Semi-Gloss Enamel
 - 2) Or approved equal

C. Galvanized-Metal Substrates:

1. Water-Based Light Industrial Coating System:

- a. For use at handrails unless otherwise noted
- b. Acrylic Prime Coat: Primer, galvanized, water based.
 - 1) KM 5725 DTM Acrylic Metal Primer/Finish
 - 2) Or approved equal
- c. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
- d. Semigloss Topcoat: Light industrial coating, exterior, water based, semigloss
 - 1) KM 5885 DTM High Performance Acrylic Semi-Gloss Enamel
 - 2) Or approved equal
- e. Intermediate Coat: Exterior, alkyd enamel, matching topcoat.
- f. Semigloss Topcoat: Alkyd, exterior, semigloss
 - 1) KM 1998 Epic Water Urethane Modified Alkyd Semi-Gloss Enamel
 - 2) Or approved

D. Aluminum Substrates:

1. Latex System:

- a. Prime Coat: Primer, quick dry, for aluminum.

LAUREL ELEMENTARY SCHOOL HVAC REPLACEMENT
San Mateo-Foster City School District
Project No. 2021005.03

- 1) KM 5725 DTM Acrylic Metal Primer/Finish
 - 2) Or approved equal
 - b. Intermediate Coat: Latex, exterior, matching topcoat.
 - c. Semigloss Topcoat: Latex, exterior, semigloss
 - 1) KM 5885 DTM High Performance Semi-Gloss Enamel
 - 2) Or approved
- E. Wood Substrates: Wood trim, Doors.
 1. Latex over Latex Primer System:
 - a. Prime Coat: Primer, latex for exterior wood.
 - 1) KM 295 Kel-Bond Universal Primer
 - 2) Or approved equal
 - b. Intermediate Coat: Latex, exterior, matching topcoat.
 - c. Semigloss Topcoat: Latex, exterior, semigloss
 - 1) KM 1215 Premium Professional Exterior 100% Acrylic Semi-Gloss
 - 2) Or approved equal
- F. Portland Cement Plaster Substrates:
 1. Latex System:
 - a. Latex Prime Coat: Latex, exterior, matching topcoat.
 - b. Alkali-Resistant Prime Coat: Primer, alkali resistant, water based.
 - 1) KM 247 Acryshield Masonry Primer
 - 2) Or approved equal
 - c. Intermediate Coat: Latex, exterior, matching topcoat.
 - d. Low-Sheen Topcoat: Latex, exterior, low sheen
 - 1) KM 1210 Premium Professional Exterior Low Sheen
 - 2) Or approved equal

END OF SECTION 099114

SECTION 312316 – TRENCHING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes excavating trenches for utilities from outside building to final connection point or public right-of-way or utility; compacted fill from top of utility bedding to subgrade elevations; and backfilling and compaction.
- B. Related Sections:
 - 1. Section 03 30 00 – Cast-in-Place Concrete.

1.2 DEFINITIONS

- A. Utility: Any buried pipe, duct, conduit, or cable.

1.3 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.4 COORDINATION

- A. Section 01 06 00 - Regulatory Requirements.
- B. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.
- C. Verify elevations of existing facilities prior to placing new Work.

PART 2 PRODUCTS

2.1 FILL MATERIALS

- A. Fill and Structural Fill shall be: As specified in the project Soils Report and any supplements to the Soils Report.

2.2 ACCESSORIES

- A. Filter Fabric: Non-biodegradable, woven as manufactured by TC Mirafi, Tenax Corp., Tensar Earth Technologies, Inc. or equal.

PART 3 EXECUTION

3.1 LINES AND GRADES

- A. Grades
 - 1. Pipes shall be laid true to the lines and grades indicated.
 - 2. The grade alignment of the pipe shall be maintained by the use of a string line parallel with the grade line and vertically above the centerline of the pipe. This line shall be established on level batter boards at intervals of not more than 25 feet. Batter boards shall span the trench and be rigidly anchored to substantial posts driven into the ground on each side of the trench. Three adjacent batter boards must be set before laying pipe to provide a check on the grades and line. Elevation and position of the string line shall be determined from the elevation and position of offset points or stakes located along the pipe route. Pipe shall not be laid using side lines for line or grade.
 - 3. As an alternative means of establishing alignment and grade, a "Laser-Beam" instrument may be utilized with a competent operator.
- B. Location of Pipe Lines:
 - 1. The location and approximate depths of the proposed pipe lines are shown on the Drawings.
 - 2. An underground locate service shall be enlisted to discover the location of existing utilities regardless if they are shown on the drawings.
 - 3. The Architect/Engineer reserves the right to make changes in lines, grades, and depths of pipe lines and manholes when such changes are necessary.

3.2 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Protect plant life, lawns, and other features remaining as a portion of final landscaping.
- C. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- D. Maintain and protect above and below grade utilities which are to remain.
- E. Cut out soft areas of subgrade not capable of compaction in place. Backfill and compact to density equal to or greater than requirements for subsequent backfill material.

3.3 EXCAVATING

- A. Excavate subsoil required for utilities.

- B. Cut trenches sufficiently wide to enable installation and allow inspection. Remove water or materials that interfere with Work.
- C. Do not interfere with 45 degree bearing splay of foundations.
- D. Hand trim excavation. Hand trim for bell and spigot pipe joints. Remove loose matter.
- E. Remove lumped subsoil, boulders, and rock as directed by the Soils Engineer or other inspector.
- F. Correct over excavated areas with backfill and compact replacement as specified for authorized excavation.
- G. Stockpile excavated material on site. Remove excess material not being used from site.

3.4 TRENCHING

- A. Excavations:
 - 1. Excavation shall be dug so that the pipe can be laid and jointed properly. The trench shall be made so that the pipe can be laid to the alignment and depth as shown on the Drawings, and it shall be excavated only so far in advance of pipe laying as permitted by the Architect/Engineer. The excavation shall not be more than two feet wider at the bottom than the outside diameter of the pipe or structure. If there is no interference with construction, or adjacent property, and if soil permits, the Contractor at his own expense shall be permitted to slope the side walls of the excavation starting at a point two (2) feet above the top of pipe.
 - 2. The trench shall be excavated to the depth required so as to provide a uniform and continuous bearing and support for the pipe on bedding material at every point between joints, except where pipe slings or other lifting tackle are withdrawn.
 - 3. Excavation Below Grade:
 - 1) Where excavation indicates that the subsurface materials at the bottom of the trench are in a loose or soft state, the Contractor shall be advised to excavate to a depth where suitable material is encountered, as directed by the Architect/Engineer.
 - 2) Where the bottom of the trench has been excavated by mistake to a greater depth than required, the Contractor shall refill this area using approved material. No additional compensation shall be given to the Contractor. Refilling with earth to bring the bottom of the trench to the proper grade will not be permitted.
 - 4. Excavation within 24 inches of existing utilities shall be governed by specifications of the Owner of the respective utility. The Contractor shall obtain these specifications and follow the same at no extra cost.

5. Excavation and shoring shall adhere to the requirements and safety standards set by OSHA.
- B. Trenching in Advance of Pipe Laying: The trench for the pipe lines shall not be opened for a distance of more than 200 feet at any one time, unless authorized by the Architect/Engineer. At no time will the Contractor be permitted to leave more than 50 feet of trench open at the end of a working day. Adequate protection of open trench shall be provided by the Contractor and the Contractor shall be responsible therefore.

3.5 SHEETING AND BRACING

- A. General:
 1. Sheeting and bracing of all excavations shall conform to the latest statutes of the State of California governing safety of workers in the construction industry. When necessary, in the opinion of the Contractor, adequate sheeting and bracing shall be installed to prevent ground movement that may cause damage or settlement to adjacent structures, pipelines and utilities. Any damage due to settlement because of failure to use sheeting or because of inadequate bracing, or through negligence or fault of the Contractor in any other manner, shall be repaired at the Contractor's expense.
 2. Sides of trenches in unsuitable, loose or soft material, five feet or more in depth, shall be shored, sheeted, braced, sloped, or otherwise supported by means of sufficient strength to protect employees working within them.
- B. Sheeting Requirements:
 3. Where excavations are made with vertical sides which require supporting, the sheeting and bracing shall be of sufficient strength to sustain the sides of the excavations and to prevent movement which could in any way injure the Work, or adjacent structures, or diminish the working space sufficiently to delay the Work. Special precautions shall be taken where there is additional pressure due to the presence of other structures.
 4. It shall be the Contractor's responsibility to select sheeting and bracing of sufficient dimensions and strength and type to adequately support the sides of trenches and excavations.
 5. Sheeting and bracing shall be removed before the completion of the Work.

3.6 BACKFILLING

- A. Backfill trenches to contours and elevations shown on the drawings.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, or spongy subgrade surfaces.
- C. Fill materials shall be as specified in the Soils Report and any supplements to the Soils Report.

- D. Employ a placement method that does not disturb or damage utilities in trench. Jetting of backfill materials to achieve compaction shall not be permitted.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Remove surplus fill materials from site.

3.7 TOLERANCES

- A. Section 01 40 00 - Quality Requirements.
- B. Top Surface of Backfilling Under Paved Areas: Plus or minus 0.05 feet from required elevations.
- C. Top Surface of General Backfilling: Plus or minus 1/10 feet from required elevations.

3.8 FIELD QUALITY CONTROL

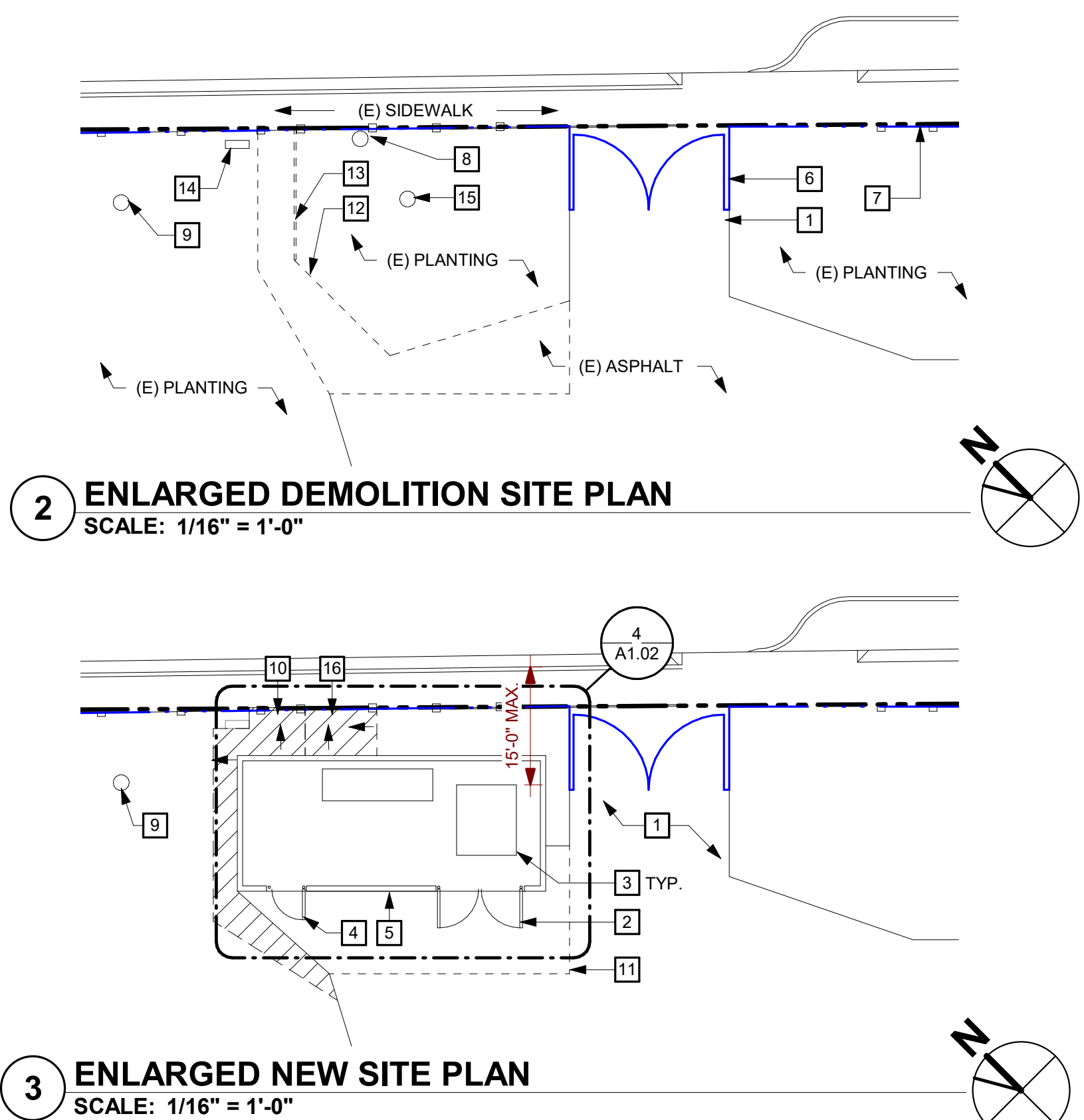
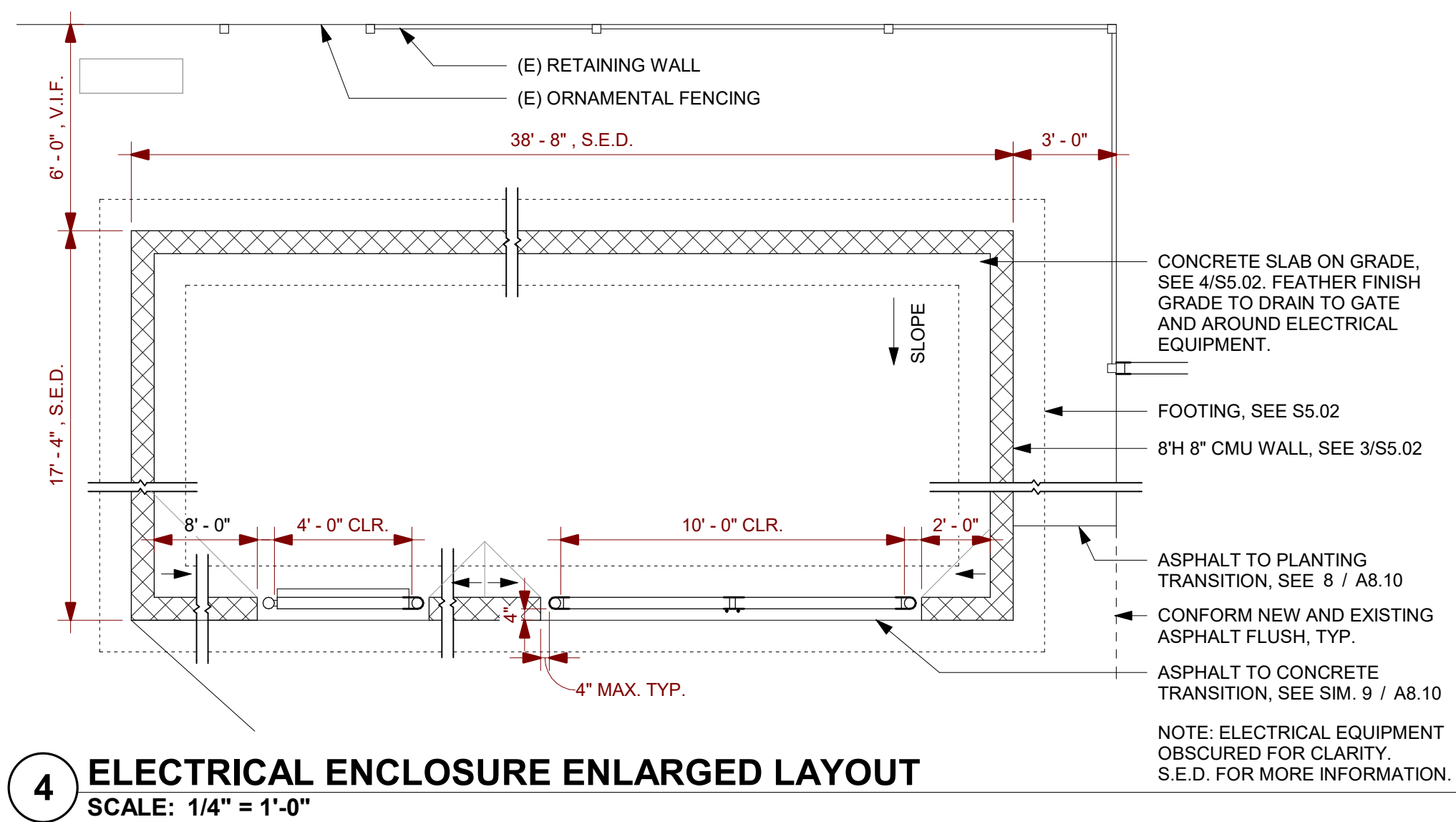
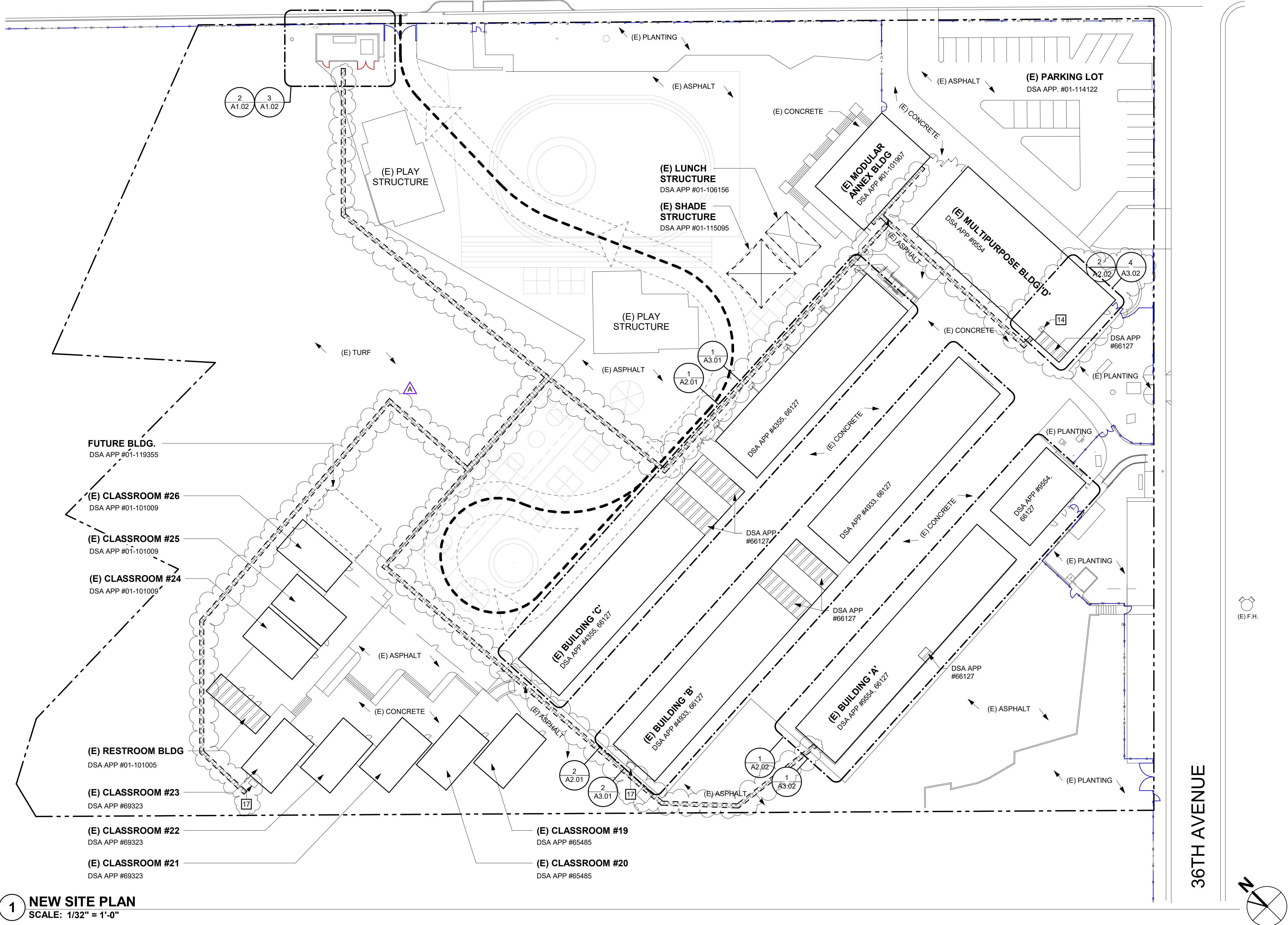
- A. Compaction testing will be performed by the project Soils Engineer.
- B. If tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest.

3.9 PROTECTION OF FINISHED WORK

- A. Section 01 70 00 - Execution and Closeout Requirements.
- B. Reshape and re-compact fills subjected to vehicular traffic during construction.

END OF SECTION

HACIENDA STREET



GENERAL SHEET NOTES

- A BUILDINGS ARE UNSPRINKLERED, TYPE V-B CONSTRUCTION UNLESS OTHERWISE NOTED.
- B NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.
- C CONTRACTOR SHALL MAINTAIN FIRE LANE ACCESS THROUGHOUT PROJECT.
- D DO NOT INTERRUPT EXISTING UTILITY SERVICES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AND COORDINATED WITH THE OWNER.
- E PROTECT EXISTING & NEW STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, TREES AND SHRUBS FROM DAMAGE DURING CONSTRUCTION.
- F REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR EXTENT OF ELECTRICAL AND MECHANICAL WORK.
- G ALL EXISTING FINISHES OR MATERIALS DAMAGED OR DEMOLISHED DUE TO NEW CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL STATE, INCLUDING BUT NOT LIMITED TO REINSTALLING OR REPLACING EXISTING CHAINLINK FENCING AS REQUIRED AND RESTRIPIPING PAVING IN KIND, S.E.D. FOR TRENCH ROUTING, SEE ARCHITECTURAL SITE PLAN FOR STRIPING AT EXISTING PAVING.

SITE PLAN KEYNOTES

- 1 (E) ASPHALT TO REMAIN.
- 2 10'W DOUBLE GATE, SEE DETAIL 3/A8.10.
- 3 ELECTRICAL EQUIPMENT, S.E.D.
- 4 4'W GATE, SEE DETAIL 2/A8.10.
- 5 CMU ENCLOSURE, S.E.D. AND S.S.D.
- 6 (E) GATE TO REMAIN.
- 7 (E) ORNAMENTAL FENCING TO REMAIN.
- 8 (E) TREE TO BE REMOVED. REMOVE STUMP TO 6" BELOW GRADE.
- 9 (E) TREE TO REMAIN.
- 10 INFILL NATIVE SOIL. PROVIDE COVERAGE AT FOUNDATION PER 3/S5.02. CONFORM FLUSH AT ASPHALT PAVING AND PROPERTY LINE.
- 11 INFILL ASPHALT, CONFORMING TO ADJACENT. SEE 9/A8.10.
- 12 REMOVE (E) ASPHALT PAVING.
- 13 REMOVE (E) RETAINING WALL, CHAINLINK FENCING, AND FOOTINGS.
- 14 (E) EQUIPMENT TO REMAIN.
- 15 RELOCATE (E) TREE TO ALTERNATE LOCATION ON CAMPUS. COORDINATE FINAL LOCATION WITH DISTRICT.
- 16 AT (E) RETAINING WALL TO REMAIN, CONFORM TO ADJACENT GRADING.
- 17 NEW TRANSFORMER PAD, S.E.D.

GRAPHIC KEY

- EXISTING TOILET ROOMS.
- EXISTING CONSTRUCTION TO REMAIN
- EXISTING COVERED STRUCTURE
- TRENCH FOR ELECTRICAL WORK, S.E.D., 8/S5.01 & DETAILS ON SHEET A8.10
- ASSUMED PROPERTY LINE
- (E) CHAINLINK FENCE
- (N) CHAINLINK FENCE
- (E) ORNAMENTAL FENCE
- (E) FIRE DEPARTMENT ACCESS
FIRE DEPARTMENT ACCESS IS 20'-0" WIDE AND RATED FOR 96,000 LBS.
- EXISTING FIRE HYDRANT

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PROJECT

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SAN MATEO-FOSTER CITY
SCHOOL DISTRICT

CONSULTANT

STAMP



STATE

DSA FILE NUMBER 41-26
APPL # 01-119551

REVISIONS

No.	Description	Date
1	Addendum 1	11/24/2021

MILESTONES

DD	
90% CD	
DSA SUB	05/28/2021
BACKCHECK	10/06/2021

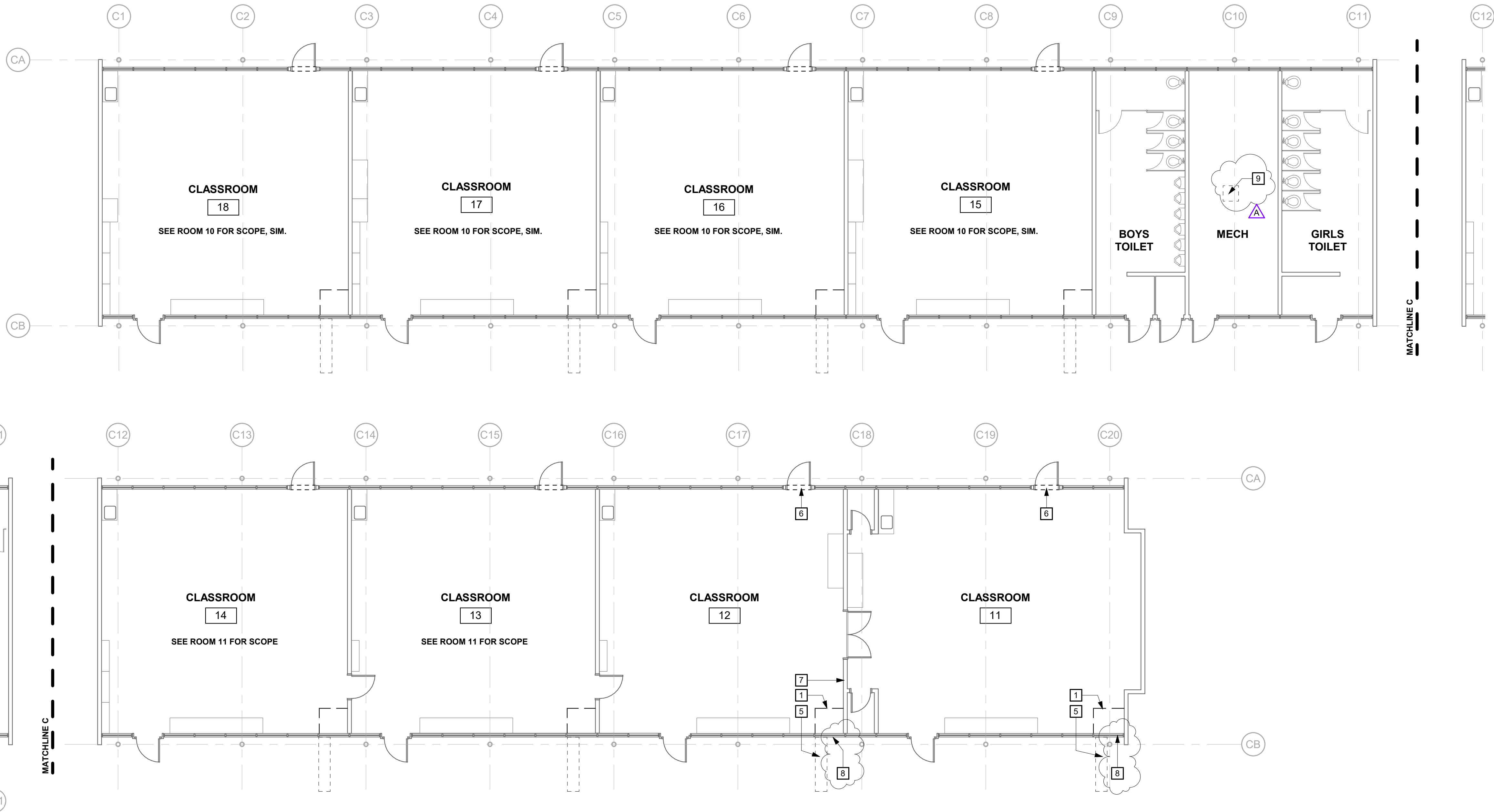
SHEET

SITE PLAN

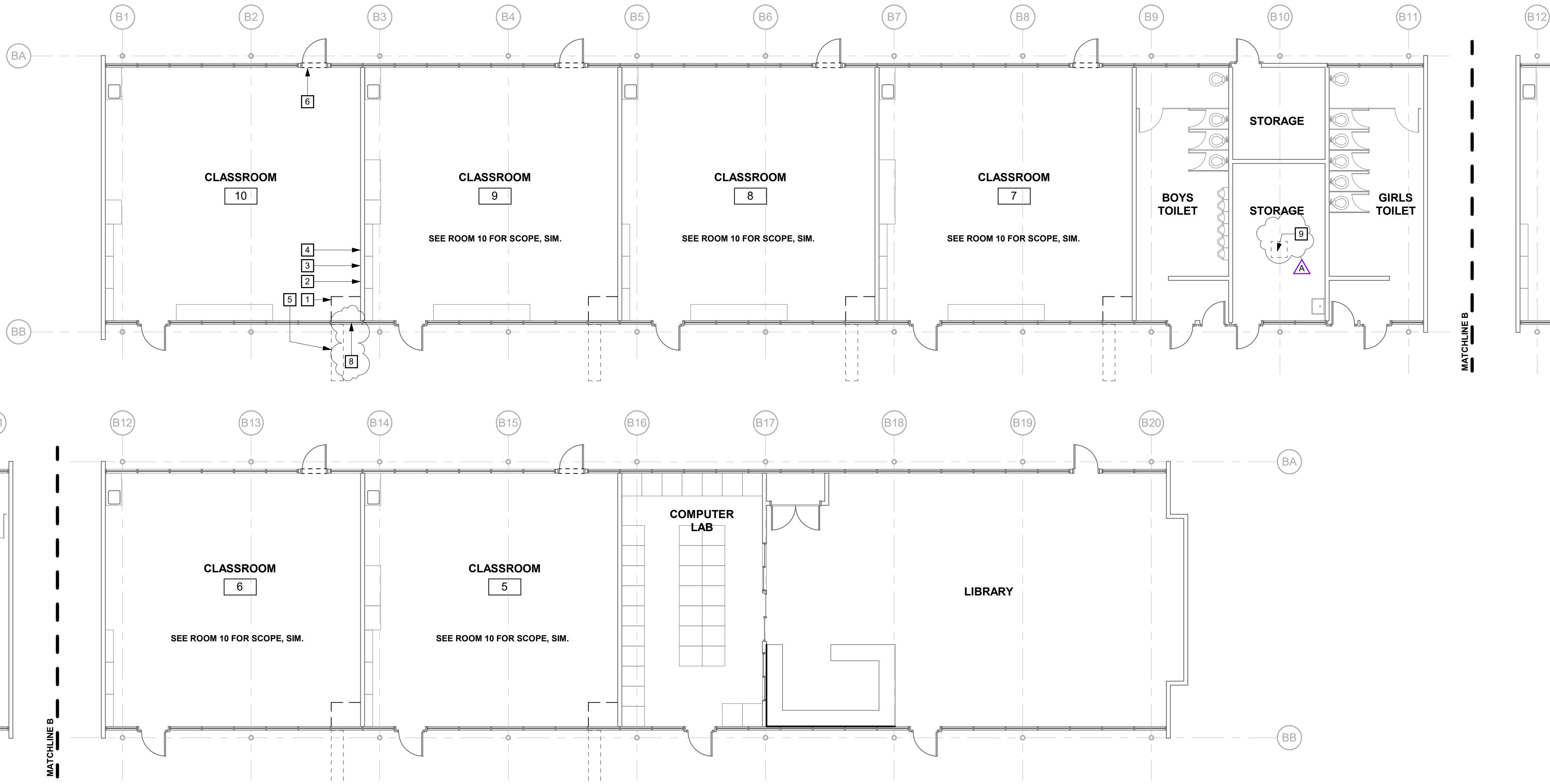
DATE 11/24/2021

JOB # 2021005.03

SHEET # AD1-A1.02



1 DEMOLITION FLOOR PLAN - BLDG C
SCALE: 1/8" = 1'-0"



2 DEMOLITION FLOOR PLAN - BLDG B
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

- A ROOM NAMES OR NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION AND NEW FLOOR PLANS.
- B REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR EXTENT OF MECHANICAL AND ELECTRICAL DEMOLITION WORK.
- C VERIFY LIMITS OF DEMOLITION WITH SCOPE OF NEW WORK PRIOR TO COMMENCING WORK.
- D ALL ITEMS SHOWN DASHED ARE TO BE DEMOLISHED UNLESS OTHERWISE NOTED ON PLANS.
- E REMOVE ALL MISCELLANEOUS TRIM, CASEWORK, EQUIPMENT, CONDUIT, BASES, AND OTHER SURFACE MOUNTED ITEMS WHETHER SHOWN OR NOT, AS REQUIRED TO FACILITATE SCOPE OF WORK. REMOVE AND CAP ALL OUTLETS, SWITCHES, WIRES, THERMOSTATS, ETC. TO THEIR SOURCE AS REQUIRED. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK.
- F REMOVE ADJACENT FINISHES AS REQUIRED TO FACILITATE SCOPE OF WORK. PATCH BACK IN KIND.
- G EXISTING EQUIPMENT INDICATED TO BE RELOCATED PER NEW PLAN IS TO BE STORED AND PROTECTED DURING CONSTRUCTION.
- H NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.
- I DIMENSIONS FOR EXISTING BUILDING ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO START OF CONSTRUCTION.
- J REFER TO "HVAC AND POWER UPGRADE PROJECT HAZARDOUS MATERIALS SURVEY REPORT." CONTRACTOR TO ABATE AREAS AFFECTED BY SCOPE OF WORK. REMOVE AND DISPOSE OF MATERIALS PER REPORT RECOMMENDATIONS.

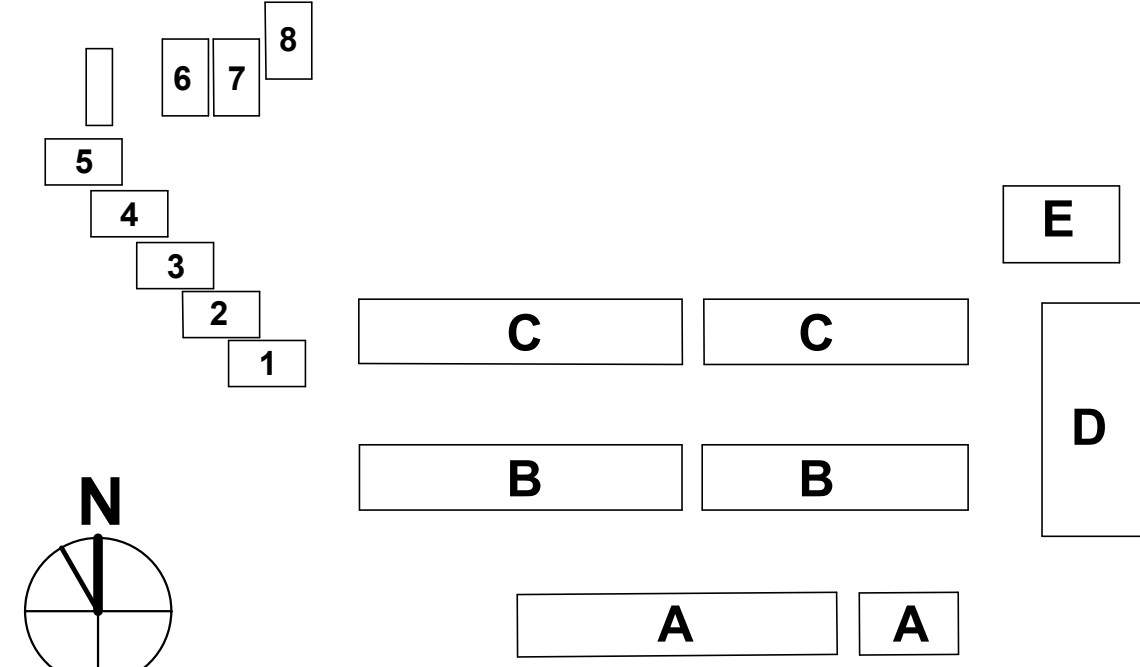
DEMOLITION FLOOR PLAN KEYNOTES

- 1 REMOVE (E) MECHANICAL UNIT AND METAL ENCLOSURE, T-BAR AND GYP SOFFIT, S.M.D.
- 2 SHORTEN (E) RACEWAY SURROUNDING THREE SIDES OF (E) WHITEBOARD. COORDINATE LENGTH TIGHT TO NEW ENCLOSURE. SEE NEW FLOOR PLANS.
- 3 REMOVE (E) 4' X 16' WHITEBOARD AND TURN OVER TO DISTRICT.
- 4 RELOCATE (E) DATA OUTLET, COORDINATED TO RECONFIGURED WIREMOLD. LOCATE A.F.F. 15" MIN. TO 48" MAX.
- 5 REMOVE PAVING AND PREP FOR NEW WORK, S.M.D.
- 6 REMOVE (E) WINDOW GLAZING ABOVE AND PREP FOR NEW WORK, S.M.D.
- 7 REMOVE (E) TACK PANEL AND TURN OVER TO DISTRICT.
- 8 REMOVE (E) FILLER PANEL FOR FUTURE AIR IN-TAKE AT MECHANICAL ENCLOSURE.
- 9 REMOVE PARTIAL GYP, BD CEILING FOR FUTURE EXHAUST FAN, S.M.D.

GRAPHIC KEY

- EXISTING NONRATED WALL TO REMAIN.
- EXISTING STOREFRONT OR WINDOW TO REMAIN.
- EXISTING ENCLOSURE TO BE DEMOLISHED

BUILDING KEY



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PROJECT

LAUREL
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SCHOOL - HVAC
REPLACEMENT

SAN MATEO-FOSTER CITY
SCHOOL DISTRICT

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STATE

DSA FILE NUMBER

41-26

APPL #

01-119551

REVISIONS

No. Description Date

Addendum 1 11/24/2021

MILESTONES

DD

90% CD

DSA SUB

05/28/2021

BACKCHECK

10/06/2021

SHEET

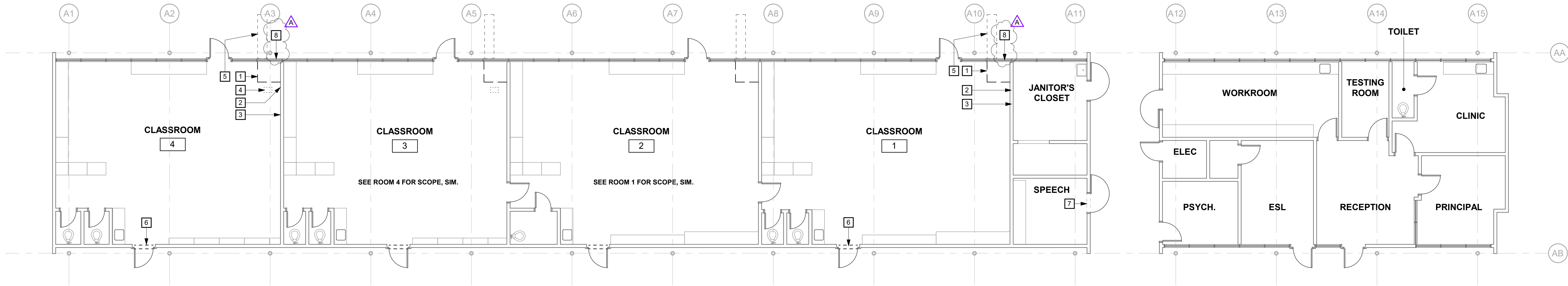
DEMOLITION
FLOOR PLANS -
BLDG B & C

DATE 11/24/2021

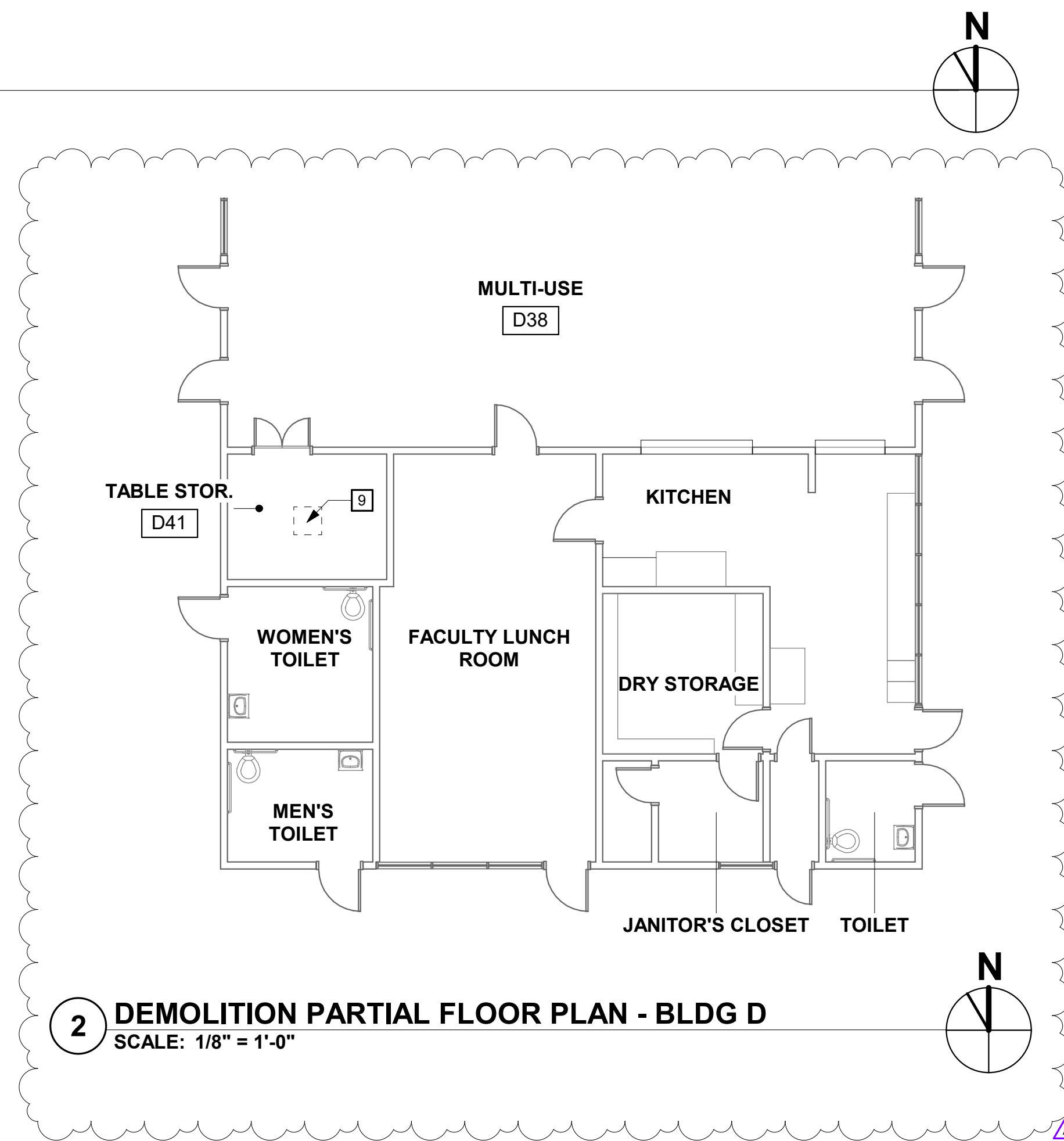
JOB # 2021005.03

SHEET # AD1-

A2.01



1 DEMOLITION FLOOR PLAN - BLDG A
SCALE: 1/8" = 1'-0"



2 DEMOLITION PARTIAL FLOOR PLAN - BLDG D
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

- A ROOM NAMES OR NUMBERS MAY NOT BE CONSISTENT BETWEEN DEMOLITION AND NEW FLOOR PLANS.
- B REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR EXTENT OF MECHANICAL AND ELECTRICAL DEMOLITION WORK.
- C VERIFY LIMITS OF DEMOLITION WITH SCOPE OF NEW WORK PRIOR TO COMMENCING WORK.
- D ALL ITEMS SHOWN DASHED ARE TO BE DEMOLISHED UNLESS OTHERWISE NOTED ON PLANS.
- E REMOVE ALL MISCELLANEOUS TRIM, CASEWORK, EQUIPMENT, CONDUIT, BASES, AND OTHER SURFACE MOUNTED ITEMS WHETHER SHOWN OR NOT, AS REQUIRED TO FACILITATE SCOPE OF WORK. REMOVE AND CAP ALL OUTLETS, SWITCHES, WIRES, THERMOSTATS, ETC. TO THEIR SOURCE AS REQUIRED. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK.
- F REMOVE ADJACENT FINISHES AS REQUIRED TO FACILITATE SCOPE OF WORK. PATCH BACK IN KIND.
- G EXISTING EQUIPMENT INDICATED TO BE RELOCATED PER NEW PLAN IS TO BE STORED AND PROTECTED DURING CONSTRUCTION.
- H NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.
- I DIMENSIONS FOR EXISTING BUILDING ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO START OF CONSTRUCTION.

REFER TO "HVAC AND POWER UPGRADE PROJECT HAZARDOUS MATERIALS SURVEY REPORT". CONTRACTOR TO ABATE AREAS AFFECTED BY SCOPE OF WORK. REMOVE AND DISPOSE OF MATERIALS PER REPORT RECOMMENDATIONS.

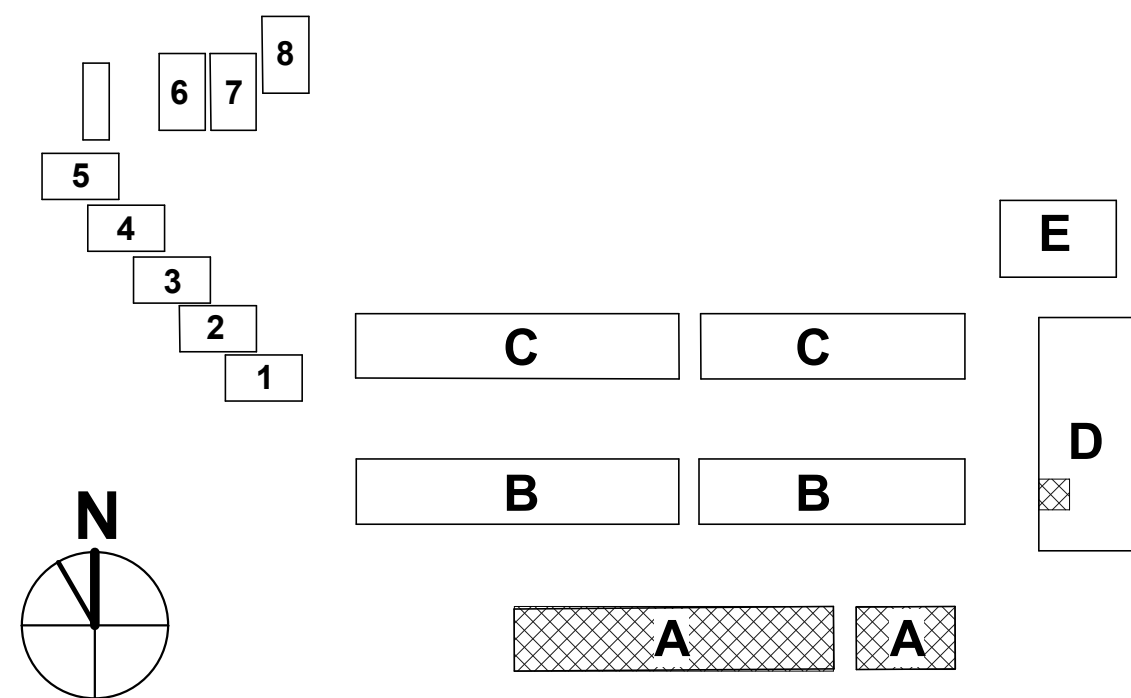
DEMOLITION FLOOR PLAN KEYNOTES

- 1 REMOVE (E) MECHANICAL UNIT AND METAL ENCLOSURE, T-BAR AND GYP SOFFIT S.M.D.
- 2 RECONFIGURE (E) RACEWAY. COORDINATE LENGTH TIGHT TO NEW ENCLOSURE, SEE NEW FLOOR PLANS.
- 3 REMOVE (E) TACK PANEL AND TURN OVER TO DISTRICT
- 4 (E) CEILING MOUNTED MOTION DETECTOR TO BE REMOVED AND REINSTALLED IN PLACE, AS REQUIRED TO FACILITATE CONSTRUCTION. REPLACE CEILING TILE.
- 5 REMOVE PAVING AND PREP FOR NEW WORK S.M.D.
- 6 REMOVE (E) WINDOW GLAZING ABOVE AND PREP FOR NEW WORK S.M.D.
- 7 PREP FOR NEW WORK S.M.D.
- 8 REMOVE (E) FILLER PANEL FOR FUTURE AIR IN-TAKE AT MECHANICAL ENCLOSURE
- 9 REMOVE PARTIAL GYP. BD CEILING FOR FUTURE EXHAUST FAN S.M.D.

GRAPHIC KEY

- EXISTING NONRATED WALL TO REMAIN.
- EXISTING STOREFRONT OR WINDOW TO REMAIN.
- EXISTING ENCLOSURE TO BE DEMOLISHED

BUILDING KEY



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PROJECT

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SAN MATEO-FOSTER CITY
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DSA FILE NUMBER 41-26
APPL # 01-119551

REVISIONS

No.	Description	Date
1	Addendum 1	11/24/2021

MILESTONES

DD	
90% CD	
DSA SUB	05/28/2021
BACKCHECK	10/06/2021

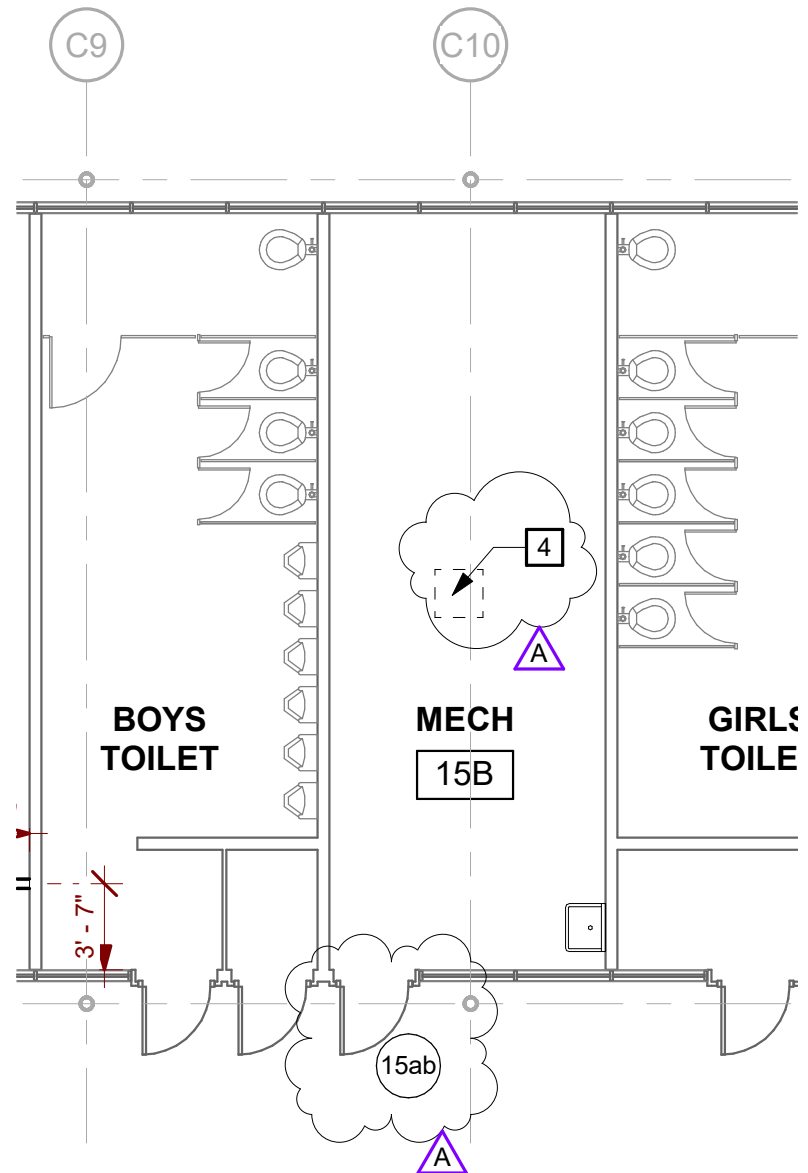
SHEET

DEMOLITION
FLOOR PLAN -
BLDG A

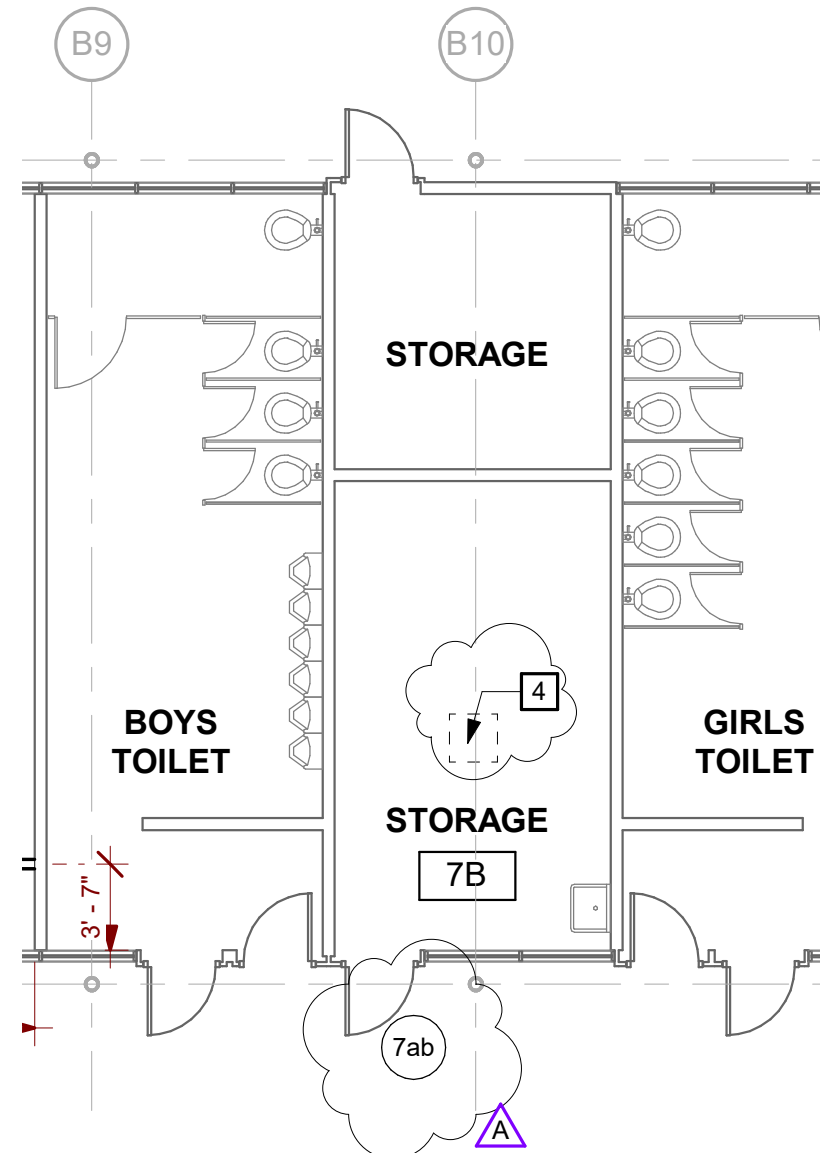
DATE 11/24/2021

JOB # 2021005.03

SHEET # AD1-
A2.02



1 NEW FLOOR PLAN - BLDG C
SCALE: 1/8" = 1'-0"



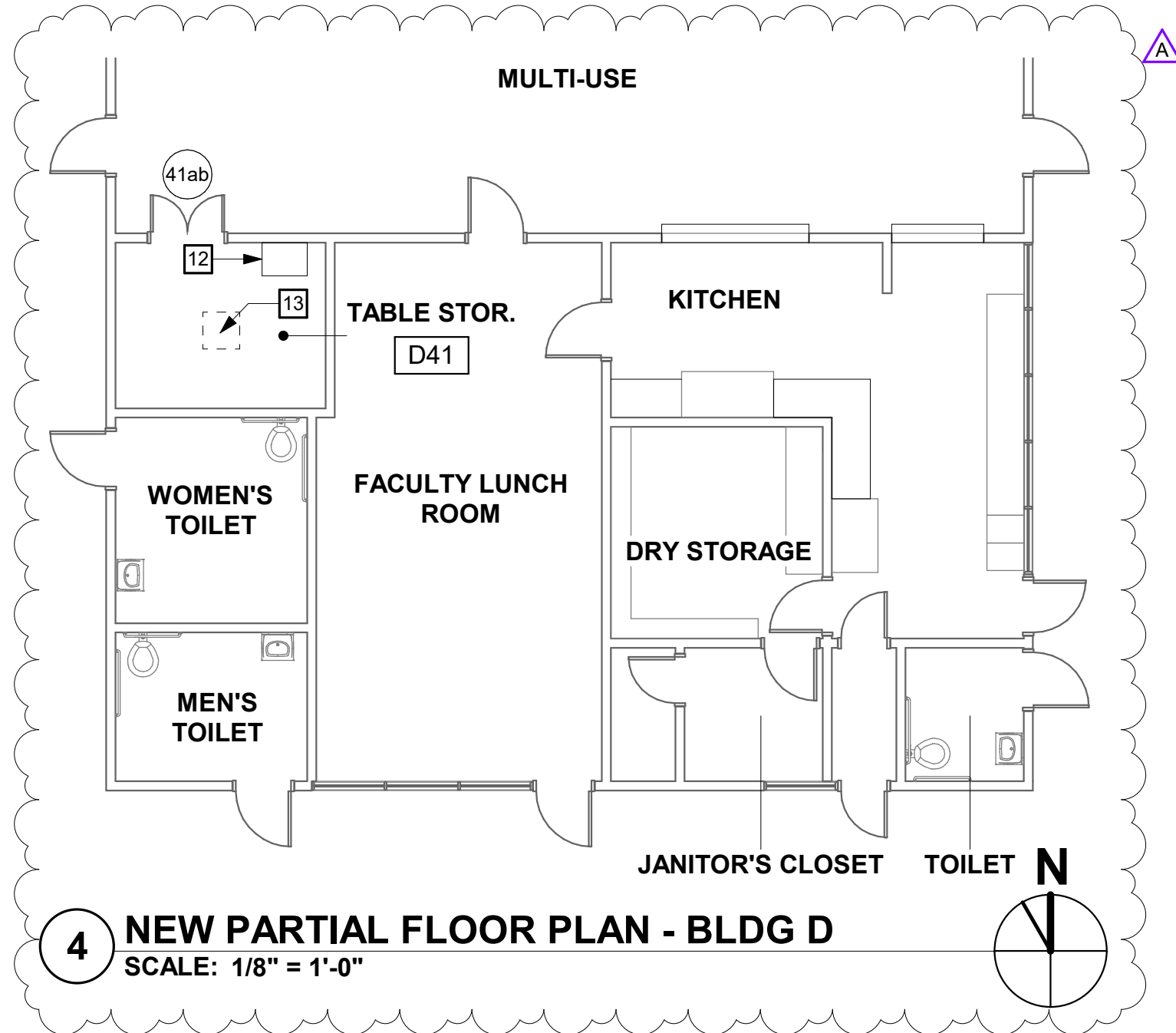
2 NEW FLOOR PLAN - BLDG B
SCALE: 1/8" = 1'-0"

NEW FLOOR PLAN KEYNOTES

- 3 REFER TO 2/A3.02 FOR TYPICAL REFLECTED CEILING PLAN, REMOVE AND REINSTALL (E) ACOUSTICAL CEILING TILES ABOVE AS REQUIRED FOR CONSTRUCTION ACCESS INCLUDING BUT NOT LIMITED TO ELECTRICAL ROUTING, MECHANICAL DUCTWORK ANCHORAGE, BLOCKING FOR ROOFTOP PLATFORMS. DO NOT ALTER SUSPENDED A.C.T. GRID.
- 4 PATCH AND PAINT GYP. BD. CEILING ADJACENT EXHAUST FAN. S.M.D.




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387 S. 1st Street, Suite 300 San Jose, CA., 95113 tel: (408) 300 - 5160 fax: (408) 300 - 5121	FILE NO.:	41-26	SHEET AD1-A3.01
	APPL NO.:	01-119551	
	JOB NO.:	2021005.03	
	DATE	11/24/21	

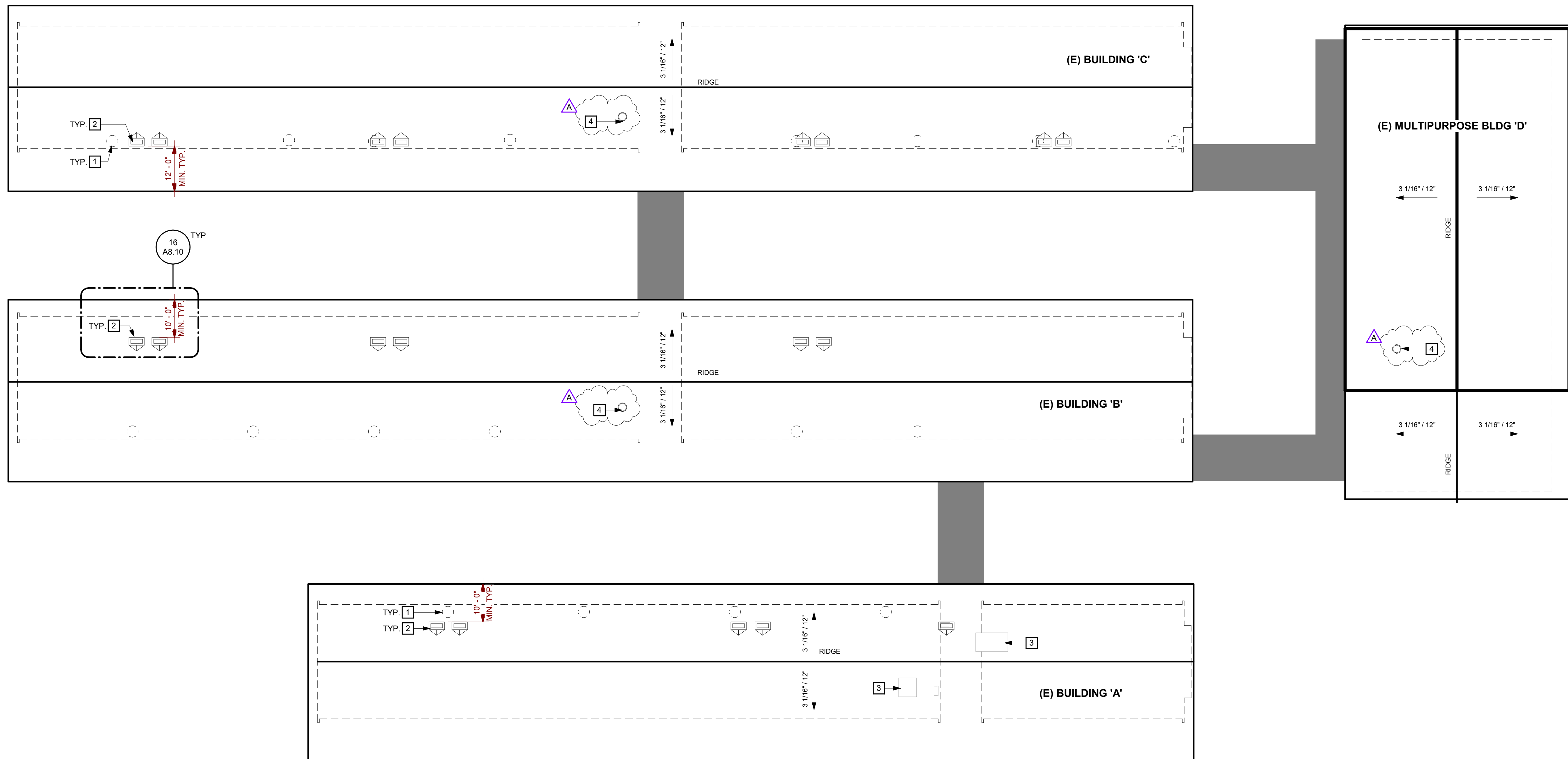
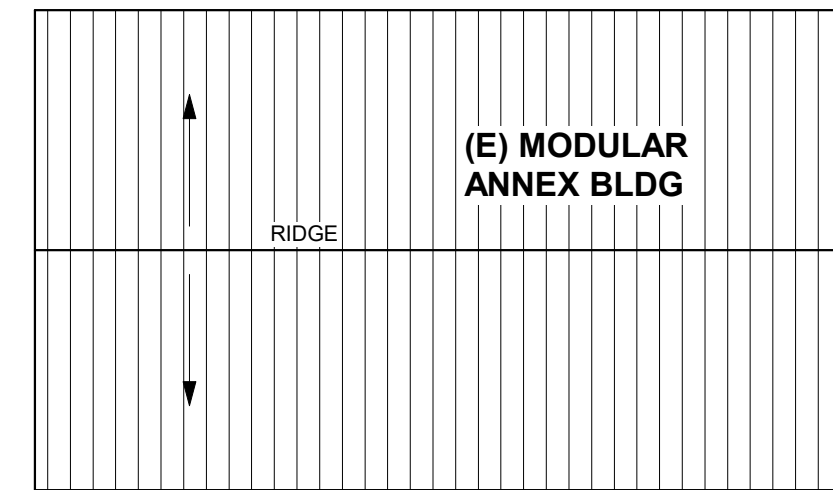
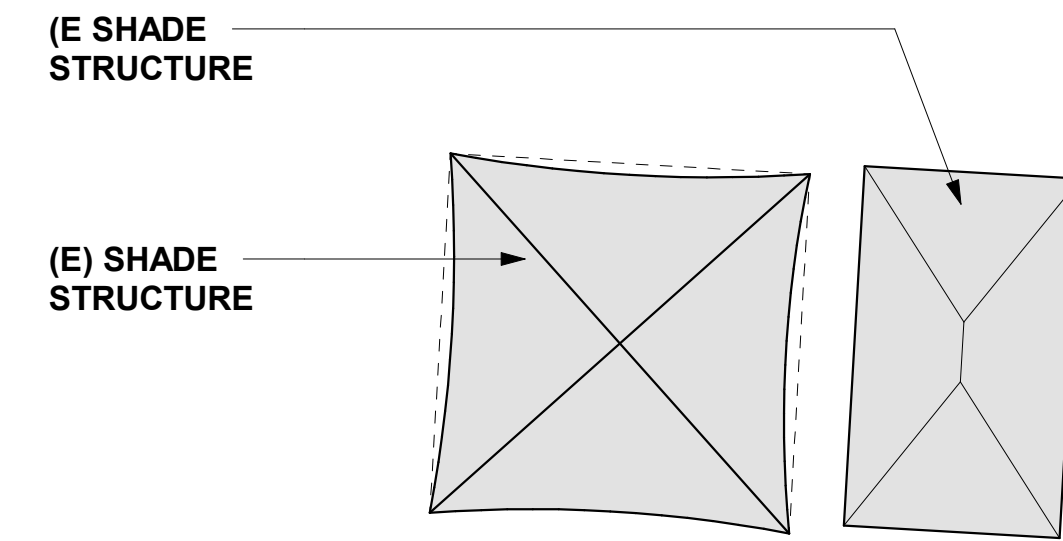
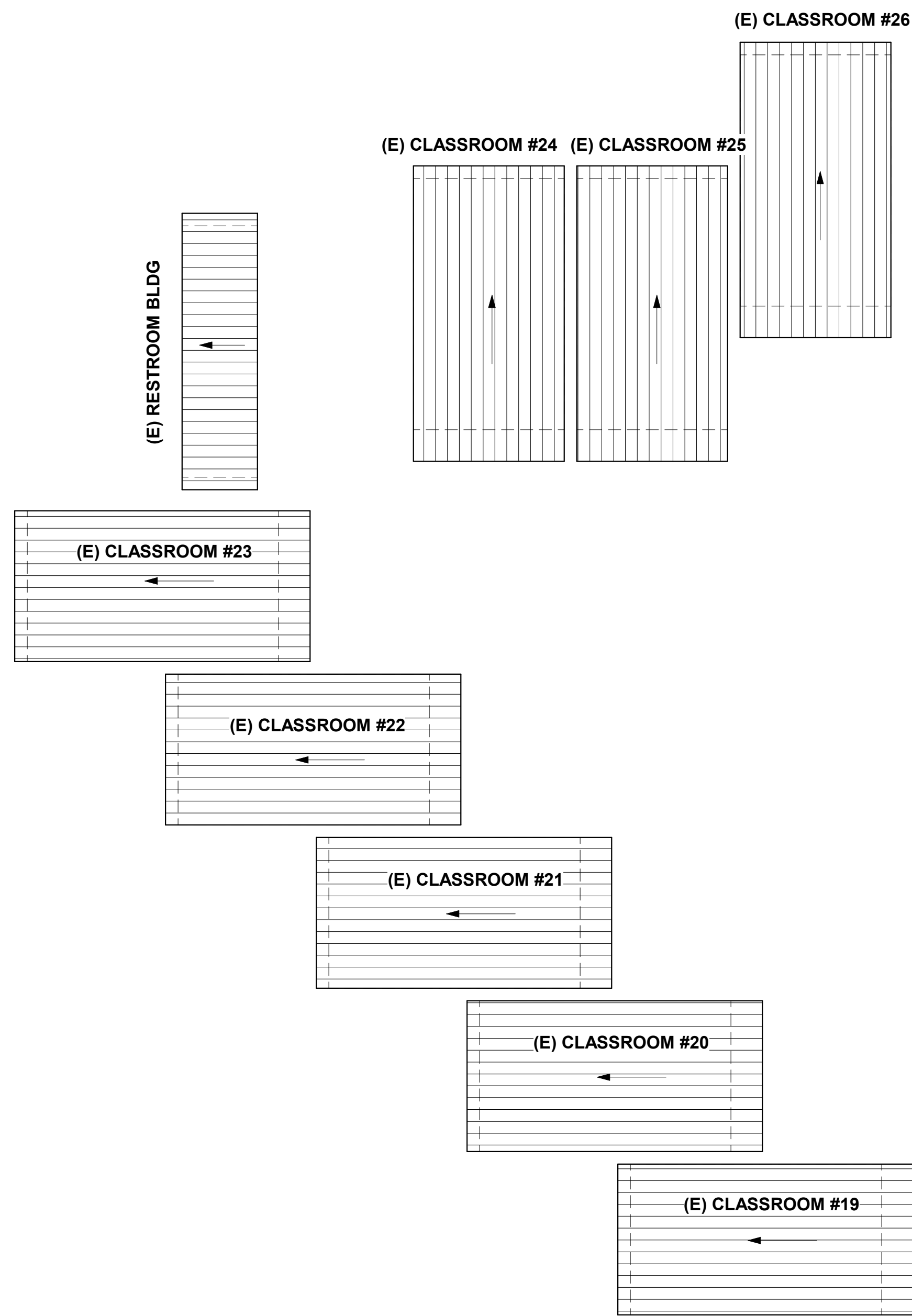


NEW FLOOR PLAN KEYNOTES

- 6 REFER TO 2/A3.02 FOR TYPICAL REFLECTED CEILING PLAN. REMOVE AND REINSTALL (E) ACOUSTICAL CEILING TILES ABOVE AS REQUIRED FOR CONSTRUCTION ACCESS, INCLUDING BUT NOT LIMITED TO ELECTRICAL ROUTING, MECHANICAL DUCTWORK ANCHORAGE, BLOCKING FOR ROOFTOP PLATFORMS. DO NOT ALTER SUSPENDED A.C.T. GRID.
- 12 ELECTRICAL EQUIPMENT S.E.D.
- 13 PATCH AND PAINT GYP. BD. CEILING ADJACENT EXHAUST FAN. S.M.D.



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		FILE NO.:	41-26	SHEET AD1-A3.02
		APPL NO.:	01-119551	
		JOB NO.	2021005.03	
DATE	11/24/21			



1 SITE ROOF PLAN
SCALE: 1/16" = 1'-0"

GENERAL SHEET NOTES

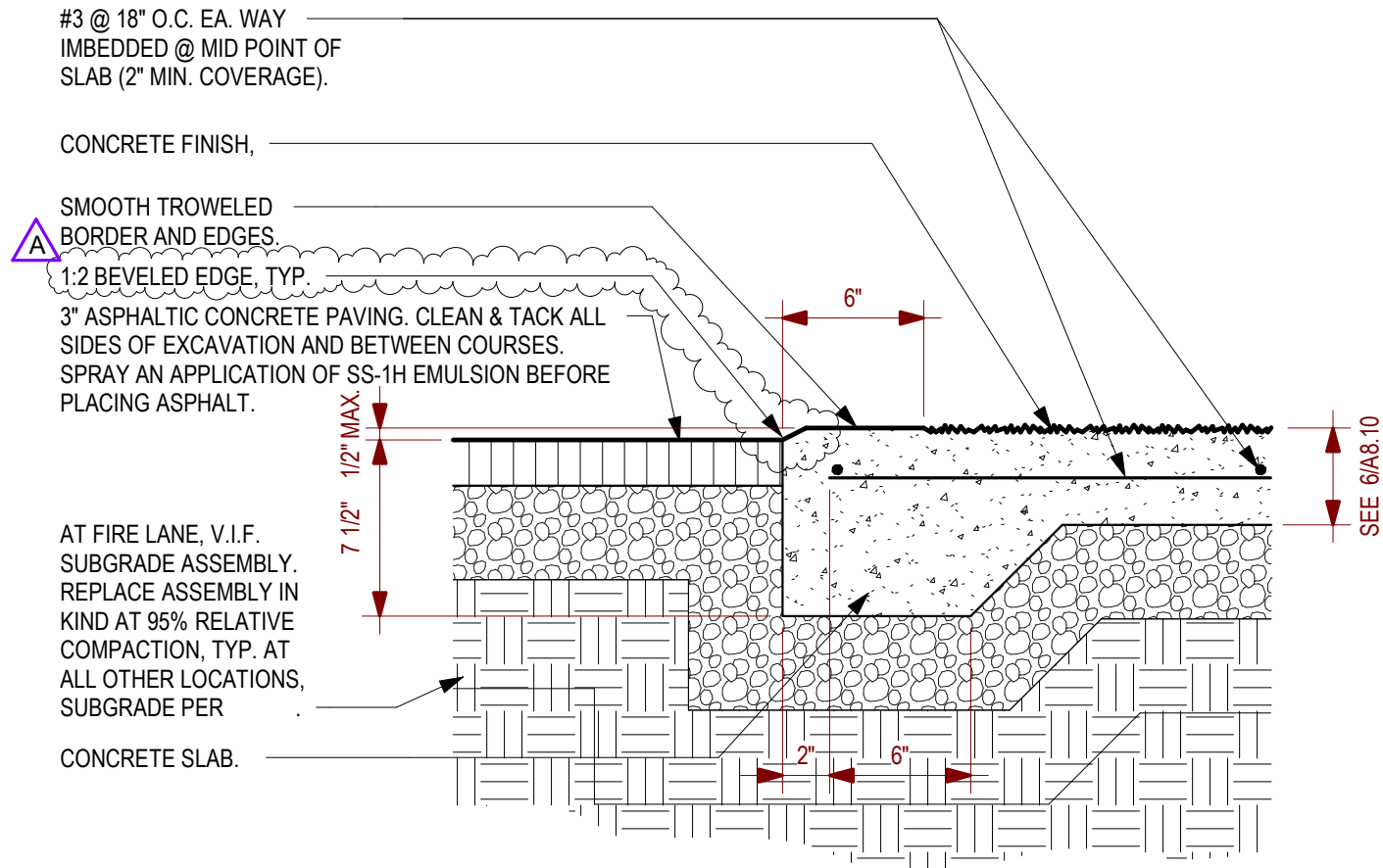
- A REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR EXTENT OF MECHANICAL AND ELECTRICAL WORK.
- B SIZE OF MECHANICAL EQUIPMENT PADS ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY REQUIRED PAD DIMENSION WITH EQUIPMENT MANUFACTURER.
- C REFER TO "HVAC AND POWER UPGRADE PROJECT HAZARDOUS MATERIALS SURVEY REPORT." CONTRACTOR TO ABATE AREAS AFFECTED BY SCOPE OF WORK. REMOVE AND DISPOSE OF MATERIALS PER REPORT RECOMMENDATIONS.

SITE ROOF PLAN KEYNOTES

- 1 PATCH (E) PENETRATION AT REMOVED FLUE AND COMBUSTION AIR INTAKE AND PATCH (N) PENETRATIONS. S.M.D. AND SEE DETAIL 17/A8.10
- 2 MECHANICAL UNIT ON PLATFORM WITH CRICKET. S.M.D. AND SEE DETAIL 10/A8.10. REMOVE (E) ROOFING TO SUBSTRATE FOR CONSTRUCTION ACCESS.
- 3 (E) MECHANICAL EQUIPMENT
- 4 EXHAUST FAN SEE 10/A8.10 SIM. S.M.D. REMOVE (E) ROOFING TO SUBSTRATE AND PREP OPENING AS REQUIRED FOR NEW WORK.

GRAPHIC KEY

- (E) ASPHALT SHINGLE, CLASS C MINIMUM
- (E) STANDING SEAM, CLASS C MINIMUM
- (E) MINERAL CAP SHEET, CLASS C MINIMUM
- (E) METAL ROOFING
- OUTLINE OF WALL BELOW



9 ASPHALT/CONCRETE JOINT

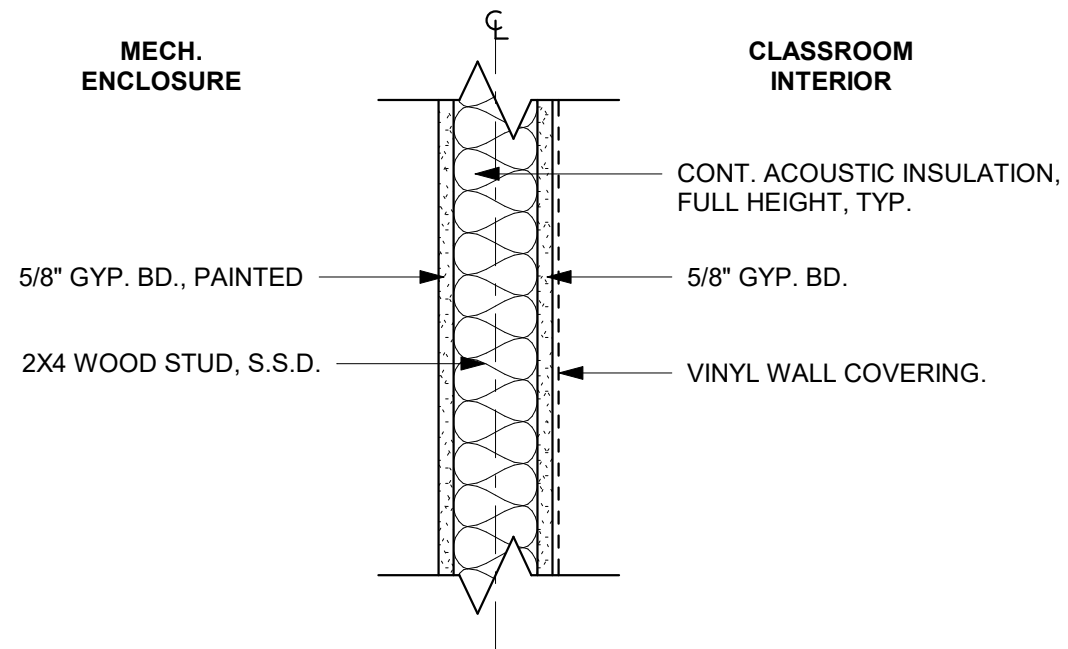
SCALE: 1 1/2" = 1'-0"



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JOB NO.	2021005.03		
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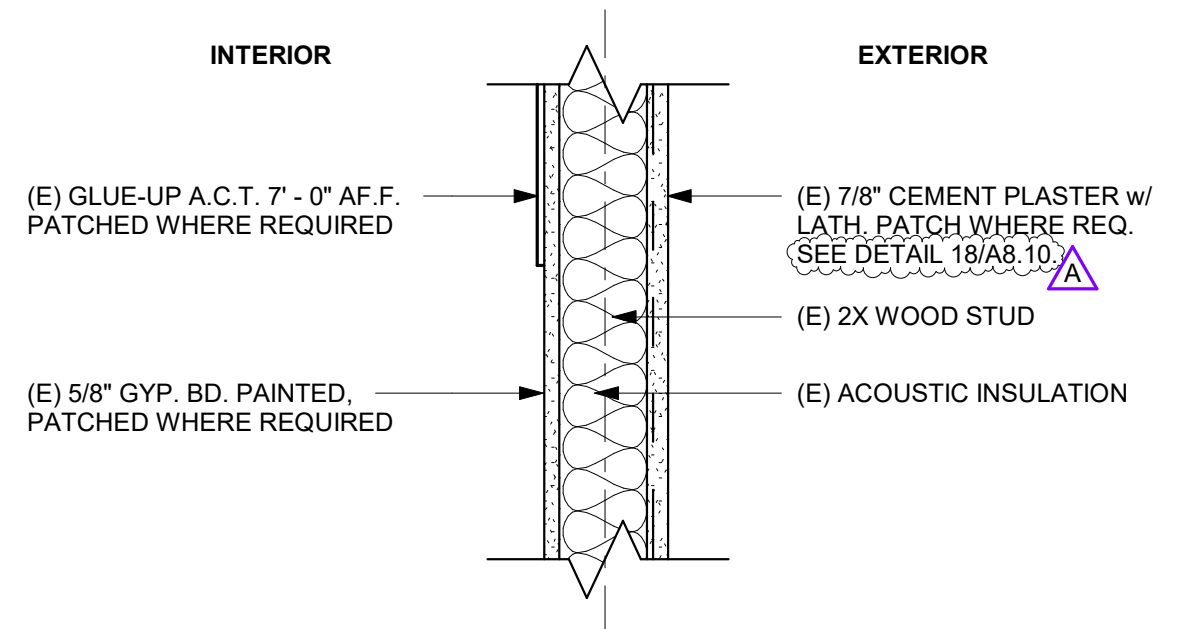


NOTE:
SEE DETAIL 6/A9.10 FOR TYPICAL SOUND TREATED NONRATED WALL.

1

WALL TYPE - MECHANICAL ENCLOSURE

SCALE: 1 1/2" = 1'-0"



(E) WALL TYPE - GLUE-UP A.C.T. / EXT. CEMENT PLASTER

SCALE: 1 1/2" = 1'-0"



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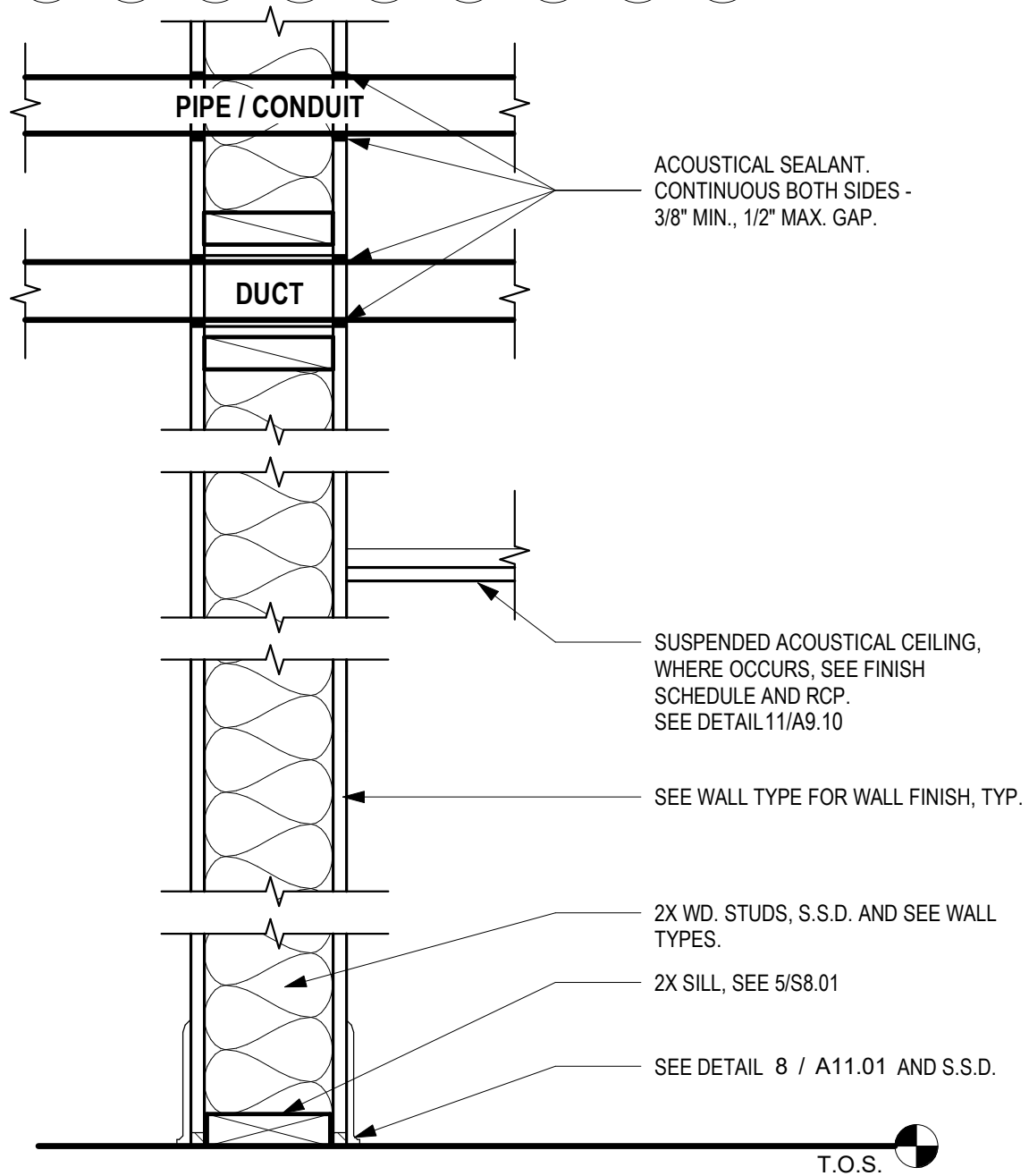
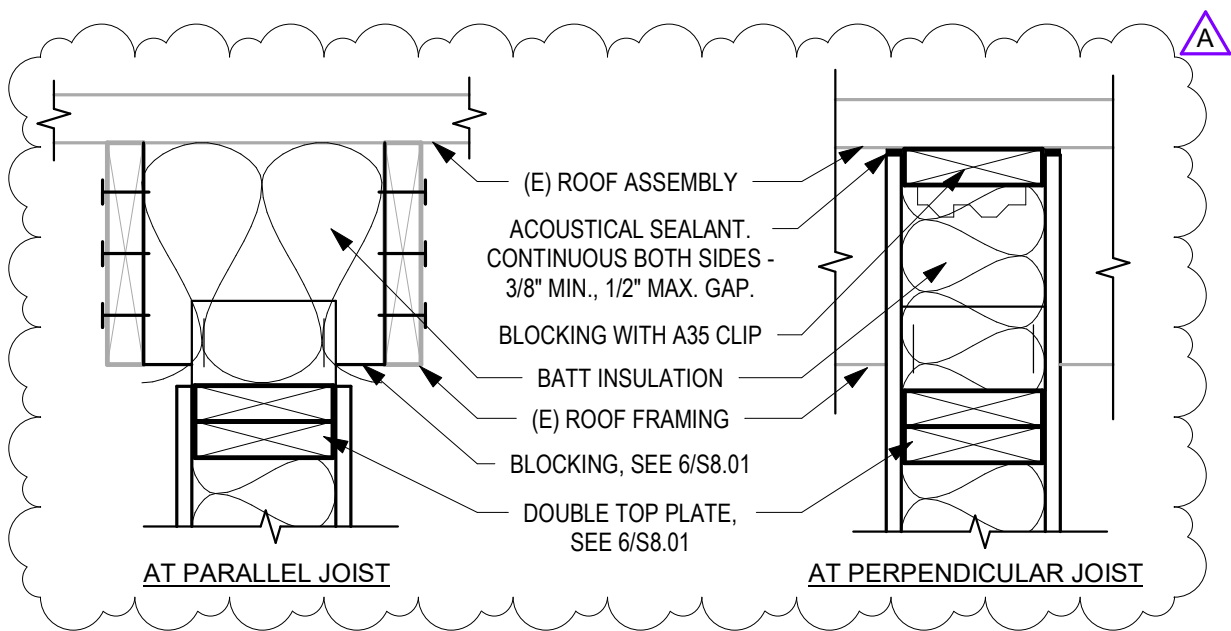
APPL NO.: 01-119551

JOB NO. 2021005.03

DATE 11/24/2021

SHEET

AD1-A9.10A



NOTES:

1. FOR RECESSED ACCESSORIES OR CABINETS, PROVIDE BLOCKING, GYPSUM BOARD AND ACOUSTICAL SEALANT SIMILAR TO DETAIL AT DUCT.

6

TYPICAL SOUND TREATED NONRATED WALL

SCALE: 1 1/2" = 1'-0"



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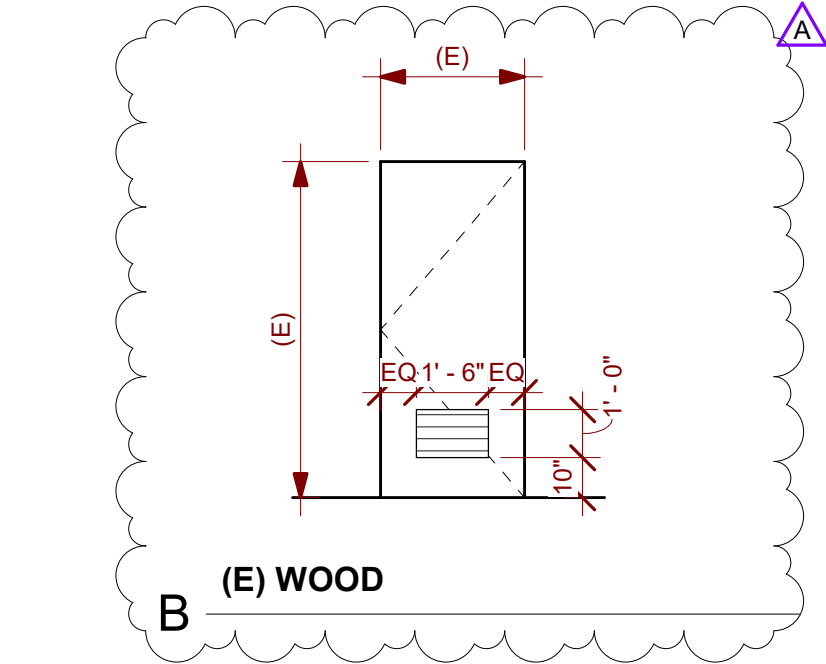
JOB NO. 2021005.03

DATE 11/24/2021

SHEET

AD1-A9.10B

DOOR SCHEDULE												
DOOR ID	OPENING SIZE		DOOR		FRAME		DETAILS (Sheet A11.01 U.O.N.)				HARDWARE GROUP	COMMENTS
	WIDTH	HEIGHT	TYPE	FINISH	TYPE	FINISH	HEAD	JAMB-1	JAMB-2	SILL		
1a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
2a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
3a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
4a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
5a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
6a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
7a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
7ab	2' - 10"	7' - 0"	B	-	-	-	-	-	-	-	-	1
8a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
9a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
10a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
11a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
12a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
13a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
14a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
15a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
15ab	2' - 10"	7' - 0"	B	-	-	-	-	-	-	-	-	1
16a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
17a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
18a	2' - 6"	7' - 0"	A	P-2	F1	P-3	11/A11.01	11/A11.01	11/A11.01	4/A11.01	01	
41ab	4' - 0"	7' - 0"	B	-	-	-	-	-	-	-	-	1




DOOR TYPES
SCALE: 1/4" = 1'-0"

DOOR SCHEDULE COMMENTS

1 PROVIDE NEW LOUVER AT EXISTING DOOR. CUT AND PREP AS REQUIRED. PAINT LOUVER TO DOOR.





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LAUREL ELEMENTARY SCHOOL - HVAC REPLACEMENT

SAN MATEO-FOSTER CITY SCHOOL DISTRICT

FILE NO.: 41-26

APPL NO.: 01-119551

JOB NO. 2021005.03

DATE 11/24/2021

SHEET

AD1-A11.01

ROOF EXHAUST FANS SCHEDULE											
TAG	MANUFACTURER	MODEL NO.	AREA SERVED	AIRFLOW	ESP	FAN	SOUND POWER	MOTOR		WEIGHT	MOUNTING
				CFM	IN. W.G.	RPM	SONES	HP / WATTS	V / PH		
REF-B-1	GREENHECK	G-09B-VG	STORAGE	450	0.25	1125	6.0	1/4	115 / 1	45	16/MP6.01
REF-C-1	GREENHECK	G-09B-VG	MECH	450	0.25	1125	6.0	1/4	115 / 1	45	16/MP6.01
REF-D-1	GREENHECK	G-070-VG	TABLE STORAGE	250	0.25	1479	4.1	1/15	115 / 1	45	10/MP6.01

1. PROVIDE WITH UL LISTING, FAN MOUNTED SPEED CONTROL, BACKDRAFT DAMPER, BIRDSCREEN, AND ROOF CURB.
2. PROVIDE WITH LINE VOLTAGE TSTAT.

△

CLASSROOM SPLIT SYSTEM HEAT PUMPS SCHEDULE																
TAG	MANUFACTURER BASIS OF DESIGN	MODEL	BLDG	LOCATION	COOLING	HEATING	AIRFLOW CFM	OUTSIDE AIR CFM	REFRIGERANT PIPING		SEER	HSPF	ELECTRICAL			WEIGHT LBS
					TOTAL MBH	TOTAL MBH			LIQUID	GAS			V / PH	MCA	MOCP	
FC-1	SAMSUNG	AM054TNZDCHAA	BLDG A	CLASSROOM 1	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-1	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-2	SAMSUNG	AM054TNZDCHAA		CLASSROOM 2	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-2	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-3	SAMSUNG	AM054TNZDCHAA	BLDG B	CLASSROOM 3	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-3	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-4	SAMSUNG	AM054TNZDCHAA		CLASSROOM 4	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-4	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-5	SAMSUNG	AM054TNZDCHAA	BLDG C	CLASSROOM 5	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-5	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-6	SAMSUNG	AM054TNZDCHAA		CLASSROOM 6	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-6	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-7	SAMSUNG	AM054TNZDCHAA	BLDG B	CLASSROOM 7	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-7	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-8	SAMSUNG	AM054TNZDCHAA		CLASSROOM 8	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-8	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-9	SAMSUNG	AM054TNZDCHAA	BLDG B	CLASSROOM 9	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-9	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-10	SAMSUNG	AM054TNZDCHAA		CLASSROOM 10	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-10	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-11	SAMSUNG	AM054TNZDCHAA	BLDG C	CLASSROOM 11	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-11	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-12	SAMSUNG	AM054TNZDCHAA		CLASSROOM 12	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-12	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-13	SAMSUNG	AM054TNZDCHAA	BLDG C	CLASSROOM 13	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-13	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-14	SAMSUNG	AM054TNZDCHAA		CLASSROOM 14	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-14	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-15	SAMSUNG	AM054TNZDCHAA	BLDG C	CLASSROOM 15	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-15	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-16	SAMSUNG	AM054TNZDCHAA		CLASSROOM 16	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-16	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-17	SAMSUNG	AM054TNZDCHAA	BLDG C	CLASSROOM 17	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-17	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212
FC-18	SAMSUNG	AM054TNZDCHAA		CLASSROOM 18	53	61	1150	450	3/8"	3/4"	-	-	208/1	2.6	15	164
HP-18	SAMSUNG	AM053TXMDCHAA		ROOF	-	-	-	-	3/8"	3/4"	17.5	10	208 / 1	34	50	212

1. SPLIT SYSTEM SHALL BE ABLE TO OPERATE AT 94% HEATING CAPACITY DOWN TO 32°F OUTDOOR AMBIENT TEMPERATURE.
2. CFM BASED ON 0.55 ESP.
3. PROVIDE WITH SAMSUNG MM-A60UN 24VAC THERMOSTAT ADAPTER AND 24VAC TRANSFORMER.
4. PROVIDE WITH DELTA CONTROL THERMOSTAT WITH CO2 SENSOR. SEE MP6.01 FOR CONTROLS.

5. PROVIDE WITH MERV-13 FILTERS WITH FILTER ACCESS PANEL.
6. FAN COIL SHALL BE ADJUSTED TO OPERATE AT CONSTANT SPEED AT INDICATED CFM.
7. NOT USED

△

SPLIT SYSTEM HEAT PUMPS SCHEDULE																
TAG	MANUFACTURER BASIS OF DESIGN	MODEL	LOCATION	COOLING	HEATING	AIRFLOW CFM	ESP IN. W.G.	REFRIGERANT PIPING		SEER	HSPF	ELECTRICAL			WEIGHT LBS	MOUNTING DETAIL
				TOTAL MBH	TOTAL MBH			LIQUID	GAS			V / PH	MCA	MOCP		
SSO-A-1	SAMSUNG	AR09TSFYBWKXCV	ROOF	9	11	-	-	1/4"	3/8"	23.5	12	208 / 1	12	20	70	3/MP6.01
SSI-A-1	SAMSUNG	AR09TSFYBWKNCV	BUILDING A SPEECH			300	-	1/4"	3/8"	-	-	NOTE 1			20	2/MP6.01

1. INDOOR UNIT POWERED BY OUTDOOR UNIT.
2. PROVIDE WITH WALL MOUNTING BRACKET.
3. PROVIDE WITH SAMSUNG WALL MOUNTED THERMOSTAT.

4. PROVIDE WITH BAGNET INTERFACE CARD. SEE MP6.01 FOR CONTROLS.
5. PROVIDE WITH CONDENSATE PUMP.

EXHAUST FANS SCHEDULE											
TAG	MANUFACTURER	MODEL NO.	AREA SERVED	AIRFLOW	ESP	FAN	SOUND POWER	MOTOR		WEIGHT	MOUNTING
				CFM	IN. W.G.	RPM	SONES	HP	V / PH		
EF-A-1	GREENHECK	G-097-VG	BLDG A ELEC ROOM	160	0.25	1061	4.4	1/4	115 / 1	65	6/MP6.01

1. PROVIDE WITH UL LISTING, FAN MOUNTED SPEED CONTROL, GRAVITY OPERATED BACKDRAFT DAMPER, BIRDSCREEN, AND PITCHED ROOF CURB.
2. CONTROL WITH THERMOSTAT. ADD TEMPERATURE SENSOR IN BMS.

AIR DISTRIBUTION SCHEDULE						
TAG	MANUFACTURER	MODEL NO.	DESCRIPTION	BORDER TYPE	MOUNTING DETAIL	NOTES
HSS-1	TITUS	S300FL	HIGH SIDEWALL SUPPLY	TYPE 1	12/MP6.01	1, 2, 4
HSR-1	TITUS	350RL	HIGH SIDEWALL RETURN	TYPE 1	13/MP6.01	2, 3

1. SET BLADES AT 22.5° DEFLECTION.
2. PRIME AND PAINT PER ARCHITECT'S INSTRUCTIONS. REGISTER COLOR SELECTED BY ARCHITECT.
3. PROVIDE WITH AIRSAN COMPACT DUCT SILENCER.
4. PROVIDE WITH ASD AIR SCOOP DEVICE.

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SAN MATEO-FOSTER CITY
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DSA FILE NUMBER

41-26

APPL #

01-119551

REVISIONS

No. Description Date

△ Addendum 1 11/24/2021

MILESTONES

DD

90% CD

DSA SUB

05/28/2021

BACKCHECK

10/06/2021

SHEET

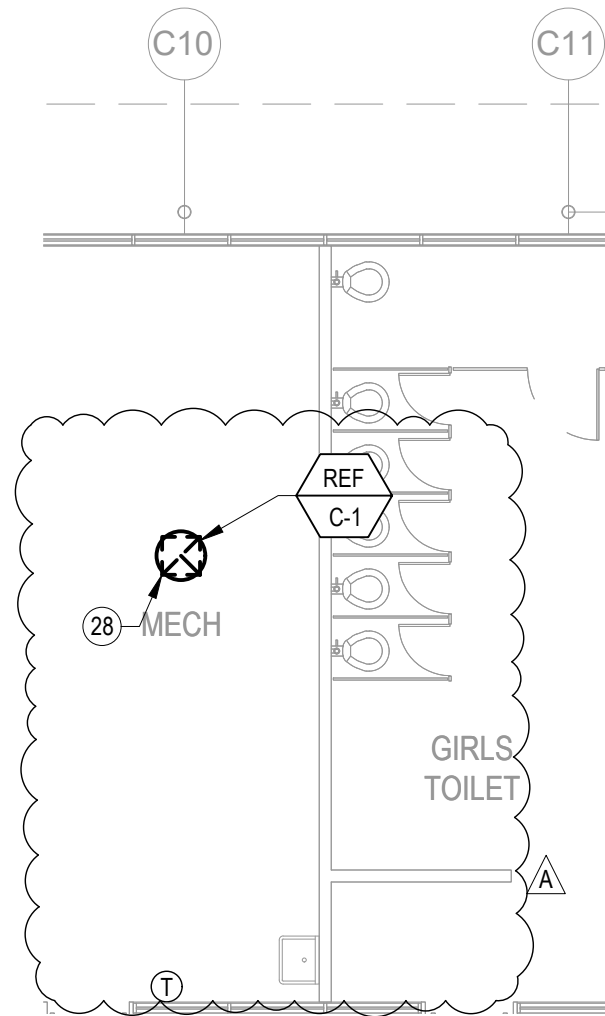
**SCHEDULES-
MECHANICAL &
PLUMBING**

DATE 11/24/2021

JOB # 2021005.03

SHEET #

**AD1-
MP0.02**



GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/ WALL OPENINGS, PENETRATIONS, DUCTWORK AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
3. FOR CLARITY, ABANDONED CD PIPING AND (E) GAS MAINS NOT SHOWN ON THIS PLAN. SEE MP2.01.
4. PAINT ALL EXPOSED DUCTWORK, SUPPORTS, AND REGISTERS TO MATCH ADJACENT. A
5. PAINT CONDENSATE PIPING AT EXTERIOR OF BUILDING TO MATCH ADJACENT.
6. SEE DETAIL 7/MP6.01 FOR PIPE SUPPORT ON ROOF.

NEW SHEET NOTES

28. INSTALL EXHAUST FAN ON ROOF. A

1 PARTIAL FLOOR PLAN - BLDG C - NEW - MECHANICAL & PLUMBING

MP2.03 SCALE: 1/8" = 1'-0"



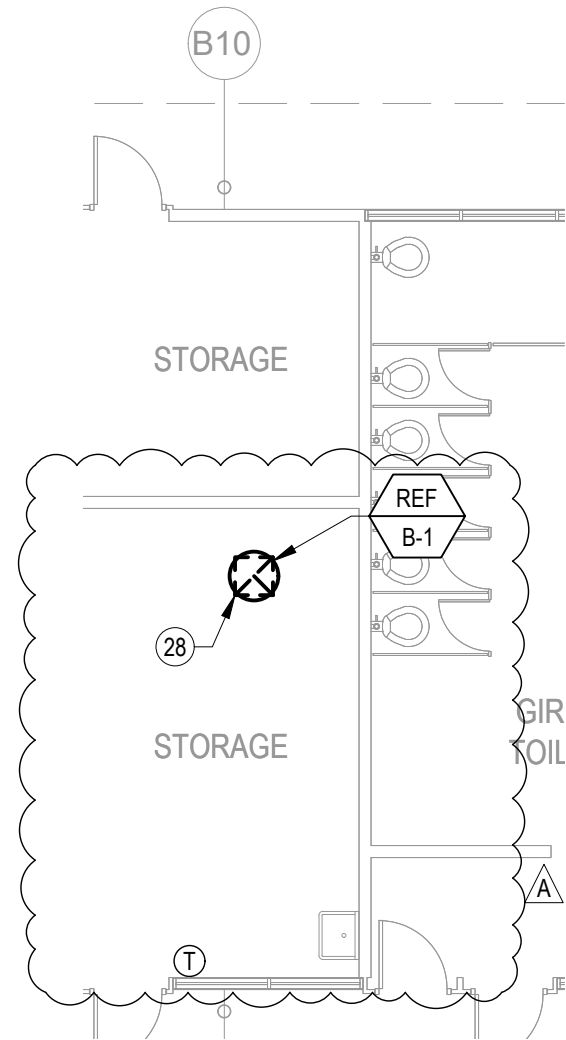
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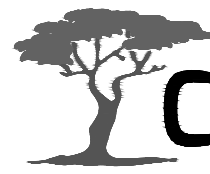
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		SAN MATEO-FOSTER CITY SCHOOL DISTRICT	
387 S. 1st Street, Suite 300 San Jose, CA., 95113	tel: (408) 300 - 5160 fax: (408) 300 - 5121	FILE NO.: 41-26	SHEET
		APPL NO.: 01-119551	REF. SHEET MP2.03
		JOB NO. 2021005.03	AD1-MP2.03a
		DATE 11/24/2021	



2
MP2.03

PARTIAL FLOOR PLAN - BLDG B - NEW - MECHANICAL & PLUMBING

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



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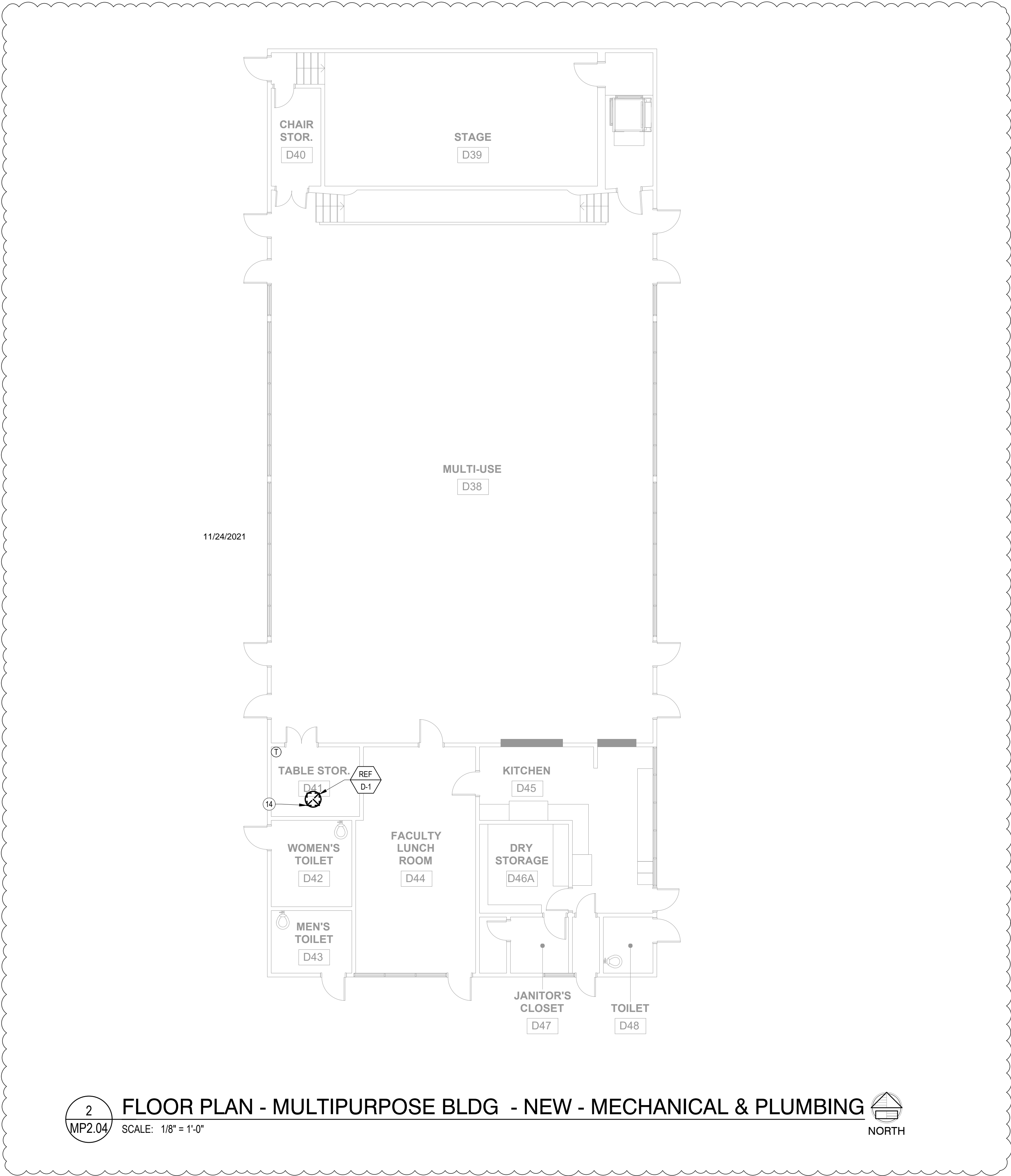
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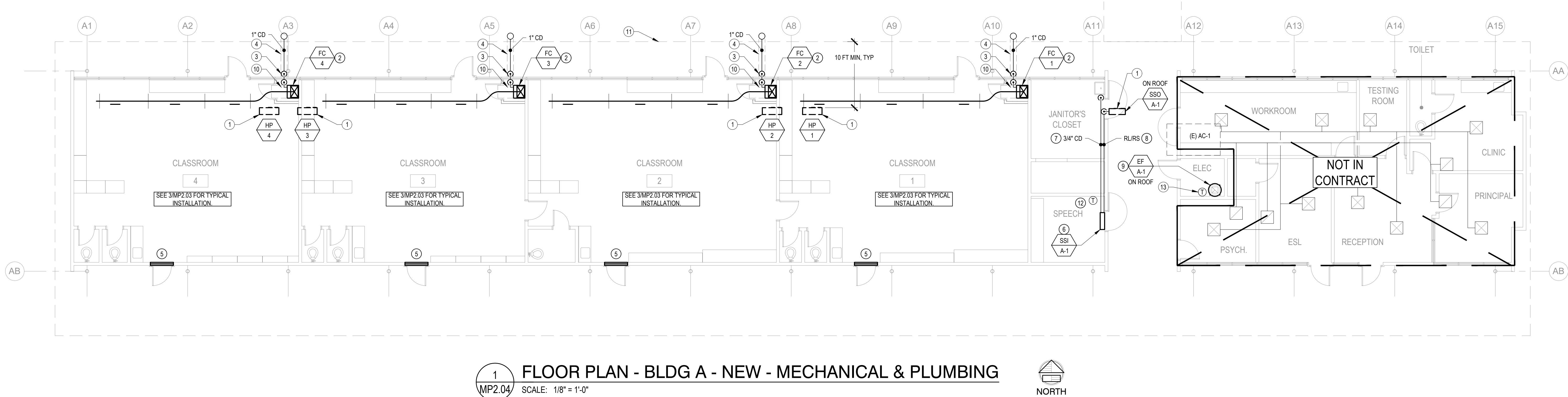
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FILE NO.: 41-26
APPL NO.: 01-119551
JOB NO. 2021005.03
DATE 11/24/2021

SHEET
REF. SHEET MP2.03
AD1-MP2.03b



- GENERAL NOTES**
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
 - COORDINATE THE LOCATIONS OF ROOF WALL OPENINGS, PENETRATIONS, DUCTWORK AND ALL MECHANICAL EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
 - FOR CLARITY, ABANDONED CD PIPING AND (E) GAS MAINS NOT SHOWN ON THIS PLAN. SEE MP2.02.
 - PAINT ALL EXPOSED DUCTWORK, SUPPORTS, AND REGISTERS TO MATCH ADJACENT.
 - PAINT CONDENSATE PIPING AT EXTERIOR OF BUILDING TO MATCH ADJACENT.
 - SEE DETAIL 7MP6.01 FOR PIPE SUPPORT ON ROOF.
- NEW SHEET NOTES**
- INSTALL HEAT PUMP ON ROOF, MIN 10 FT FROM EDGE OF ROOF, TYP.
 - INSTALL FAN COIL, TYP. SEE 3MP2.03 AND 6MP2.03 FOR TYPICAL FAN COIL INSTALLATION. SEE 1MP6.01 FOR TYPICAL FAN COIL MOUNTING.
 - CD FROM FAN COIL, DROP CD PIPE TIGHT TO EXTERIOR WALL TO BELOW GRADE, AND ROUTE TO CD DRYWELL. PROVIDE CLEANOUT FOR EACH AGGREGATE HORIZONTAL CHANGE IN DIRECTION EXCEEDING 135°. SEE 13MP6.01 FOR CD DRYWELL.
 - SAWCUT, REPAIR, AND PATCH TO MATCH EXISTING. SEE SHEET A8.10 ON ARCHITECT'S DRAWINGS FOR PATCHING AT GRADE.
 - MOTORIZED RELIEF DAMPER AND RETURN GRILLE (RG-1) MOUNTED TO BOTH SIDES OF RELIEF OPENING. DAMPER AND GRILLE SIZE TO MATCH (E) FRAME, APPROXIMATELY 46"x35". RETURN GRILLE TO FILL ENTIRE (E) WINDOW PANEL. VERIFY EXACT DIMENSIONS IN FIELD.
 - INSTALL FAN COIL ABOVE DOOR, COORDINATE EXACT HEIGHT WITH DISTRICT.
 - PUMP CONDENSATE FROM FAN COIL TO (E) SINK IN JANITOR'S CLOSET. CONNECT TO SINK TAILPIECE. RUN PIPE TIGHT TO CEILING.
 - INSTALL REFRIGERANT PIPING FROM HEAT PUMP ON ROOF TO FAN COIL. RUN PIPING ALONG SAME ROUTE AS CONDENSATE PIPING.
 - INSTALL ROOFTOP EXHAUST FAN ON PITCHED ROOF CURB. ENSURE EXHAUST FAN IS A MINIMUM OF 10 FT AWAY FROM ANY OUTSIDE AIR INTAKES.
 - CD FROM FAN COIL, DROP PIPE DOWN TO ENCLOSURE FLOOR AT LEFT SIDE OF UNIT, ENSURING PIPE DOES NOT BLOCK FILTER ACCESS. THEN RUN ALONG FLOOR TO EXTERIOR WALL. PROVIDE CLEANOUT FOR EACH AGGREGATE HORIZONTAL CHANGE IN DIRECTION EXCEEDING 135°. SEE 9MP6.01 FOR CONNECTION TO UNIT.
 - (E) ROOF OUTLINE, TYP.
 - INSTALL THERMOSTAT ON INTERIOR WALL AND WIRE TO FAN COIL SSI-A-1.
 - INSTALL THERMOSTAT ON INTERIOR WALL AND WIRE TO EXHAUST FAN EF-A-1.
 - INSTALL EXHAUST FAN ON ROOF, INSTALL THERMOSTAT ON INTERIOR WALL AND WIRE TO REF-D-1.



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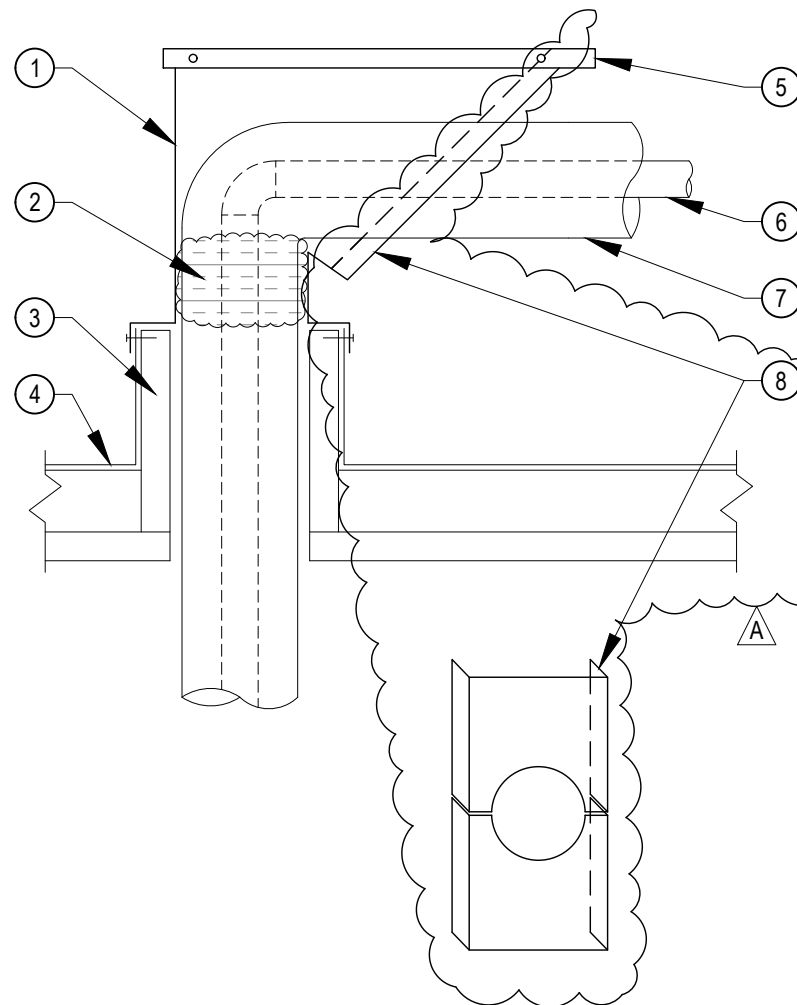
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SHEET
**FLOOR PLAN -
NEW - BLDG A -
MECHANICAL &
PLUMBING**

DATE 11/24/2021
JOB # 2021005.03
SHEET #

MP2.04



○ DETAIL NOTES:

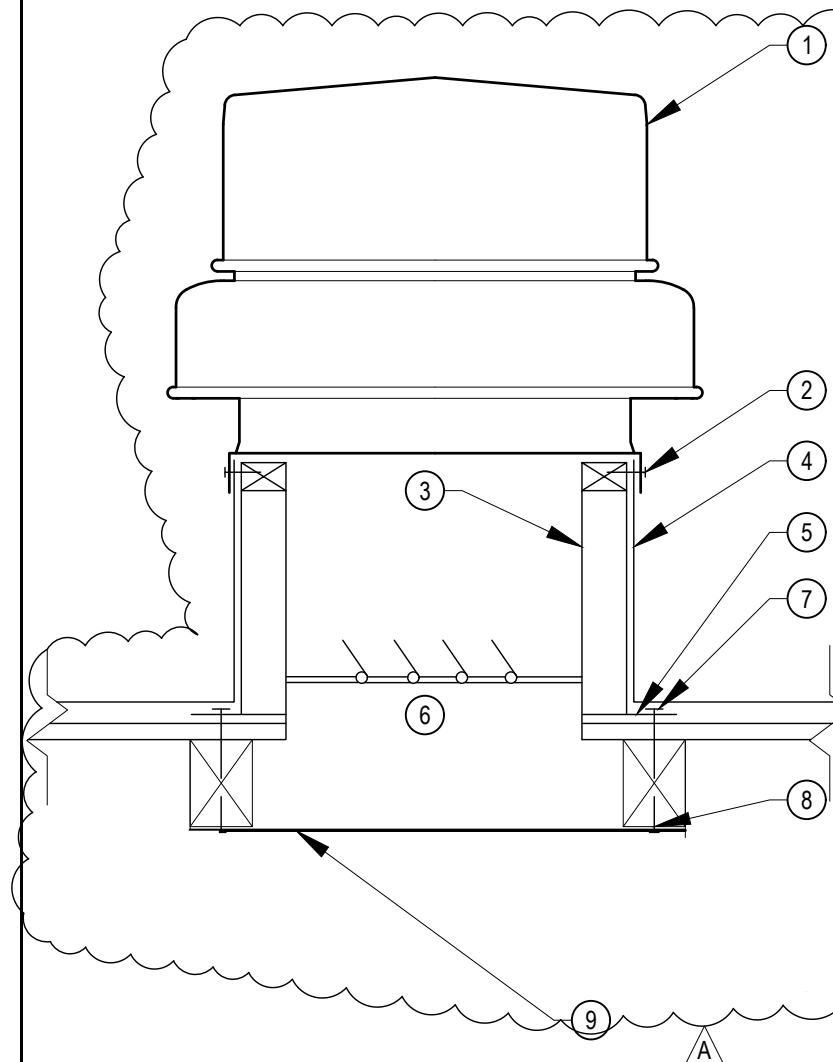
1. GALVANIZED SHEET METAL ROOF JACK WITH CAP.
2. FILL OPENING WITH FOAM.
3. ROOF OPENING. SEE STRUCTURAL DRAWING FOR CURB, SEE ARCHITECT'S DRAWINGS FOR FLASHING.
4. ROOFING.
5. REMOVABLE SHEET METAL COVER ATTACHED WITH TWO (2) #8 SELF TAPPING SCREWS EACH SIDE, PAINTED.
6. PIPE.
7. PIPE INSULATION.
8. 2 PIECE 20 GA. GALVANIZED SHEET METAL COVER W/ 1-1/2" FLANGES ATTACHED W/ #12 SMS @4" O.C.

NOTES:

1. EXPOSED PIPING SHALL HAVE ALUMINUM JACKET.

4 PIPING ROOF JACK

N.T.S.



○ DETAIL NOTES:

1. EXHAUST FAN.
2. SECURE TO ROOF CURB WITH #12 SELF TAPPING SCREWS AT 12" ON CENTER. MINIMUM 2 PER SIDE.
3. FACTORY CURB WITH NAILER.
4. FOR ROOFING AND FLASHING, SEE ARCHITECT'S DRAWINGS.
5. ROOF DECK.
6. BACKDRAFT DAMPER.
7. 3/8"Ø LAG SCREW THRU CURB AND ROOF WITH 3" MINIMUM EMBEDMENT INTO BLOCKING.
8. 4x BLOCKING. SECURE TO STRUCTURE WITH SIMPSON HU44 HANGERS EACH END.
9. 1/4" METAL MESH SCREEN, ATTACHED TO FRAMED BLOCKING W/ #8 WOOD SCREWS @6" O.C. ALL AROUND.

6 EXHAUST FAN MOUNTING

N.T.S.



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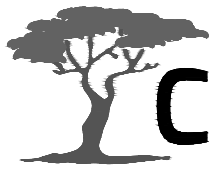
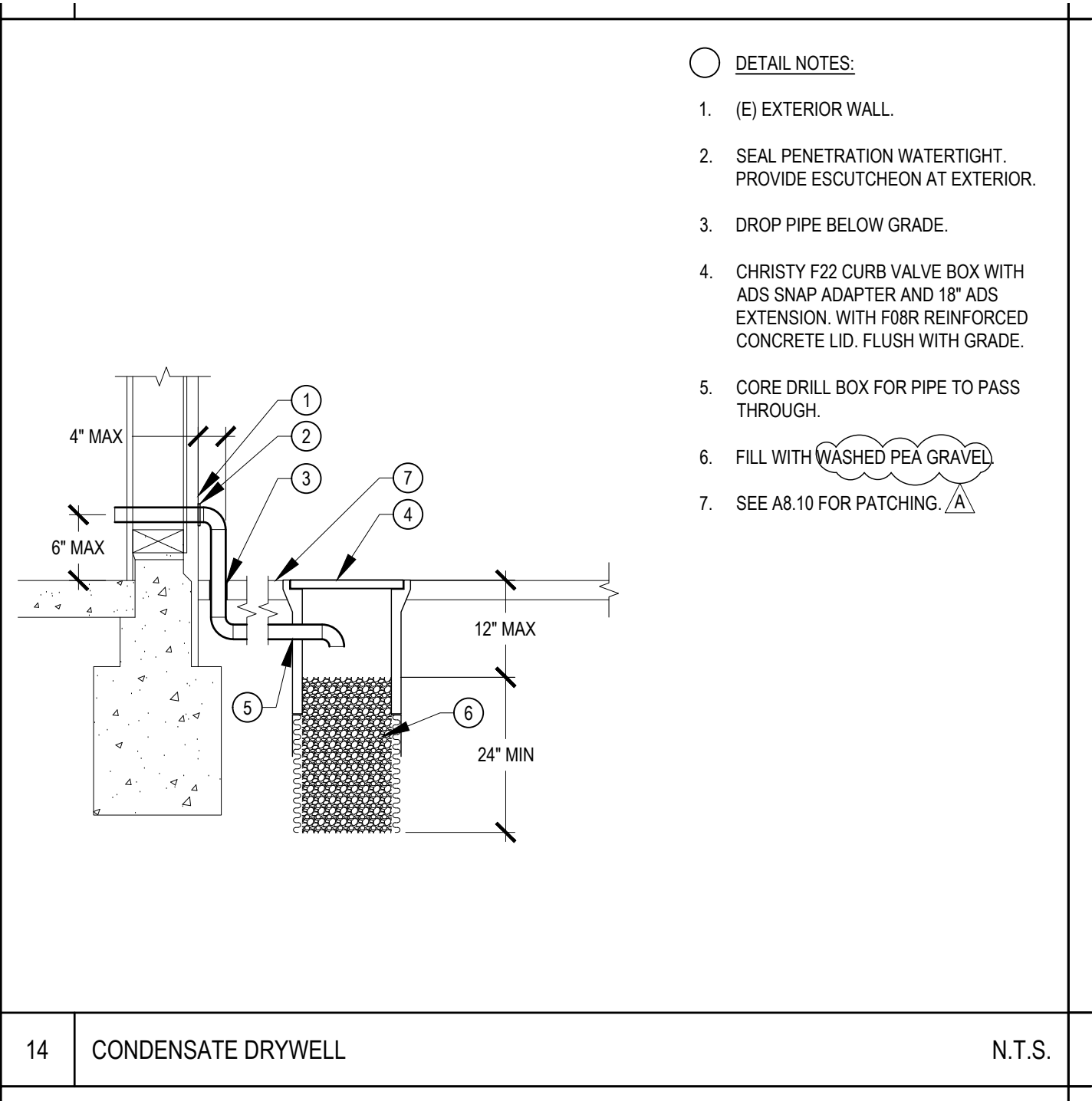
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LAUREL ELEMENTARY SCHOOL -
HVAC REPLACEMENT

SAN MATEO-FOSTER CITY SCHOOL DISTRICT

FILE NO.: 41-26
APPL NO.: 01-119551
JOB NO.: 2021005.03
DATE 11/24/2021


SHEET
REF. SHEET MP6.01
AD1-MP6.01a



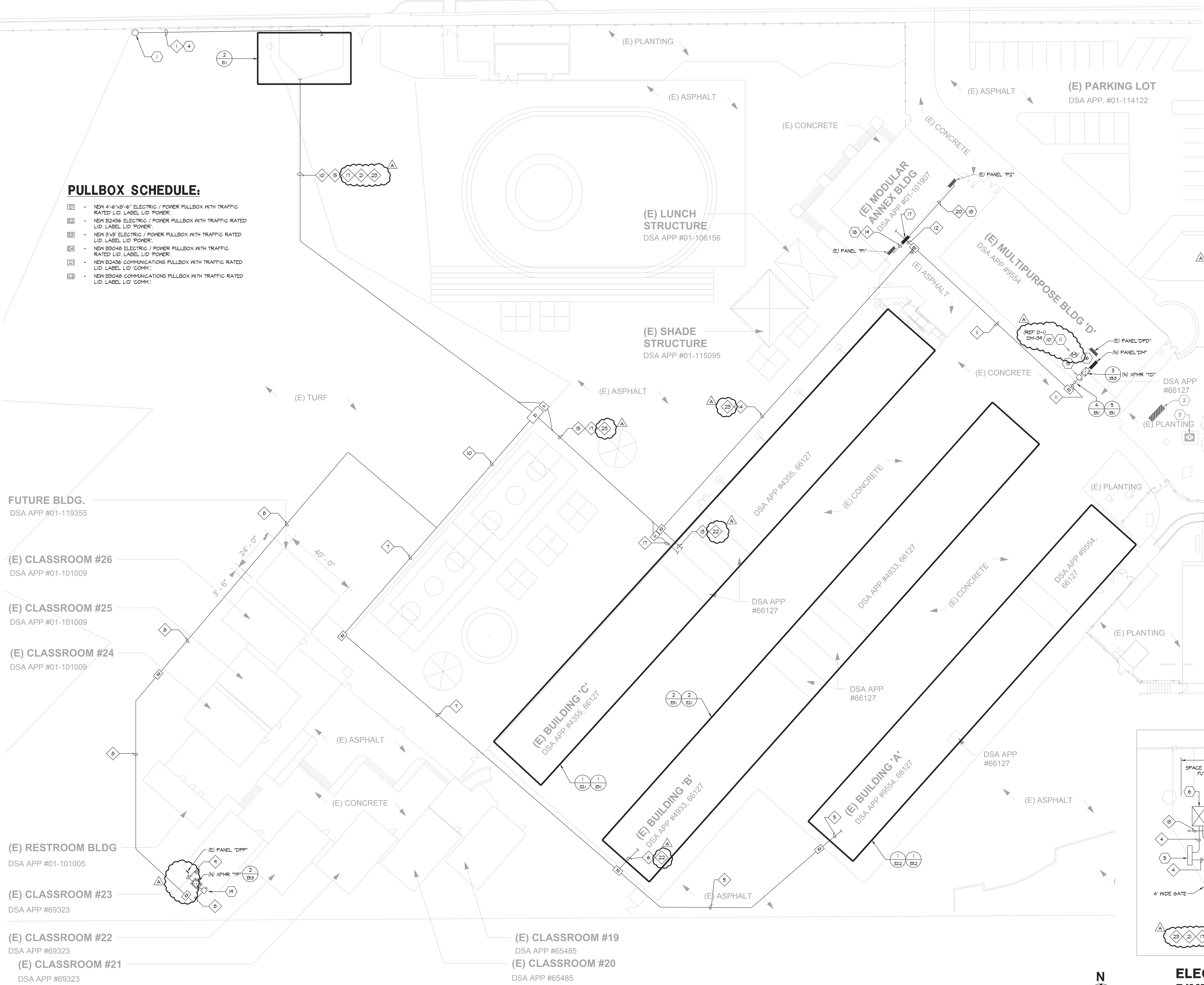
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	APPL NO.: 01-119551	REF. SHEET MP6.01
	JOB NO. 2021005.03	AD1-MP6.01b
	DATE 11/24/2021	

DA STREET



PULLBOX SCHEDULE:

- 1 - NEW 4'-6"x8'-6" ELECTRIC / POWER PULLBOX WITH TRAFFIC RATED LID, LABEL LID POWER.
- 2 - NEW B2436 ELECTRIC / POWER PULLBOX WITH TRAFFIC RATED LID, LABEL LID POWER.
- 3 - NEW 3'x5' ELECTRIC / POWER PULLBOX WITH TRAFFIC RATED LID, LABEL LID POWER.
- 4 - NEW B2048 ELECTRIC / POWER PULLBOX WITH TRAFFIC RATED LID, LABEL LID POWER.
- 5 - NEW B2436 COMMUNICATIONS PULLBOX WITH TRAFFIC RATED LID, LABEL LID COMM.
- 6 - NEW B2048 COMMUNICATIONS PULLBOX WITH TRAFFIC RATED LID, LABEL LID COMM.

FUTURE BLDG.
DSA APP #01-119355

(E) CLASSROOM #26
DSA APP #01-101009

(E) CLASSROOM #25
DSA APP #01-101009

(E) CLASSROOM #24
DSA APP #01-101009

(E) RESTROOM BLDG
DSA APP #01-101005

(E) CLASSROOM #23
DSA APP #69323

(E) CLASSROOM #22
DSA APP #69323

(E) CLASSROOM #21
DSA APP #69323

(E) CLASSROOM #19
DSA APP #65485

(E) CLASSROOM #20
DSA APP #65485

(E) LUNCH
STRUCTURE
DSA APP #01-106156

(E) SHADE
STRUCTURE
DSA APP #01-115095

(E) MODULAR
ANNEX BLDG
DSA APP #01-101907

(E) PARKING LOT
DSA APP. #01-114122

(E) MULTIPURPOSE BLDG 'D'
DSA APP #9554

(E) BUILDING 'C'
DSA APP #4355, 66127

(E) BUILDING 'B'
DSA APP #4933, 66127

(E) BUILDING 'A'
DSA APP #9554, 66127

GENERAL NOTES:

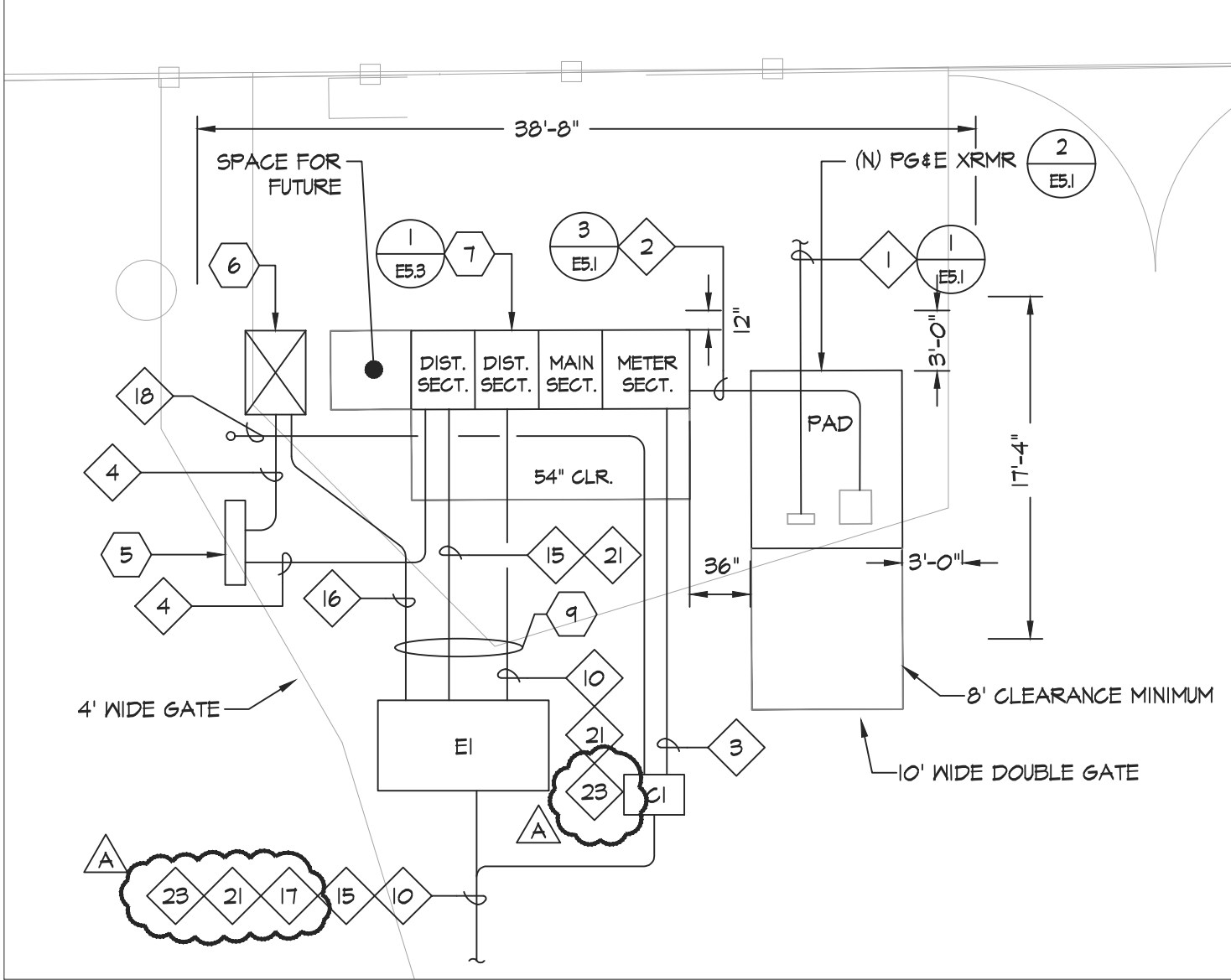
- CONTRACTOR SHALL COORDINATE UNDERGROUND REQUIREMENTS WITH ALL OTHER TRADES TO AVOID CONFLICTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SAN CUTTINGS AND REMOVAL OF EXISTING SURFACES TO FACILITATE UNDERGROUND SYSTEMS. THE CONTRACTOR SHALL PATCH AND REPAIR ALL DAMAGED AND CUT SURFACES TO MATCH ADJACENT.
- CONTRACTOR TO SITE SURVEY EXISTING CONDITIONS AND LOCATIONS OF EXISTING UNDERGROUND SYSTEMS WHERE NEW TRENCH WORK OCCURS PRIOR TO BIDDING. CONTRACTOR SHALL TAKE PROPER PRECAUTIONS TO ENSURE EXISTING UNDERGROUND SYSTEMS/CONDUITS/PIPES ARE NOT DAMAGED DURING INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR ANY REPAIRS REQUIRED IN THE EVENT THE EXISTING UNDERGROUND SYSTEMS ARE DAMAGED AS A RESULT OF THE NEW ELECTRICAL TRENCH WORK.
- INSTALL P64E PRIMARY TRENCH PER 1/ ES.1.
- INSTALL P64E SECONDARY TRENCH PER 3/ ES.1.
- P64E TRANSFORMER PAD SHALL BE PER 2/ ES.1.
- ALL ON SITE TRENCH SHALL BE INSTALLED PER 3/ ES.4.
- SEE DEMO SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- SEE NEW SINGLE LINE DIAGRAM FOR FEEDER CABLE AND CONDUIT REQUIREMENTS.
- THE CONTRACTOR SHALL MANDREL THROUGH THE ENTIRE P64E CONDUIT SYSTEM. COORDINATE WITH P64E FOR ADDITIONAL REQUIREMENTS AND PROCEDURES.

SHEET NOTES:

- EXISTING P64E UTILITY POLE WITH NEW P64E PRIMARY RISER.
- EXISTING 1600A MAIN SWITCHBOARD TO BE DEMOLISHED. DEMOLISH EXISTING UNDERGROUND PAD AND PATCH SURFACE TO MATCH EXISTING.
- EXISTING P64E TRANSFORMER TO BE REMOVED BY P64E. DEMOLISH EXISTING TRANSFORMER PAD AND PATCH SURFACE TO MATCH EXISTING.
- NEW STREET CROSSING FOR PRIMARY CONDUIT. CONTRACTOR TO OBTAIN ALL CITY PERMITS FOR PROVIDING THE STREET CROSSING.
- FUTURE PV DISCONNECT SWITCH.
- FUTURE PV DISTRIBUTION PANEL.
- NEW 2000A MAIN SWITCHBOARD.
- NEW IN-GRADE ELECTRICAL PULL BOX LABEL LID "ELECTRICAL".
- REFER TO DETAIL SET 4 FOR CONDUIT TRENCH BELOW FOUNDATION.
- PROVIDE NEMA-3R, 120V MOTOR RATED SWITCH FOR ROOFTOP EXHAUST FAN.
- ROUTE 120V CIRCUIT TO THE PANEL AND CIRCUIT INDICATED. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- NOT USED.
- NEW SIGNAL PULL BOX LABEL LID "SIGNAL".
- EXISTING SIGNAL PULL BOX STUB NEW CONDUIT INTO EXISTING BOX AS REQUIRED.
- NEW 400A-3P, 480V UNFUSED DISCONNECT SWITCH.
- NEW DISCONNECT SWITCH, XFMR 'TD' AND PANEL 'DM' TO BE INSTALLED IN EXISTING STORAGE ROOM IN BUILDING 'D'.
- NEW PANEL 'DPA'. PANEL TO BE SURFACE MOUNTED ON THE EXTERIOR OF THE MODULAR ANNEX BUILDING.
- CONDUIT ROUTED EXPOSED ON THE EXTERIOR OF THE MODULAR ANNEX BUILDING.
- NEW 200A-3P, 480V UNFUSED DISCONNECT SWITCH.

CONDUIT SCHEDULE:

- (N) (1) 4" - P64E PRIMARY.
- (N) (1) 5" - P64E SECONDARY.
- (N) (1) 1" - P64E COMMUNICATIONS.
- (N) (2) 3" - FUTURE PV DISTRIBUTION PANEL.
- (N) 2.5" - XFMR 'TA'.
(N) (1) 2.5" - FUTURE PV.
- (N) (2) 2.5" - XFMR 'TB'.
- (N) (2) 2.5" - XFMR 'TB'.
- (N) (2) 2.5" - XFMR 'TB'.
- (N) (1) 4" - PANEL 'DPP'.
- (N) 2.5" - XFMR 'TA'.
(N) (2) 2.5" - XFMR 'TB'.
(N) (2) 2.5" - XFMR 'TP'.
(N) (2) 2.5" - FUTURE PV.
- (N) (2) 2.5" - XFMR 'TD'.
(N) (1) 2" - PANEL 'DPA'.
- (N) (1) 2" - PANEL 'DPA'.
- (N) (2) 2.5" - XFMR 'TC'.
- (N) (2) 2.5" - XFMR 'TD'.
(N) (2) 2.5" - FUTURE PV.
- (N) (2) 2.5" - XFMR 'TD'.
(N) (2) 2.5" - XFMR 'TC'.
(N) (3) 2.5" - FUTURE PV.
- (N) (1) 2.5" - FUTURE PV.
- (N) (1) 1" - P64E COMMUNICATIONS.
(N) 2" - FUTURE PV COMMUNICATIONS.
- (N) 2" - FUTURE PV COMMUNICATIONS.
- (N) (1) 1 1/2" - PANEL 'P1'.
- (N) (1) 1 1/2" - PANEL 'P2'.
- (N) (3) 4" - SPARE.



ELECTRICAL SWITCHGEAR
DIMENSIONS

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

aedis
architects

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387 S. 1st Street, Suite 300
San Jose, CA 95113
tel: (408)-300-5160
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PROJECT

LAUREL
ELEMENTARY
SCHOOL - HVAC
REPLACEMENT

SAN MATEO-FOSTER CITY
SCHOOL DISTRICT
CONSULTANT



American Consulting Engineers
Electrical, Inc.
1985 The Alameda, Suite 202
San Jose, CA 95126
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Fax: 408/226-2314

STAMP

STATE

DSA FILE NUMBER 41-26
APPL # 01-119551

REVISIONS

No.	Description	Date
ADDENDUM 1		11/24/2021

MILESTONES

DD
90% CD
DSA SUB 05/28/2021
BACKCHECK

SHEET

ELECTRICAL
SITE PLAN

DATE 11/24/2021
JOB # 2021005.03

SHEET # AD-1
E1.1

ELECTRICAL SITE PLAN

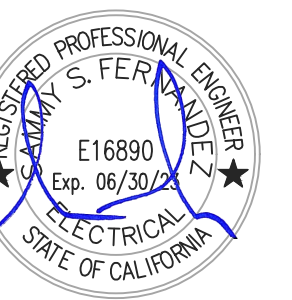
SCALE: 1" = 20'-0"

PROJECT

**LAUREL
ELEMENTARY
SCHOOL - HVAC
REPLACEMENT**

SAN MATEO-FOSTER CITY
SCHOOL DISTRICT

CONSULTANT



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Electrical, Inc.**
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REVISIONS
No. Description Date
ADDENDUM 1 11/24/2021

MILESTONES
DD
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DSA SUB 05/28/2021
BACKCHECK

SHEET

**ELECTRICAL NEW
FLOOR PLANS -
BLDGS B & C**

DATE 11/24/2021
JOB # 2021005.03
SHEET # AD-1
E3.1

GENERAL NOTES:

- ALL CONDUITS SHALL BE ROUTED CONCEALED IN CEILING BELOW WHERE POSSIBLE.
- CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND POINTS OF CONNECTION FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR. ADJUST LOCATION AND CONNECTION POINTS AS NEEDED.
- SEE PANEL SCHEDULES AND SINGLE LINE DIAGRAM FOR POWER CONNECTION REQUIREMENTS.
- COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- FUSED AND UNFUSED DISCONNECT SWITCHES SHALL BE 600V RATED, HEAVY DUTY CYCLE. FUSES FOR MECHANICAL UNITS SHALL BE SIZED PER THE MANUFACTURER'S RECOMMENDATION.
- DISCONNECT SWITCHES ON THE ROOF SHALL BE MOUNTED TO THE HEAT PUMP UNIT. COORDINATE INSTALLATION LOCATION WITH THE UNIT INSTALLER AND MANUFACTURER.

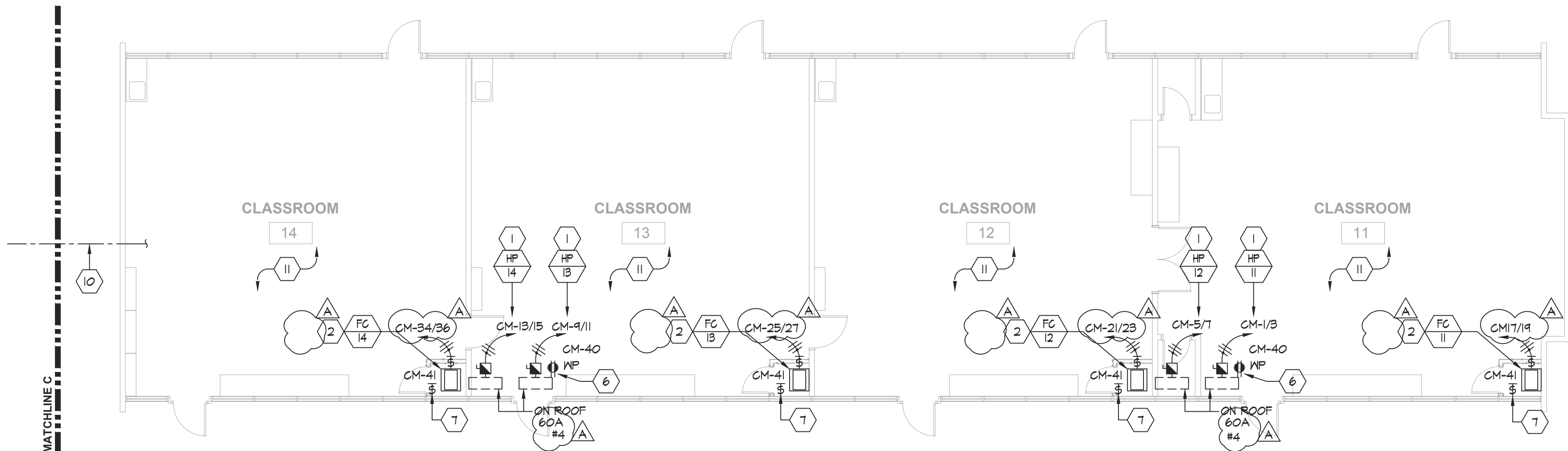
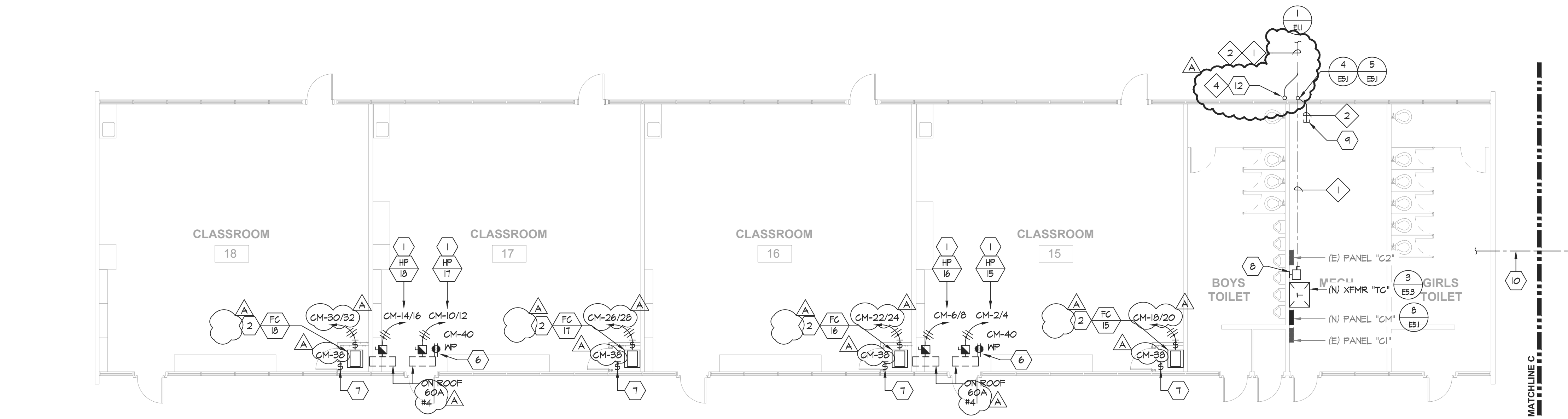
- PROVIDE CONDUIT ROOF PENETRATIONS REQUIRED. COORDINATE ROOF PENETRATION LOCATIONS WITH MECHANICAL'S PIPING ROOF PENETRATIONS. ROOF PENETRATION SHALL BE PER DETAIL 4/MP6.01.

SHEET NOTES:

- NEW 60A-2P, NEMA-3R, FUSED DISCONNECT SWITCH FOR MECHANICAL UNIT.
- NEW 30A-2P, NEMA-4, MOTOR-RATED DISCONNECT SWITCH FOR MECHANICAL UNIT.
- NEW 30A-2P, NEMA-3R, FUSED DISCONNECT SWITCH FOR MECHANICAL UNIT.
- NOT USED.
- EXISTING MECHANICAL UNIT AND CONNECTIONS TO REMAIN.
- PROVIDE NEW WEATHERPROOF 6FC1 RECEPTACLE. RECEPTACLE SHALL BE MOUNTED ON A WEATHERPROOF BOX WITH WILE-IN-USE COVER. COVER SHALL BE INTERMATIC WFOIMXD "BOSS".
- PROVIDE MOTOR RATED SWITCH AND 120V POWER FOR CONDENSATION PUMP.
- NEW 400A-3P, 480V UNFUSED DISCONNECT SWITCH.
- STUB LOW VOLTAGE CONDUIT INTO THE ROOM AND CAP FOR FUTURE USE.
- MOUNT CONDUIT ADJACENT TO CHASE AND ROUTE ACROSS THE HALLWAY.
- ROUTE MECHANICAL UNIT'S CIRCUIT HOMERUN UNDER CANOPY AS INDICATED BY SHEET NOTE #10. CONNECT TO NEW ELECTRICAL PANEL.
- STUB FUTURE SOLAR CONDUIT 18" ABOVE GRADE AT THIS APPROXIMATE LOCATION AND CAP.
- PROVIDE 120V MOTOR RATED SWITCH FOR EXHAUST FAN. PROVIDE #10'S HOMERUN AND CONNECT TO CIRCUIT INDICATED. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR.

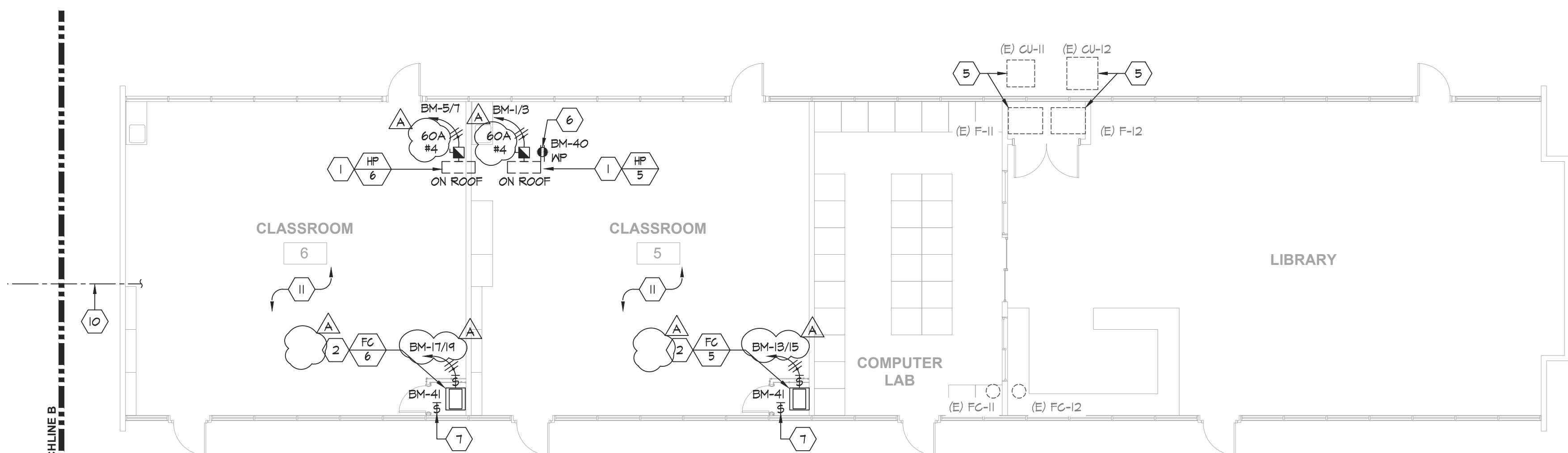
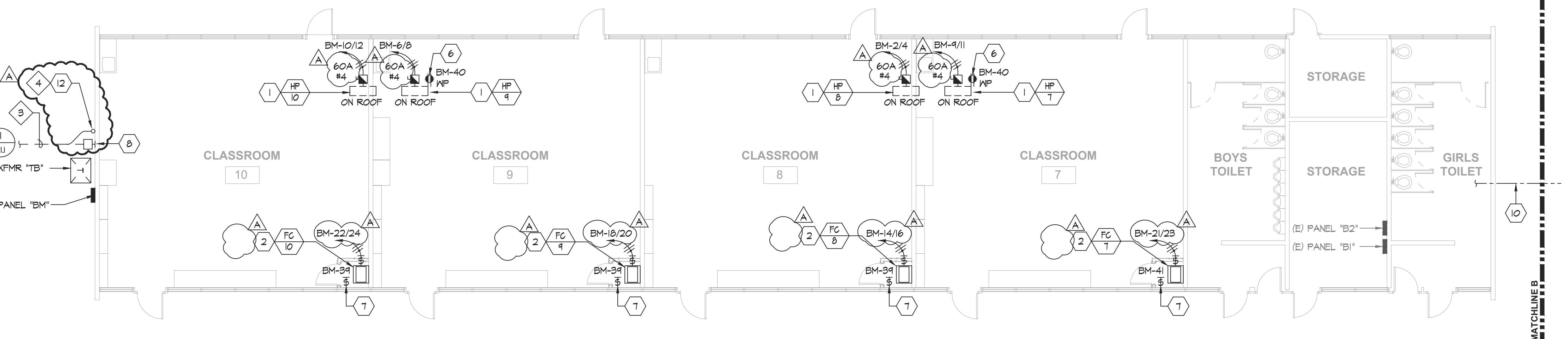
CONDUIT SCHEDULE:

- (N) (2) 2.5" - XFMR "C".
- (N) (1) 1" - F64E COMMUNICATIONS.
(N) (1) 2" - FUTURE FV COMMUNICATIONS.
- (N) (2) 2.5" - XFMR "B".
- (N) (1) 2.5" - FUTURE FV.



1 ELECTRICAL NEW FLOOR PLAN - BLDG C

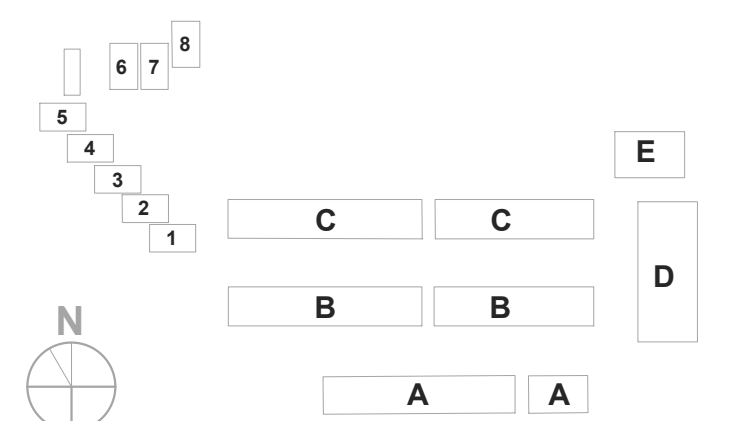
E3.1 SCALE: 1/8" = 1'-0"



2 ELECTRICAL NEW FLOOR PLAN - BLDG B

E3.1 SCALE: 1/8" = 1'-0"

BUILDING KEY

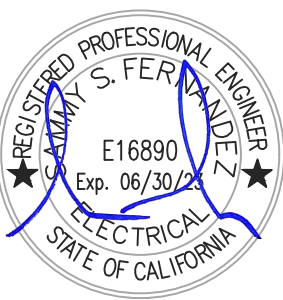


PROJECT

LAUREL
ELEMENTARY
SCHOOL - HVAC
REPLACEMENT

SAN MATEO-FOSTER CITY
SCHOOL DISTRICT

CONSULTANT



STAMP

STATE

DSA FILE NUMBER

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APPL #

01-119551

REVISIONS

No. Description Date

ADDENDUM 1 11/24/2021

MILESTONES

DD

90% CD

DSA SUB

05/28/2021

BACKCHECK

SHEET

ELECTRICAL NEW
FLOOR PLANS -
BLDGS A

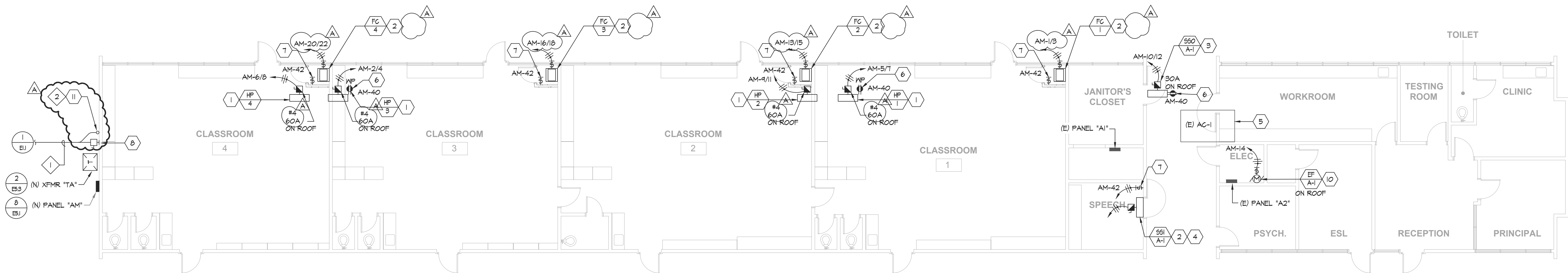
DATE 11/24/2021

JOB # 2021005.03

SHEET #

AD-1

E3.2



1 ELECTRICAL NEW FLOOR PLAN - BLDG A

E3.2 SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- ALL CONDUITS SHALL BE ROUTED CONCEALED IN CEILING BELOW WHERE POSSIBLE.
- CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND POINTS OF CONNECTION FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR. ADJUST LOCATION AND CONNECTION POINTS AS NEEDED.
- SEE PANEL SCHEDULES AND SINGLE LINE DIAGRAM FOR POWER CONNECTION REQUIREMENTS.
- COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- FUSED AND UNFUSED DISCONNECT SWITCHES SHALL BE 600V RATED, HEAVY DUTY CYCLE. FUSES FOR MECHANICAL UNITS SHALL BE SIZED PER THE MANUFACTURER'S RECOMMENDATION.
- DISCONNECT SWITCHES ON THE ROOF SHALL BE MOUNTED TO THE HEAT PUMP UNIT. COORDINATE INSTALLATION LOCATION WITH THE UNIT INSTALLER AND MANUFACTURER.

- PROVIDE CONDUIT ROOF PENETRATIONS REQUIRED. COORDINATE ROOF PENETRATION LOCATIONS WITH MECHANICAL'S PIPING ROOF PENETRATIONS. ROOF PENETRATION SHALL BE PER DETAIL 4/MP6.01.

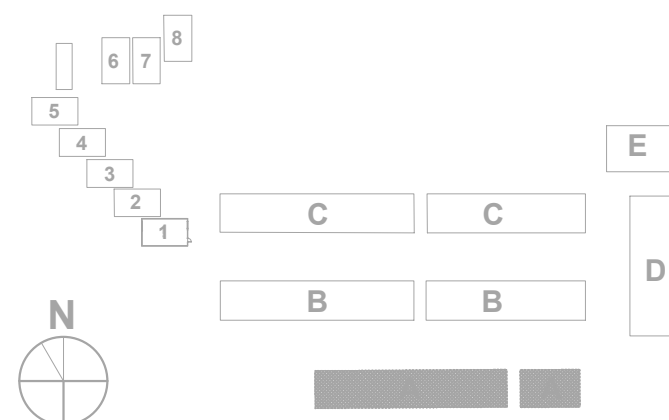
SHEET NOTES:

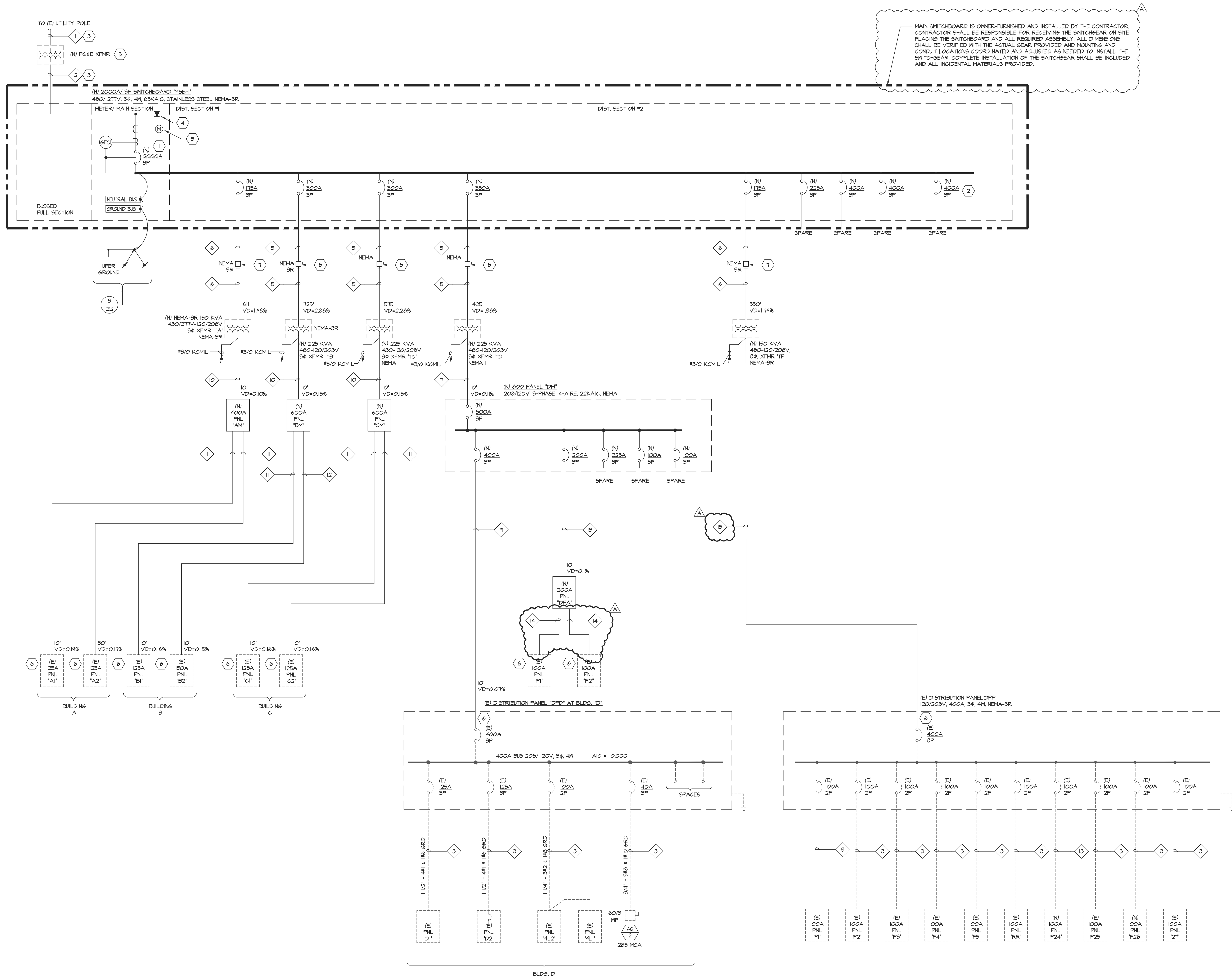
- NEW 60A-2P, NEMA-3R, FUSED DISCONNECT SWITCH FOR MECHANICAL UNIT.
- NEW 30A-2P, NEMA-4, MOTOR-RATED DISCONNECT SWITCH FOR MECHANICAL UNIT.
- NEW 30A-2P, NEMA-3R, FUSED DISCONNECT SWITCH FOR MECHANICAL UNIT.
- INDOOR UNIT IS POWER BY THE OUTDOOR UNIT. ROUTE HOMERUN CIRCUIT TO ASSOCIATED OUTDOOR UNIT. REFER TO MECHANICAL SCHEDULE MP0.02 FOR ADDITIONAL REQUIREMENTS.
- EXISTING MECHANICAL UNIT AND CONNECTIONS TO REMAIN.
- PROVIDE NEW WEATHERPROOF 6FCI RECEPTACLE. RECEPTACLE SHALL BE MOUNTED ON A WEATHERPROOF BOX WITH WHILE-IN-USE COVER. COVER SHALL BE INTERMATIC WFOHMMD "BOSS".
- PROVIDE MOTOR RATED SWITCH AND 120V POWER FOR CONDENSATION PUMP.
- NEW 200A/3P, 480V UNFUSED DISCONNECT SWITCH.
- NOT USED.
- PROVIDE NEMA-3R MOTOR RATED SWITCH AND 120V POWER.
- STUB FUTURE SOLAR CONDUIT 18" ABOVE GRADE AT THIS APPROXIMATE LOCATION AND GAP.

CONDUIT SCHEDULE:

- (N) (1) 2 1/2" - XTMR "TA".
- (N) (1) 2 1/2" - FUTURE PV.

BUILDING KEY





GENERAL NOTES:

- SEE DETAIL 2/E3.2 FOR GROUNDING AT SWITCHBOARD ENCLOSURE REQUIREMENTS.
- SEE DETAIL 3/E3.2 FOR MAIN SWITCHBOARD GROUNDING REQUIREMENTS.
- SEE DETAIL 5/E3.2 FOR TRANSFORMER GROUNDING REQUIREMENTS.
- ALL TRANSFORMERS SHALL BE CLASS 155 INSULATION - COMPLETELY ENCLOSED EXCEPT FOR VENTILATION.
- SEE ENLARGED SWITCHGEAR PLAN FOR ADDITIONAL REQUIREMENTS.
- THE CONTRACTOR SHALL OBTAIN THE P64E SUBSTRUCTURE PACKAGE PRIOR TO ANY RELATED WORK. THE CONTRACTOR SHALL COORDINATE ALL P64E INSTALLATION REQUIREMENTS WITH P64E GREENBOOK AND P64E SUBSTRUCTURE PACKAGE.
- SEE THE ENLARGED SITE DEMO SITE PLAN AND DEMO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- PROVIDE THE REQUIRED ARC FLASH HAZARD WARNING LABEL TO MEET THE REQUIREMENTS OF CEC 110.16. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- PROVIDE MAINTENANCE SWITCH FOR ARC ENERGY REDUCTION TO MEET THE REQUIREMENTS OF CEC 240.87.

SHEET NOTES:

- MAIN BREAKER SHALL BE 6FCI PER NEG.
- PV BREAKER TO BE INSTALLED AT THE FURTHEST POINT ON THE BUS BAR.
- INSTALL PER P64E AND P64E GREENBOOK REQUIREMENTS.
- PROVIDE TWO DEDICATED TELEPHONE LINES FROM THE MAIN SWITCHBOARD TO THE TELEPHONE MPOE PER P64E REQUIREMENTS. MOUNT TELEPHONE OUTLETS INSIDE METER SECTION FOR THE MAIN SWITCHBOARD BEHIND THE SWITCHBOARDS DOORS. MOUNT IN NEMA-3R JUNCTION BOX.
- PROVIDE P64E METER PER P64E REQUIREMENTS.
- COORDINATE THE DISCONNECT AND REMOVAL OF THE EXISTING FEEDERS WITH THE PROJECT SCHEDULE AFTER REMOVAL OF EXISTING FEEDERS AND CONDUITS. CONTRACTOR SHALL RECONNECT PANEL WITH NEW FEEDERS AND CONDUIT AS SHOWN.
- PROVIDE 200A-3P DISCONNECT SWITCH FOR TRANSFORMER.
- PROVIDE 400A-3P DISCONNECT SWITCH FOR TRANSFORMER.
- PROVIDE SPACE FOR FUTURE CIRCUIT BREAKERS.

CABLE SCHEDULE:

- (N) 1 4" - P64E PRIMARY.
- (N) 7 3" - P64E SECONDARY.
- (E) FEEDER TO REMAIN.
- (N) 4" - (N) 4#600 + (1) #1/0 GND.
- (N) 2 SETS - (N) 2.5" - (N) 3#250 + #2 GND.
- (N) 2 1/2" - (N) 3#300 + (1) #4 GND.
- (N) 2 SETS - (N) 4" - (N) 4#600 + #3/0 GND.
- (N) 2" - (N) 3#1 + #6 GND.
- (N) 4" - (N) 4#500 + #3 GND.
- (N) 2 SETS - (N) 3" - (N) 4#350 + #2/0 GND.
- (N) 1 1/2" - (N) 4#1 + #6 GND.
- (N) 2" - (N) 4#1/0 + #6 GND.
- (N) 2" - (N) 4#3/0 + #6 GND.
- (N) 1 1/2" - (N) 3#1 + #6 GND.
- (N) 4" - (N) 4#600 + #3/0 GND.

SHEET NOTES:

- 1 PROVIDE SUBFEED CIRCUIT BREAKERS TO RE-FEED EXISTING PANELS.
SEE SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.

PANEL NAME	AM	FED FROM	XFMR TA
VOLTAGE	208/120V	MAIN CB	400A-3P
PHASE	3	BUSSING	400 AMP
WIRE	4	MIN A/C	10/200
TYPE	NEMA 3R	SUB-FEED CB	
MOUNTING	SURFACE	FEED THRU LUGS	YES

CIRCUIT DESCRIPTION	LOAD TYPE (KVA)	CB	OKT	PH	OKT	PH	CB	LOAD TYPE (KVA)	CIRCUIT DESCRIPTION		
	LTG	REC	MTR	NCL	#	AMP	LTG	REC	MTR	NCL	
(N) FC-1 - CLASSROOM 1			0.89	15A	1	A	2		4.37	(N) HP-3 - CLASSROOM 3	
* * * *			0.89		2P	3	B	4		4.37	
(N) HP-1 - CLASSROOM 1			3.74	50A	5	C	6	50A	4.37	(N) HP-4 - CLASSROOM 4	
* * * *			3.74		2P	7	A	8		4.37	
(N) HP-2 - CLASSROOM 2			3.74	50A	9	B	10	20A	1.24	(N) SS0-A1 / SS1-A-1	
* * * *			3.74		2P	11	C	12		1.24	
(N) FC-2 - CLASSROOM 2			0.89	15A	13	A	14	20A/1P	1.04	(N) SS0-A1 / SS1-A-2	
* * * *			0.89		2P	15	B	16		0.89	
SPARE				20A/1P	17	C	18	2P	0.89	(N) FC-3 - CLASSROOM 3	
SPARE				20A/1P	19	A	20	15A	0.89	(N) FC-4 - CLASSROOM 4	
SPARE				20A/1P	21	B	22	2P	0.89	* * * *	
SPARE				20A/1P	23	C	24	20A/1P		SPARE	
SPARE				20A/1P	25	A	26	20A/1P		SPARE	
SPARE				20A/1P	27	B	28	20A/1P		SPARE	
SPARE				20A/1P	29	C	30	20A/1P		SPARE	
(B) PANEL "A1"				125A	31	A	32	20A/1P		SPARE	
* * * *					33	B	34	20A/1P		SPARE	
* * * *					35	C	36	20A/1P		SPARE	
(B) PANEL "A2"				125A	37	A	38	20A/1P		SPARE	
* * * *					39	B	40	20A/1P	0.72	(N) GFCI MOUNT ON ROOF - BLDG A	
* * * *					41	C	42	20A/1P	0.48	(N) MOTOR RATED SWITCH FOR COND. PUMP - BLDG A	
	0	0	0	18.6				0	1.2	0	24.5

LOAD SUMMARY	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA
(LTD) LIGHTING X 125%	0	1.25	0.0
(REC) RECEIPTS PER 220.44	1.2	1.00	1.2
100KVA x 100% + REMAINDER x 50%	0	0.50	0.0
(MTR) LARGEST MOTOR X 125%	0	1.25	0.0
+ REMAINING MOTORS x 100%	0	1.00	0.0
(NCL) NON CONTINUOUS LOAD x 100%	43.1	1.00	43.1

Yes/N	KVA PHASE A (CONNECTED)	18.2
Y	KVA PHASE B (CONNECTED)	13.6
N	KVA PHASE C (CONNECTED)	14.5
SPD	SUB FEED CONNECTED	
Y	COPPER BUSSING	
N	ALUMINUM BUSSING	
	TOTAL DEMAND KVA	44.3
	TOTAL LOAD AMPERES	123.0

<

PANEL NAME	CM
VOLTAGE	208/120V
PHASE	3
WIRE	4
TYPE	NEMA 1
MOUNTING	SURFACE

FED FROM XFMR TC
MAIN CB 600A-3P
BUSSING 600 AMP
MIN A/C 10/200
SUB-FEED CB
FEED THRU LUGS YES

CIRCUIT DESCRIPTION	LOAD TYPE (KVA)	CB	OKT	PH	CB	LOAD TYPE (KVA)	CIRCUIT DESCRIPTION				
LTG	REC	MTR	NCL	#	AMP	LTG	REC	MTR	NCL		
(N) HP-11 - CLASSROOM 11			3.74	50A	1	A	2	50A	3.74	(N) HP-15 - CLASSROOM 15	
* * * *			3.74	2P	3	B	4	2P	3.74	* * * *	
(N) HP-12 - CLASSROOM 12			3.74	50A	5	C	6	50A	3.74	(N) HP-16 - CLASSROOM 16	
* * * *			3.74	2P	7	A	8	2P	3.74	* * * *	
(N) HP-13 - CLASSROOM 13			3.74	50A	9	B	10	50A	3.74	(N) HP-17 - CLASSROOM 17	
* * * *			3.74	2P	11	C	12	2P	3.74	* * * *	
(N) HP-14 - CLASSROOM 14			3.74	50A	13	A	14	50A	3.74	(N) HP-18 - CLASSROOM 18	
* * * *			3.74	2P	15	B	16	2P	3.74	* * * *	
(N) FC-11 - CLASSROOM 11				15A	17	C	18	15A	0.89	(N) FC-15 - CLASSROOM 15	
* * * *				2P	19	A	20	2P	0.89	* * * *	
(N) FC-12 - CLASSROOM 12				15A	21	B	22	15A	0.89	(N) FC-16 - CLASSROOM 16	
* * * *				2P	23	C	24	2P	0.89	* * * *	
(N) FC-13 - CLASSROOM 13				15A	25	A	26	15A	0.89	(N) FC-17 - CLASSROOM 17	
* * * *				2P	27	B	28	2P	0.89	* * * *	
(B) PANEL C1				125A	29	C	30	15A	0.89	(N) FC-18 - CLASSROOM 18	
* * * *					31	A	32	2P	0.89	* * * *	
* * * *					33	B	34	15A	0.89	(N) FC-14 - CLASSROOM 14	
(B) PANEL C2				125A	35	C	36	2P	0.89	* * * *	
* * * *					37	A	38	20A/1P	0.48	(N) MOTOR RATED SWITCH FOR COND. PUMP - BLDG C	
* * * *					39	B	40	20A/1P	0.72	(N) GFCI RES MOUNT ON ROOF - BLDG C	
(N) MOTOR RATED SWITCH FOR COND. PUMP - BLDG C				3P	41	C	42	20A/1P	0.72	* * * *	
	0	0	0.5	38.9				0	1.4	0.5	38.9

LOAD SUMMARY	CONNECTED KVA	DEMAND FACTOR	DEMAND KVA
(LTD) LIGHTING X 125%	0	1.25	0.0
(REC) RECEIPTS PER 220.44	1.4	1.00	1.4
100KVA x 100% + REMAINDER x 50%	0	0.50	0.0
(MTR) LARGEST MOTOR X 125%	0.5	1.25	0.6
+ REMAINING MOTORS x 100%	0.5	1.00	0.5
(NCL) NON CONTINUOUS LOAD x 100%	68.8	1.00	68.8

Yes/N	KVA PHASE A (CONNECTED)	25.8
Y	KVA PHASE B (CONNECTED)	25.9
N	KVA PHASE C (CONNECTED)	19.8
SPD	SUB FEED CONNECTED LOAD	
Y	COPPER BUSSING	
N	ALUMINUM BUSSING	
	TOTAL DEMAND KVA	71.4
	TOTAL LOAD AMPERES	198.2