RENOVATIONS & ADDITIONS TO ROCKBRIDGE INNOVATION CENTER
VA DOE#081-02-01-101
Project No. 21148

ADDENDUM NO. 1

June 21, 2023

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated June 1, 2023.

Acknowledge receipt of this Addendum (38 pages) in the space provided on the BID FORM. Failure to do so may subject the Bidder to disqualification.

The following items clarify, modify, change, delete from or add to the Contract Documents. When any paragraph, subparagraph, or sub-subparagraph thereof is modified or deleted by this Addendum, the unaltered provisions of that paragraph, subparagraph or sub-subparagraph shall remain in effect.

CLARIFICATIONS / GENERAL

1. Prebid agenda and attendance list attached.
2. **BID DATE CHANGE:** Bids shall be received until but no later than 2:00 PM local time prevailing, **Thursday, July 6, 2023** at the Rockbridge County School Board Office, 2893 Collierstown Road, Lexington, Virginia 24450 and then publicly opened and read immediately thereafter. Bids shall not be received after this date and time.
3. The Rockbridge County Public Service Authority (PSA) will be installing a new water vault adjacent Hines Lane to accommodate the metering, valves and separation of potable water service into a dedicated domestic water main and fire service main. The Contractor will connect to the new 3” domestic water main and 6” fire service main on site below grade, exterior to the new PSA water vault.
4. Upon initiation of construction, General Contractor will be provided the Revit/CADD drawing files for the project.

SPECIFICATIONS

1. <u>SECTION 033000 – CAST-IN-PLACE CONCRETE:</u>
   - A. 2.8.B: Add paragraph 8 as follows.

     For polished concrete slabs-on-grade, limit total percentage by weight of fly ash and other pozzolans to not more than 20 percent of the total cementitious materials.
   - B. 2.8.C: Revise Type 2 to Type 3.
2. <u>SECTION 051200 – STRUCTURAL STEEL FRAMING:</u>
   - A. Revise 1.6.A. as follows:

Fabricator Qualifications: The fabricator shall be qualified per Division 1 specifications. The fabricator shall maintain and implement quality control practices per the Virginia Uniform Statewide Building Code and by reference IBC Chapter 17, AISC 360-16 Chapter N, and AISC 303-16 Chapter 8. If the fabricator does not have their quality control program reviewed, audited, and certified by an independent approved agency or have AISC Building Fabricator certification, the structural steel fabrication work for the project shall be subject to inspection by the Special Inspector at the fabricator's facility. Inspections include review of welding procedures, steel material mill certifications steel material management, and fastener certifications.

B. Revise 1.6.B. as follows:

Installer (Erector) Qualifications: The installer shall be qualified per Division 1 specifications. The installer shall maintain and implement quality control practices per the Virginia Uniform Statewide Building Code and by reference IBC Chapter 17, AISC 360-16 Chapter N, and AISC 303-16 Chapter 8. All erection work of structural steel, open-web steel joists, and steel deck shall be subject to Special Inspections.

3. SECTION 210513 – COMMON MOTOR REQUIREMENTS FOR FIRE SUPPRESSION EQUIPMENT:

C. Delete section in its entirety.

4. SECTION 210523 – GENERAL DUTY VALVES FOR WATER BASED FIRE SUPPRESSION PIPING:

A. 3.1-A-4: Delete reference.

5. SECTION 211313 – WET PIPE SPRINKLER SYSTEM:

A. 2.3: Delete reference.

6. SECTION 211316 – DRY PIPE SPRINKLER SYSTEM:

A. 1.1 A: Change reference to Alternate Bid Item #1.

B. 2.5: Dry Sprinkler System Nitrogen Generator with Purge Vent – Delete reference.

7. SECTION 220548.13 – VIBRATION CONTROLS FOR PLUMBING PIPING AND EQUIPMENT:

A. Delete section.

8. SECTION 220593 – TESTING, ADJUSTING AND BALANCING FOR PLUMBING:

A. Delete section.

9. SECTION 220716 – PLUMBING EQUIPMENT INSULATION:

A. 1.1 – A: Delete reference to #1, #3, and #6 and all reference thereof in remaining section. #4 reference domestic hot water pump only.

10. SECTION 220719 – PLUMBING PIPING INSULATION:

A. 1.1 – A: Delete reference to #4 and #5 and all reference thereof in remaining section.

11. SECTION 221116 – DOMESTIC WATER PIPING:

    A. 1.1 – A: Delete reference to #2, #3 and all reference thereof in remaining section.

12. SECTION 221316 – SANITARY WASTE AND VENT PIPING:

    A. 1.1 – A: Delete reference to #3 and all reference thereof in remaining section.

13. SECTION 221319 – SANITARY WASTE PIPING SPECIALTIES:

    A. 1.1 – A: Delete reference to #1 and all reference thereof in remaining section.

14. SECTION 221423 – STORM DRAINAGE PIPING SPECIALTIES:

    A. 1.1 – A: Delete reference to #2, #3 and #6 all reference thereof in remaining section.

15. SECTION 221513 – GENERAL SERVICE COMPRESSED AIR PIPING:

    A. 2.2 – B & D: Delete reference and all reference thereof in remaining section.

16. SECTION 223200 – DOMESTIC WATER FILTRATION EQUIPMENT:

    A. Delete section in its entirety.

17. SECTION 224500 – EMERGENCY PLUMBING FIXTURES:

    A. 1.1-A: Delete reference to #1, #2 and #3 and all references thereof in remaining section.

18. SECTION 262213 – LOW-VOLTAGE DITRIBUTION TRANSFORMER:

    A. Add section in its entirety.

19. SECTION 263600 – TRANSFER SWITCHES:

    A. Add section in its entirety.

20. SECTION 310516 – AGGREGATE MATERIALS:

    A. ADD paragraph 2.1.F: Landscape Stone: VDOT #57 Stone. Stone shall be cleaned and washed prior to placement.

DRAWINGS

1. C105 – ALTERNATE BID ITEMS:

    A. Change note that reads “Base Bid: 8” 21-A stone. Add Bid #1: Concrete per structural drawings” to read “Base Bid: 12” 21-A stone. Add Bid #1: Concrete shall be concrete pavement per detail #6/C501, 56’-0” X 44’-0”. Provide expansion joints at pad mid-points each way and 2’-6” minimum block outs at each of the (4) columns. Control joints in the slab shall be 7’ to 9’ square on equal spacing.”

2. C106 – SITE PLAN ENLARGEMENTS:

    A. Several elements in the courtyard area have been added: a second partial-height screen wall, several 6” wide landscape stone strips, and a new planting bed. Refer to sheet XC106A.

3. L101 – LANDSCAPE PLAN:

    A. Landscaping has been added to the courtyard area. The plant schedule has been modified to include these changes. Refer to sheet XL101A.

4. L501 – LANDSCAPE DETAILS:

   A. A stone strip detail has been added. Refer to sheet XL501A.

5. S102 – FOUNDATION PLAN – AREA B:

   A. Revise “GREENHOUSE FOUNDATION PLAN NOTES – ALTERNATE BID ITEM #1” to “GREENHOUSE FOUNDATION PLAN NOTES - ALTERNATE BID ITEM #2.”

   B. Add Keyed Note B to new slab-on-grade in Auto Body 324. See Plan Keynote S1 on A801.

      B. PROVIDE (4) CHAIN TIE-DOWNS CAST IN THE SLAB-ON-GRADE. NEENAH R-3490 MOORING EYE OR APPROVED EQUAL. THICKEN SLAB TO 8” THICK FOR A MINIMUM OF 2’-6” X 2’-6” AT THE B.O. SLAB. TAPER B.O. SLAB BACK TO 6” THICK OVER A DISTANCE OF 8” MIN AROUND PERIMETER. REINFORCE W/ (4)#4 x 2’-6” EW. (2) OF THE #4 BARS SHALL PASS THRU THE MOORING EYE. COORDINATE LAYOUT AND ORIENTATION WITH THE OWNER.

   C. Add Keyed Note C to new slab-on-grade in Auto Body 324 at relocated Paint Booth.

      C. PROVIDE 5” HIGH x 6” WIDE CONCRETE CURB AROUND PERIMETER OF THE RELOCATED PAINT BOOTH. MATCH EXISTING LAYOUT INCLUDING 15” WIDE x 3’-0”+/- INTERIOR RAISED SLAB AT PERSONNEL DOOR. PROVIDE #4 x 8” DOWELS SET IN 4” DEEP DRILLED HOLES WITH EPOXY ADHESIVE @ 18” O.C. MAX, AT CORNERS, AND 6” FROM CURB ENDS. CENTER DOWELS IN CURB. PROVIDE (1)#4 2” CLEAR FROM T.O. CURB CONT AROUND CURB. PROVIDE 18” x 18” CORNER BARS. AT INTERIOR RAISED SLAB, PROVIDE #4 DOWELS @ 18” O.C. MAX AND AT CORNERS 3” FROM EDGE. PROVIDE #4 BARS AT PERIMETER AND 6x6-W2.0xW2.0 WWF 2” FROM T.O. RAISED SLAB.

6. S103 – FOUNDATION PLAN – AREA C:

   A. Revise title of “FOUNDATION PLAN – AREA C – ALTERNATE BID ITEM #2” to “FOUNDATION PLAN – AREA C – ALTERNATE BID ITEM #1.”

   B. Revise top of pier elevations of the two P2 piers adjacent to the existing manholes to (-1’-6”). The two piers adjacent to the addition remain at (-1’-0”).

7. S201 – ROOF FRAMING PLAN – AREA A:

   A. Replace sheet with attached revised sheet.

8. S202 – ROOF FRAMING PLAN – AREA B:

   A. Replace sheet with attached revised sheet.

9. S203 – ROOF FRAMING PLAN – AREA C:

   A. Replace sheet with attached revised sheet.

10. S502 – SECTIONS AND DETAILS:

    A. Replace sheet with attached revised sheet.

11. A041– DEMOLITION PLAN: In the existing Electronics Lab (by the new front door), there are existing casework pieces and wall mounted workstations. Those are all to be demolished. Patch and repair the wall(s) that are to remain in new construction.

12. A041 and A042 – DEMOLITION PLANS: Added note GN-9 to the Demolition General Notes to read as follows:

    GN-9: New openings to be provided in existing masonry walls are to be saw-cut and opening sizes and locations are to be coordinated with new construction. The contractor is to provide new toothed- in solid masonry units to replace masonry units that remain at new opening jambs. The new solid masonry units are to have a 4" minimum dimension from the jamb opening and are to match the existing masonry in the wall. The existing masonry bond pattern and head joint alignment used in the wall are to be maintained. Provide bullnosing as required. (typical)

14. A104 – FLOOR PLAN- AREA B: Replace sheet with attached revised sheet.

    CMU pilaster has been added to the plan at the new Auto Body Lab (324) entrance. Refer to plan detail 2/A104.

15. A122- REFLECTED CEILING PLAN- AREA A: Replace sheet with attached revised sheet. Revised ceiling layout in Kitchen Lab (312).

16. A601- DOOR SCHEDULE & DETAILS: Replace sheet with attached revised sheet.

    Added signage schedule, location plans and elevation, and types. Add note GN-4 to sheet. Notes to read as follows:

    GN-4: SIGNAGE SCHEDULE DOES NOT INCLUDE VINYL WALL COVERINGS AT CLASSROOM. SEE FINISH PLANS FOR DETAILS ON VINYL WALLCOVERINGS.

17. A711 – Finish Plans Area A & A712 – Finish Plans Area B: Vinyl wallcoverings (VWC) 1-3 are detailed in plan and elevation on sheet A711. VWC-4 and VWC-5 are both detailed in plan and elevation on sheet A712. All dimensions listed are to be field verified before fabrication of wallcoverings.

18. P001 – PLUMBING & FIRE PROTECTION – NOTES, LEGEND AND SCHEDULES:

    A. Fire Protection General Notes – Note #20 – Revise note to read "Alternate Bid #1 shall receive a Dry-Pipe Sprinkler System to protect canopy structure. Dry-pipe valve shall be located in Building Trades 332 closet.

19. E605 – ELECTRICAL - PANEL SCHEDULES, Added Panel Schedules HL1 and LE7. See sketch E1 and E2.

20. E651 - ELECTRICAL – ONE-LINE DIAGRAMS, Revised feeder sizes for ATS. See Sketch E3.

21. E604 – ELECTRICAL – PANEL SCHEDULES, Added branch circuits for generator jacket heater and battery charger to Panel EL1, Circuits 20 & 22. See sketch E4.

22. E103L – ELECTRICAL LIGHTING PLAN – AREA A, Revised lighting layout for KITCHEN room 312. See sketch E5.

END OF ADDENDUM

SPECTRUM DESIGN
architects | engineers

Renovations & Additions to Rockbridge Innovation Center

Project No. 21148
VA DOE PROJECT # 081-02-01-101

Wednesday, June 14, 2023 @ 10:00 AM
Rockbridge County HS Auditorium
143 Greenhouse Road, Lexington VA 24450

Type of meeting:	**PreBid Conference – Non Manditory Attendance**	Facilitator:	Granville Grant, Project Manager

Attendees: See Sign-In Attendance List

Agenda

1.	Introduction	David Daniels – Rockbridge County Public Schools Phillip Thompson – Superintendent Rockbridge County Public Schools Randy Walters – Rockbridge County Public Schools Kimberlyn Lindsay – Spectrum Design, PC Zach Britton – Spectrum Design, PC Granville Grant - Spectrum Design, PC
2.	Project Synopsis	Renovations and additions to existing CTE Facility, including related engineering and sitework upgrades; total building area of the school project is approximately 36,300 square feet renovation and 11,000 square feet addition.
3.	Bid Receipt Date & Location	Bids shall be prepared on a lump sum basis. Bids shall be received until but no later than 2:00 PM local time prevailing, Thursday, June 29, 2023 at the Rockbridge County School Board Office, 2893 Collierstown Road, Lexington, Virginia 24450 and then publicly opened and read immediately thereafter. Bids shall not be received after this date and time. A bid bond of 5% will be required.
4.	Bid Procedures	The Owner reserves the right to reject any or all Bids, to waive informalities or irregularities in the bids received, to accept the Bid deemed to be in the best interest of the Owner, and to negotiate with the apparent low bidder should the lowest responsive and responsible bid exceed the funds available for the project.
5.	Contract	Contract shall be awarded on a Lump Sum Basis of the Total Base Bid Amount. Review Bid Form 004110.
6.	Plans & Specifications	The Invitation for Bids for the above project may be accessed at Rockbridge County Public Schools https://www.rockbridge.k12.va.us and may be purchased at TRASCO, 128 West Kirk Avenue, Roanoke, Virginia, (540) 345-1533, http://www.trascoplanroom.com. No partial sets will be issued. Bidder is responsible for purchase. Copies of the Invitation for Bid documents, including the Plans, Specifications & Addendum, will also be available for inspection at McGraw Hill Dodge (Richmond), Valley Construction News (Roanoke).
7.	Technical Questions	Direct to David Daniels david_daniels@rockbridge.k12.va.us Granville Grant ggrant@spectrumpc.com and build@spectrumpc.com

		Use Pre-Bid Question Form provided in project manual.
8.	Bonds, Insurance, Terms and Conditions Questions	Bidders must be aware of the insurance requirements listed in the specifications. Bidders are responsible for all insurance costs including Builders Risk, Performance and Material Payment Bonds.
9.	Time of Completion	Rockbridge County School Board will approve/award construction bid on July 11, 2023. Construction Notice to Proceed will occur July 12, 2023. Substantially completed and accepted by the Owner by November 15, 2024. Final Completion and Project Closeout of the contract for construction shall be achieved by December 24, 2024.
10.	AIA Documents	Numerous AIA documents will form the basis of this contract and are bound in the specs for reference.
11.	Progress Payments	Must be submitted on AIA for G-702 and associated forms.
12.	Special Inspections	Contracted directly by Owner.
13.	Temporary Utilities and Tap Fees	General Contractors are responsible for all temporary utilities and tap fees for permanent connections (electrical, lighting, heat, telephone, water, and sanitary). The General Contractor is also required to provide a trailer on site large enough for progress meetings and management/supervision of the project.
14.	Tour	A tour of the project work area will be conducted immediately following the Pre-Bid Conference.

Notes:

1. Direct link to Rockbridge County Public School's website to obtain bid documents is

   Finance & Budget / Bids and Request for Proposals (rockbridge.k12.va.us)

2. Spectrum Design has sent one (1) set of bid documents to Rockbridge County Building Official to initiate and expedite the permitting process. Contractor will be required to obtain permit as required by the Contract Documents. Rockbridge County permit fee will be waived.
3. Fall session begins August 7,2023 for teachers. Students return August 15, 2023.
4. Security measures shall remain in place by Contractor during construction schedule. Owner will be on site throughout construction. ID required at all times on construction personnel and vehicles. Access to project shall be via Greenhouse Road and Hines Lane. All construction personnel shall check in/out each day at GC trailer.
5. Contractor shall not enter/access main HS entrance/parking lot off Greenhouse Road or rear kitchen loading dock entrance/parking lot off Hines Lane. Both Greenhouse Road and Hines Lane are public roadways and shall not be impeded at any time throughout construction.
6. Contractor's work schedule is flexible. 4(10's) is certainly allowable by Owner. Night and weekend work also available as necessary. All work days/times shall be coordinated with and approved by Owner.
7. Contractor allowed to utilize existing facilities (water, power, etc.). Coordination with Owner required. Contractor allowed to utilize existing parking lot directly in front of existing building for mobilization/lay-down (See Civil/Site Plans). Portable toilet facilities will be required by Contractor. Construction trailer for project management and meetings will be required by Contractor.
8. Asbestos containing materials involved in project work, represented in the Contract Documents and Bid Form 004110. All inspections/clearances following demolition will be performed by Owner's third-party inspector. Should Contractor observe any additional suspicious materials, Contractor shall stop work, allow Owner evaluation and clearance, to allow work to continue.
9. No liquidated damages or incentives to complete work early. Actual damages may be sought as applicable per the Contract Documents.
10. No occupancy by Owner throughout project work schedule/area.

11. Contractor required to utilize the services of a surveyor for new building construction layout. FYI – Owner is currently working through establishment and definition of Hines Lane R/W. Owner does not expect any concern with such associated with project.
12. CADD file available to Contractor from Spectrum Design for construction use. Details will be determined with project General Contractor.
13. Contractor possession of illegal drugs, tobacco and firearms on Rockbridge County School property is prohibited and strictly enforced. Criminal background check requirements shall be coordinated with Rockbridge County Schools for all construction personnel on property.
14. Davis-Bacon wage rates are not applicable to project.
15. Addendum #1 will be issued June 20, 2023.
16. During construction, low-noise and/or no-noise requirements within High School may exist considering Owner testing and other conditions. Owner & Contractor to coordinate such schedule.
17. Structural Steel Framing – Installer Qualifications: AISC-Certified Erector, Category CSE. Certification may be waived. Special Inspections as required per Section #014100 apply to materials and installation.
18. Existing equipment to support program is being maintained for re-use. Contractor shall see the FFE Plans A800-A802 where equipment is scheduled for reuse and reinstallation. Other equipment/materials within building are to be removed by Owner which are not utilized within the construction project. Should contractor identify any equipment and/or materials not identified within the Contract Documents, Contractor shall coordinate with the Owner regarding demolition or salvage. Owner is to remove all personal property, equipment, etc. not retained for the complete and final project prior to the start of construction.
19. Question regarding CMU block fill, whether it exists and whether it poses and environmental concern. CMU core insulation fill apparently exists. See Addendum #1 for clarification. Also, Owner is currently testing insulation material to determine if an environmental abatement need.

End of Notes

SPECTRUM DESIGN
architects | engineers
10 Church Avenue SE, Plaza Suite 1, Roanoke, Virginia 24011-2104
540-342-6001 Phone 540-342-6055 Fax

PREBID CONFERENCE ATTENDANCE LIST

Renovations & Additions to Rockbridge Innovation Center

Project No.: 21148 VA DOE#081-02-01-101 Project Manager: Granville Grant

Wednesday June 14, 2023 @ 10:00 AM @ Rockbridge County HS Auditorium

	Name	Firm	Phone	Fax	Email
✓ 1	Granville Grant	Spectrum Design	540.342.6001	540.342.6055	ggrant@spectrumpc.com
✓ 2	David Daniels	Rockbridge County Public Schools	540.463.7386	540.463.7823	david_daniels@rockbridge.k12.va.us
✓ 3	Phillip Thompson	Rockbridge County Public Schools			
✓ 4	Randy Walters	Rockbridge County Public Schools	540-460-9550	cell	randy_walters@rockbridge.k12.va.us
✓ 5	Zach Britton	Spectrum Design			
✓ 6	Kimberlyn Lindsay	Spectrum Design			
7	Larry Day Sr	F & R	540 580 3379		lday@fandr.com
8	EDDIE HERRON	G+H Contracting	540·387·5059		eherron@ghcontracting.com
9	Tim Moran	Avis Construction	540·580·3069		morant@avisconstruction.com
10	Bryan Petak	KNA Contracting	540-759-1817		bpetak@knacontracting.com
11	Jim Haltigan	SEMCO Services	540 2904092		jim@semcoservices.com
12	Jason Massie	D.H. Griffin Wrecking	540·855·7046		Jmassie@dhgriffin.com
13	Matt Hulvey	Nielsen	540-434-7376		mhulvey@nielsen-inc.com
14	Amanda Heutink	Nielsen	"	"	
15	Eric Rice	Price			erice@pricebuildingsinc.com

Note: Contact Randy Walters for Future site visit Appointments.

SECTION 262213
LOW-VOLTAGE DISTRIBUTION TRANSFORMERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes distribution, dry-type transformers with a nominal primary and secondary rating of 600 V and less, with capacities up to 1500 kVA.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type and size of transformer.
2. Include rated nameplate data, capacities, weights, dimensions, minimum clearances, installed devices and features, and performance for each type and size of transformer.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For transformers to include in emergency, operation, and maintenance manuals.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: Accredited by NETA.

1. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Inspection: On receipt, inspect for and note any shipping damage to packaging and transformer.

1. If manufacturer packaging is removed for inspection, and transformer will be stored after inspection, re-package transformer using original or new packaging materials that provide protection equivalent to manufacturer's packaging.

B. Storage: Store in a warm, dry, and temperature-stable location in original shipping packaging.

C. Handling: Follow manufacturer's instructions for lifting and transporting transformers.

PART 2 - PRODUCTS

2.1 GENERAL TRANSFORMER REQUIREMENTS

A. Description: Factory-assembled and -tested, air-cooled units for 60-Hz service.

B. Comply with NFPA 70.

1. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

C. Transformers Rated 15 kVA and Larger:

1. Comply with 10 CFR 431 (DOE 2016) efficiency levels.
2. Marked as compliant with DOE 2016 efficiency levels by an NRTL.

D. Shipping Restraints: Paint or otherwise color-code bolts, wedges, blocks, and other restraints that are to be removed after installation and before energizing. Use fluorescent colors that are easily identifiable inside the transformer enclosure.

2.2 DISTRIBUTION TRANSFORMERS

A. Comply with NFPA 70, and list and label as complying with UL 1561.

B. Cores: Electrical grade, non-aging silicon steel with high permeability and low hysteresis losses.

1. One leg per phase.
2. Core volume shall allow efficient transformer operation at 10 percent above the nominal tap voltage.
3. Grounded to enclosure.

C. Coils: Continuous windings without splices except for taps.

1. Coil Material: Copper.
2. Internal Coil Connections: Brazed or pressure type.
3. Terminal Connections: Welded.

D. Encapsulation: Transformers smaller than 30 kVA shall have core and coils completely resin encapsulated.

E. Enclosure: Ventilated.

1. NEMA 250, Type 2: Core and coil shall be encapsulated within resin compound to seal out moisture and air.
2. KVA Ratings: Based on convection cooling only and not relying on auxiliary fans.
3. Wiring Compartment: Sized for conduit entry and wiring installation.
4. Finish: Comply with NEMA 250.

a. Finish Color: ANSI 49 gray weather-resistant enamel.

b. Finish Color: ANSI 49 gray weather-resistant enamel.

F. Taps for Transformers 3 kVA and Smaller: One 5 percent tap above normal full capacity.

G. Taps for Transformers 7.5 to 24 kVA: One 5 percent tap above and one 5 percent tap below normal full capacity.

H. Taps for Transformers 25 kVA and Larger: Two 2.5 percent taps above and four 2.5 percent taps below normal full capacity.

I. Insulation Class, 30 kVA and Larger: 220 deg C, UL-component-recognized insulation system with a maximum of 150 deg C rise above 40 deg C ambient temperature.

J. Grounding: Provide ground-bar kit or a ground bar installed on the inside of the transformer enclosure.

K. Electrostatic Shielding: Each winding shall have an independent, single, full-width copper electrostatic shield arranged to minimize interwinding capacitance.

1. Arrange coil leads and terminal strips to minimize capacitive coupling between input and output terminals.
2. Include special terminal for grounding the shield.

L. Wall Brackets: Manufacturer's standard brackets.

2.3 IDENTIFICATION

A. Nameplates: Engraved, laminated-acrylic or melamine plastic signs for each distribution transformer, mounted with corrosion-resistant screws. Nameplates and label products are specified in Section 260553 "Identification for Electrical Systems."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions for compliance with enclosure- and ambient-temperature requirements for each transformer.

B. Verify that field measurements are as needed to maintain working clearances required by NFPA 70 and manufacturer's written instructions.

C. Examine walls, floors, roofs, and concrete bases for suitable mounting conditions where transformers will be installed.

D. Verify that ground connections are in place and requirements in Section 260526 "Grounding and Bonding for Electrical Systems" have been met. Maximum ground resistance shall be 3 ohms at location of transformer.

E. Environment: Enclosures shall be rated for the environment in which they are located.

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

3.2 INSTALLATION

A. Construct concrete bases according to Section 033000 "Cast-in-Place Concrete" or Section 033053 "Miscellaneous Cast-in-Place Concrete" and anchor floor-mounted transformers according to manufacturer's written instructions, seismic codes applicable to Project, and requirements in Section 260529 "Hangers and Supports for Electrical Systems."

1. Coordinate size and location of concrete bases with actual transformer provided. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified with concrete.

B. Secure transformer to concrete base according to manufacturer's written instructions.

C. Secure covers to enclosure and tighten all bolts to manufacturer-recommended torques to reduce noise generation.

D. Remove shipping bolts, blocking, and wedges.

3.3 CONNECTIONS

A. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."

B. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

C. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

D. Provide flexible connections at all conduit and conductor terminations and supports to eliminate sound and vibration transmission to the building structure.

3.4 ADJUSTING

A. Record transformer secondary voltage at each unit for at least 48 hours of typical occupancy period. Adjust transformer taps to provide optimum voltage conditions at secondary terminals. Optimum is defined as not exceeding nameplate voltage plus 5 percent and not being lower than nameplate voltage minus 3 percent at maximum load conditions. Submit recording and tap settings as test results.

B. Output Settings Report: Prepare a written report recording output voltages and tap settings.

3.5 CLEANING

A. Vacuum dirt and debris; do not use compressed air to assist in cleaning.

END OF SECTION

SECTION 263600
TRANSFER SWITCHES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Contactor-type automatic transfer switches.
2. Transfer switch accessories.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for transfer switches.
2. Include rated capacities, operating characteristics, electrical characteristics, and accessories.

B. Shop Drawings:

1. Include plans, elevations, sections, details showing minimum clearances, conductor entry provisions, gutter space, and installed features and devices.
2. Include material lists for each switch specified.
3. Single-Line Diagram: Show connections between transfer switch, power sources, and load; and show interlocking provisions for each combined transfer switch and bypass/isolation switch.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For each type of product to include in emergency, operation, and maintenance manuals.

1. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

a. Features and operating sequences, both automatic and manual.
b. List of all factory settings of relays; provide relay-setting and calibration instructions, including software, where applicable.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications:

1. Member company of NETA.

a. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

1.6 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components of transfer switch or transfer switch components that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NEMA ICS 1.

C. Comply with NFPA 110.

D. Comply with UL 1008 unless the requirements of these Specifications are stricter.

E. Indicated Current Ratings: Apply as defined in UL 1008 for continuous loading and total system transfer, including tungsten filament lamp loads not exceeding 30 percent of switch ampere rating, unless otherwise indicated.

F. Tested Fault-Current Closing and Short-Circuit Ratings: Adequate for duty imposed by protective devices at installation locations in Project under the fault conditions indicated, based on testing according to UL 1008.
1. Short-time withstand capability for three cycles.

G. Repetitive Accuracy of Solid-State Controls: All settings shall be plus or minus 2 percent or better over an operating temperature range of minus 20 to plus 70 deg C.

H. Resistance to Damage by Voltage Transients: Components shall meet or exceed voltage-surge withstand capability requirements when tested according to IEEE C62.62. Components shall meet or exceed voltage-impulse withstand test of NEMA ICS 1.

I. Electrical Operation: Accomplish by a nonfused, momentarily energized solenoid or electric-motor-operated mechanism. Switches for emergency or standby purposes shall be mechanically and electrically interlocked in both directions to prevent simultaneous connection to both power sources unless closed transition.

J. Neutral Terminal: Solid and fully rated unless otherwise indicated.

K. Factory Wiring: Train and bundle factory wiring and label, consistent with Shop Drawings, by color-code or by numbered or lettered wire and cable shrinkable sleeve markers at terminations. Color-coding and wire and cable markers are specified in Section 260553 "Identification for Electrical Systems."

1. Designated Terminals: Pressure type, suitable for types and sizes of field wiring indicated.
2. Power-Terminal Arrangement and Field-Wiring Space: Suitable for top, side, or bottom entrance of feeder conductors as indicated.
3. Control Wiring: Equipped with lugs suitable for connection to terminal strips.
4. Accessible via front access.

L. Enclosures: General-purpose NEMA 250, Type 3R, complying with NEMA ICS 6 and UL 508, unless otherwise indicated.

2.2 CONTACTOR-TYPE AUTOMATIC TRANSFER SWITCHES

A. Comply with Level 1 equipment according to NFPA 110.

B. Switch Characteristics: Designed for continuous-duty repetitive transfer of full-rated current between active power sources.
1. Switch Action: Double throw; mechanically held in both directions.
2. Contacts: Silver composition or silver alloy for load-current switching.
3. Conductor Connectors: Suitable for use with conductor material and sizes.
4. Material: Tin-plated aluminum.
5. Main and Neutral Lugs: Mechanical type.
6. Ground bar.
7. Connectors shall be marked for conductor size and type according to UL 1008.

C. Automatic Open-Transition Transfer Switches: Interlocked to prevent the load from being closed on both sources at the same time.

1. Sources shall be mechanically and electrically interlocked to prevent closing both sources on the load at the same time.

D. Automatic Transfer-Switch Controller Features:

1. Controller operates through a period of loss of control power.
2. Undervoltage Sensing for Each Phase of Normal and Alternate Source: Sense low phase-to-ground voltage on each phase. Pickup voltage shall be adjustable from 85 to 100 percent of nominal, and dropout voltage shall be adjustable from 75 to 98 percent of pickup value. Factory set for pickup at 90 percent and dropout at 85 percent.

3. Voltage/Frequency Lockout Relay: Prevent premature transfer to generator. Pickup voltage shall be adjustable from 85 to 100 percent of nominal. Factory set for pickup at 90 percent. Pickup frequency shall be adjustable from 90 to 100 percent of nominal. Factory set for pickup at 95 percent.
4. Time Delay for Retransfer to Normal Source: Adjustable from zero to 30 minutes, and factory set for 10 minutes. Override shall automatically defeat delay on loss of voltage or sustained undervoltage of emergency source, provided normal supply has been restored.
5. Test Switch: Simulate normal-source failure.
6. Switch-Position Pilot Lights: Indicate source to which load is connected.
7. Source-Available Indicating Lights: Supervise sources via transfer-switch normal- and emergency-source sensing circuits.

    a. Normal Power Supervision: Green light with nameplate engraved "Normal Source Available."
    b. Emergency Power Supervision: Red light with nameplate engraved "Emergency Source Available."

8. Unassigned Auxiliary Contacts: Two normally open, single-pole, double-throw contacts for each switch position, rated 10 A at 240-V ac.
9. Transfer Override Switch: Overrides automatic retransfer control so transfer switch will remain connected to emergency power source regardless of condition of normal source. Pilot light indicates override status.
10. Engine Starting Contacts: One isolated and normally closed, and one isolated and normally open; rated 10 A at 32-V dc minimum.
11. Engine Shutdown Contacts:
    a. Time delay adjustable from zero to five minutes, and factory set for five minutes. Contacts shall initiate shutdown at remote engine-generator controls after retransfer of load to normal source.

12. Engine-Generator Exerciser: Solid-state, programmable-time switch starts engine generator and transfers load to it from normal source for a preset time, then retransfers and shuts down engine after a preset cool-down period. Initiates exercise cycle at preset intervals adjustable from 7 to 30 days. Running periods shall be adjustable from 10 to 30 minutes. Factory settings shall be for 7-day exercise cycle, 20-minute running period, and 5-minute cool-down period. Exerciser features include the following:

    a. Exerciser Transfer Selector Switch: Permits selection of exercise with and without load transfer.
    b. Push-button programming control with digital display of settings.
    c. Integral battery operation of time switch when normal control power is unavailable.

2.3 TRANSFER SWITCH ACCESSORIES

A. Remote Annunciator System:

1. Source Limitations: Same manufacturer as transfer switch in which installed.

2. Functional Description: Remote annunciator panel shall annunciate conditions for indicated transfer switches.
3. Annunciation panel display shall include the following indicators:

    a. Sources available, as defined by actual pickup and dropout settings of transfer-switch controls.
    b. Switch position.
    c. Switch in test mode.
    d. Failure of communication link.

4. Annunciator Panel: LED-lamp type with audible signal and silencing switch.

    a. Indicating Lights: Grouped for each transfer switch monitored.
    b. Label each group, indicating transfer switch it monitors, location of switch, and identity of load it serves.
    c. Mounting: Flush, modular, steel cabinet unless otherwise indicated.
    d. Lamp Test: Push-to-test or lamp-test switch on front panel.

2.4 SOURCE QUALITY CONTROL

A. Factory Tests: Test and inspect components, assembled switches, and associated equipment according to UL 1008. Ensure proper operation. Check transfer time and voltage, frequency, and time-delay settings for compliance with specified requirements. Perform dielectric strength test complying with NEMA ICS 1.

B. Prepare test and inspection reports.

1. For each of the tests required by UL 1008, performed on representative devices, for emergency systems. Include results of test for the following conditions:

    a. Overvoltage.
    b. Undervoltage.
    c. Loss of supply voltage.
    d. Reduction of supply voltage.
    e. Alternative supply voltage or frequency is at minimum acceptable values.
    f. Temperature rise.
    g. Dielectric voltage-withstand; before and after short-circuit test.
    h. Overload.
    i. Contact opening.
    j. Endurance.
    k. Short circuit.
    l. Short-time current capability.
    m. Receptacle withstand capability.
    n. Insulating base and supports damage.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Annunciator and Control Panel Mounting: Flush in wall unless otherwise indicated.

B. Identify components according to Section 260553 "Identification for Electrical Systems."

C. Set field-adjustable intervals and delays, relays, and engine exerciser clock.

D. Comply with NECA 1.

3.2 CONNECTIONS

A. Wiring to Remote Components: Match type and number of cables and conductors to generator sets,control, and communication requirements of transfer switches as recommended by manufacturer. Increase raceway sizes at no additional cost to Owner if necessary to accommodate required wiring.

B. Wiring Method: Install cables in raceways and cable trays except within electrical enclosures. Conceal raceway and cables except in unfinished spaces.

1. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."

C. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii.

D. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."

E. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

F. Connect twisted pair cable according to Section 260523 "Control-Voltage Electrical Power Cables."

G. Route and brace conductors according to manufacturer's written instructions. and Section 260529 "Hangers and Supports for Electrical Systems." Do not obscure manufacturer's markings and labels.

H. Brace and support equipment according to Section 260548.16 "Seismic Controls for Electrical Systems."

I. Final connections to equipment shall be made with liquidtight, flexible metallic conduit no more than 18 inches in length.

3.3 FIELD QUALITY CONTROL

A. Administrant for Tests and Inspections:
   1. Administer and perform tests and inspections with assistance of factory-authorized service representative.

B. Tests and Inspections:

   1. After installing equipment, test for compliance with requirements according to NETA ATS.
   2. Visual and Mechanical Inspection:

      a. Compare equipment nameplate data with Drawings and Specifications.
      b. Inspect physical and mechanical condition.
      c. Inspect anchorage, alignment, grounding, and required clearances.
      d. Verify that the unit is clean.
      e. Verify appropriate lubrication on moving current-carrying parts and on moving and sliding surfaces.
      f. Verify that manual transfer warnings are attached and visible.
      g. Verify tightness of all control connections.
      h. Inspect bolted electrical connections for high resistance using one of the following methods, or both:

         1) Use of low-resistance ohmmeter.
         2) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method according to manufacturer's published data.

      i. Perform manual transfer operation.
      j. Verify positive mechanical interlocking between normal and alternate sources.
      k. Perform visual and mechanical inspection of surge arresters.
      l. Inspect control power transformers.

         1) Inspect for physical damage, cracked insulation, broken leads, tightness of connections, defective wiring, and overall general condition.
         2) Verify that primary and secondary fuse or circuit-breaker ratings match Drawings.
         3) Verify correct functioning of drawout disconnecting contacts, grounding contacts, and interlocks.

   3. Electrical Tests:

      a. Perform insulation-resistance tests on all control wiring with respect to ground.
      b. Perform a contact/pole-resistance test. Compare measured values with manufacturer's acceptable values.
      c. Verify settings and operation of control devices.
      d. Calibrate and set all relays and timers.
      e. Verify phase rotation, phasing, and synchronized operation.

f. Perform automatic transfer tests.
g. Verify correct operation and timing of the following functions:

1) Normal source voltage-sensing and frequency-sensing relays.
2) Engine start sequence.
3) Time delay on transfer.
4) Alternative source voltage-sensing and frequency-sensing relays.
5) Automatic transfer operation.
6) Interlocks and limit switch function.
7) Time delay and retransfer on normal power restoration.
8) Engine cool-down and shutdown feature.

4. Measure insulation resistance phase-to-phase and phase-to-ground with insulation-resistance tester. Include external annunciation and control circuits. Use test voltages and procedure recommended by manufacturer. Comply with manufacturer's specified minimum resistance.

a. Check for electrical continuity of circuits and for short circuits.
b. Inspect for physical damage, proper installation and connection, and integrity of barriers, covers, and safety features.
c. Verify that manual transfer warnings are properly placed.
d. Perform manual transfer operation.

5. After energizing circuits, perform each electrical test for transfer switches stated in NETA ATS and demonstrate interlocking sequence and operational function for each switch at least three times.

a. Simulate power failures of normal source to automatic transfer switches and retransfer from emergency source with normal source available.
b. Simulate loss of phase-to-ground voltage for each phase of normal source.
c. Verify time-delay settings.
d. Verify pickup and dropout voltages by data readout or inspection of control settings.
e. Test bypass/isolation unit functional modes and related automatic transfer-switch operations.
f. Verify proper sequence and correct timing of automatic engine starting, transfer time delay, retransfer time delay on restoration of normal power, and engine cool-down and shutdown.

6. Ground-Fault Tests: Coordinate with testing of ground-fault protective devices for power delivery from both sources.

a. Verify grounding connections and locations and ratings of sensors.

C. Coordinate tests with tests of generator and run them concurrently.

D. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation and contact resistances and time delays. Attach a label or tag to each tested component indicating satisfactory completion of tests.

E. Transfer switches will be considered defective if they do not pass tests and inspections.

F. Remove and replace malfunctioning units and retest as specified above.

G. Prepare test and inspection reports.

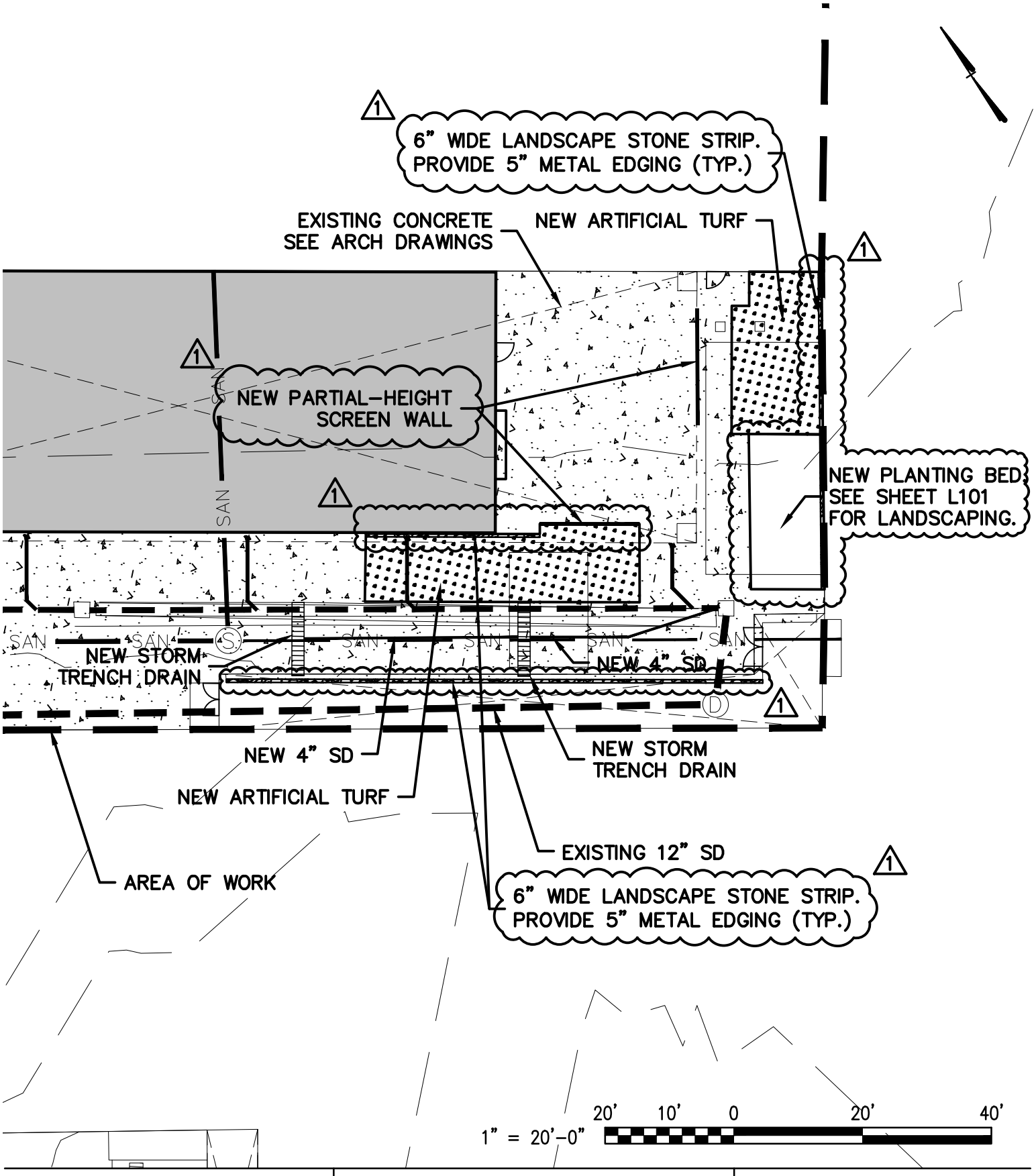
3.4 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain transfer switches and related equipment.

B. Training shall include testing ground-fault protective devices and instructions to determine when the ground-fault system shall be retested. Include instructions on where ground-fault sensors are located and how to avoid negating the ground-fault protection scheme during testing and circuit modifications.

C. Coordinate this training with that for generator equipment.

END OF SECTION



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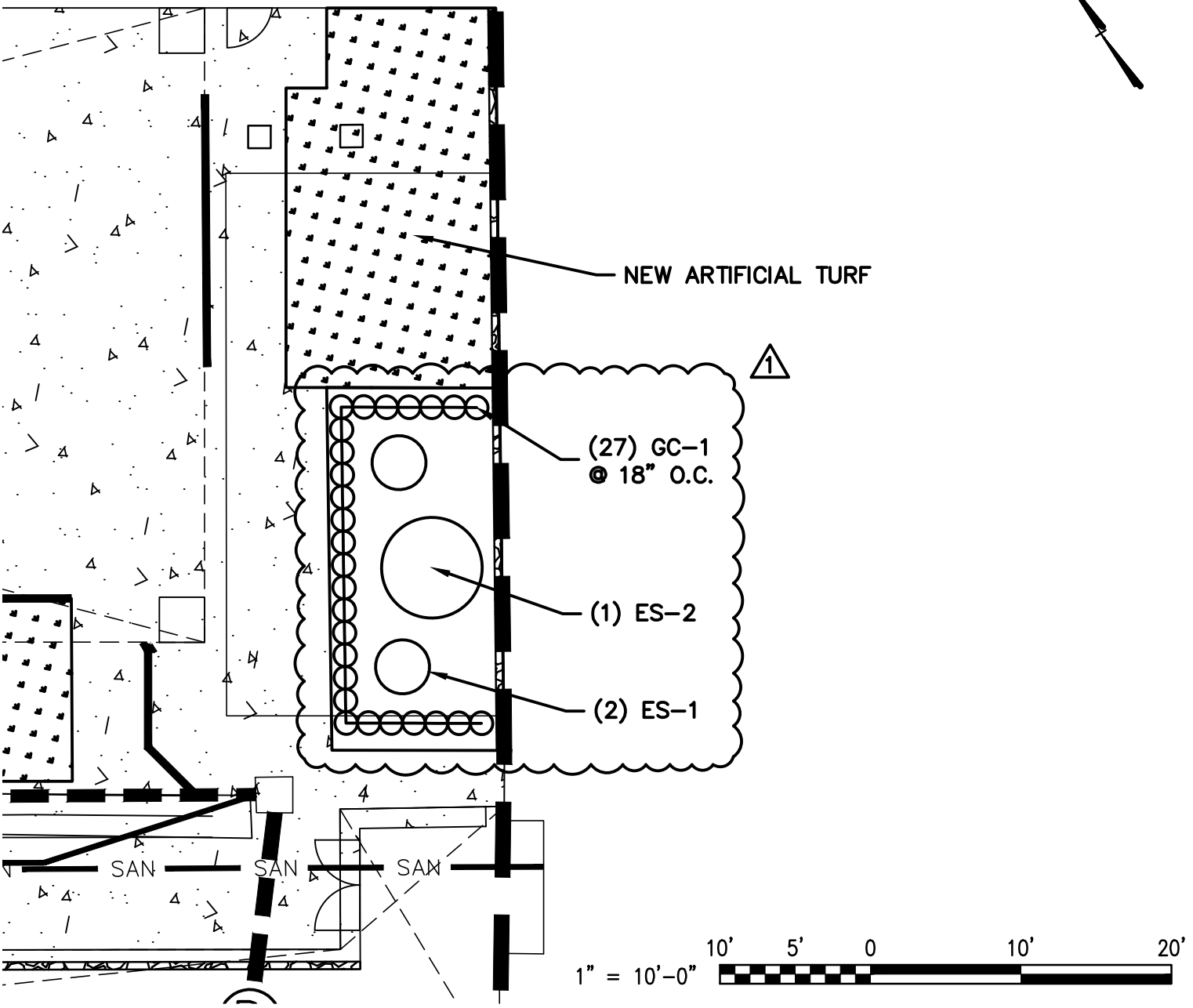
COMM. NO. 21148	RENOVATIONS AND ADDITIONS TO ROCKBRIDGE INNOVATION CENTER		DRAWN BY: AGA
DATE: 6/20/23	**COURTYARD REVISION**		CHECKED BY: MAR
	SCALE: 1" = 20'	REF. NO.: C106	

XC106A
DRAWING NO.



1

PLANT SCHEDULE

KEY	QUAN.	SCIENTIFIC NAME	COMMON NAME	SIZE	REMARKS
DT	DECIDUOUS TREES				
DT-1	2	PRUNUS SERRULATA 'KWANZAN'	KWANZAN FLOWERING CHERRY	MIN 2.5" CAL	B&B
ES	EVERGREEN SHRUBS				
ES-1	41	PRUNUS LAUROCERASUS	OTTO LUKEN LAUREL	#5 CONT.	3' O.C.
ES-2	1	THUJA OCCIDENTALIS	PETITE THUJA ARBORVITAE	4' HEIGHT	B&B
GC	GROUNDCOVERS				
GC-1	62	LORIOPE MUSCARI 'BIG BLUE'	BLUE LILY TURF	2 QT	18" O.C.
GC-2	40	NARCISSUS 'MANLY'	MANLY DAFFODIL	BULB	12" O.C.
GC-3	29	HEMEROCALLIS 'FRAGRANT RETURNS'	DAYLILY	#1 CONT.	24" O.C.

* SEE SHEET L501 FOR LANDSCAPE DETAILS

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COMM. NO. 21148

DATE: 6/20/23

RENOVATIONS AND ADDITIONS TO
ROCKBRIDGE INNOVATION CENTER

LANDSCAPING REVISION

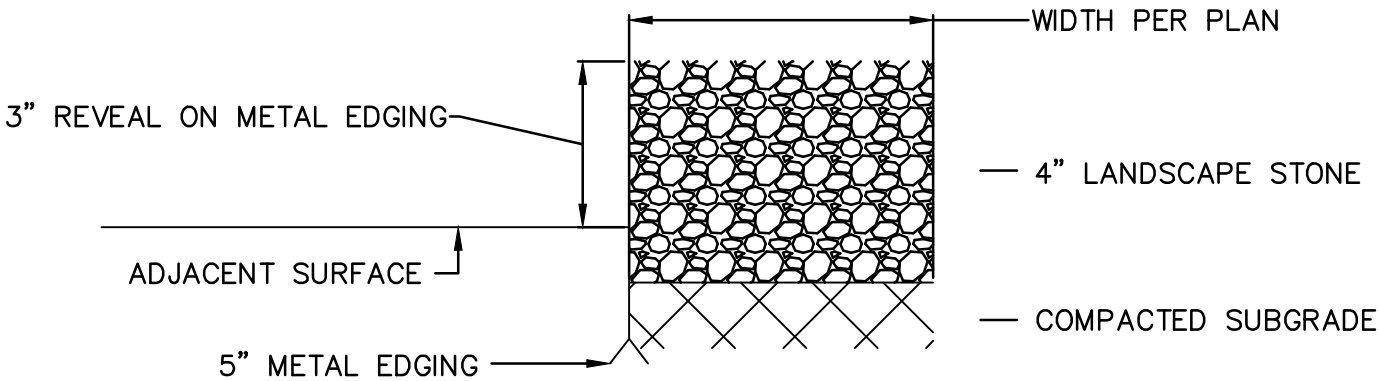
SCALE: 1" = 10'

REF. NO.: L101

DRAWN BY: AGA

CHECKED BY: MAR

XL101A
DRAWING NO.



STONE STRIP DETAIL

NO SCALE

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DATE: 6/20/23	**LANDSCAPING REVISION - DETAIL**		CHECKED BY: MAR
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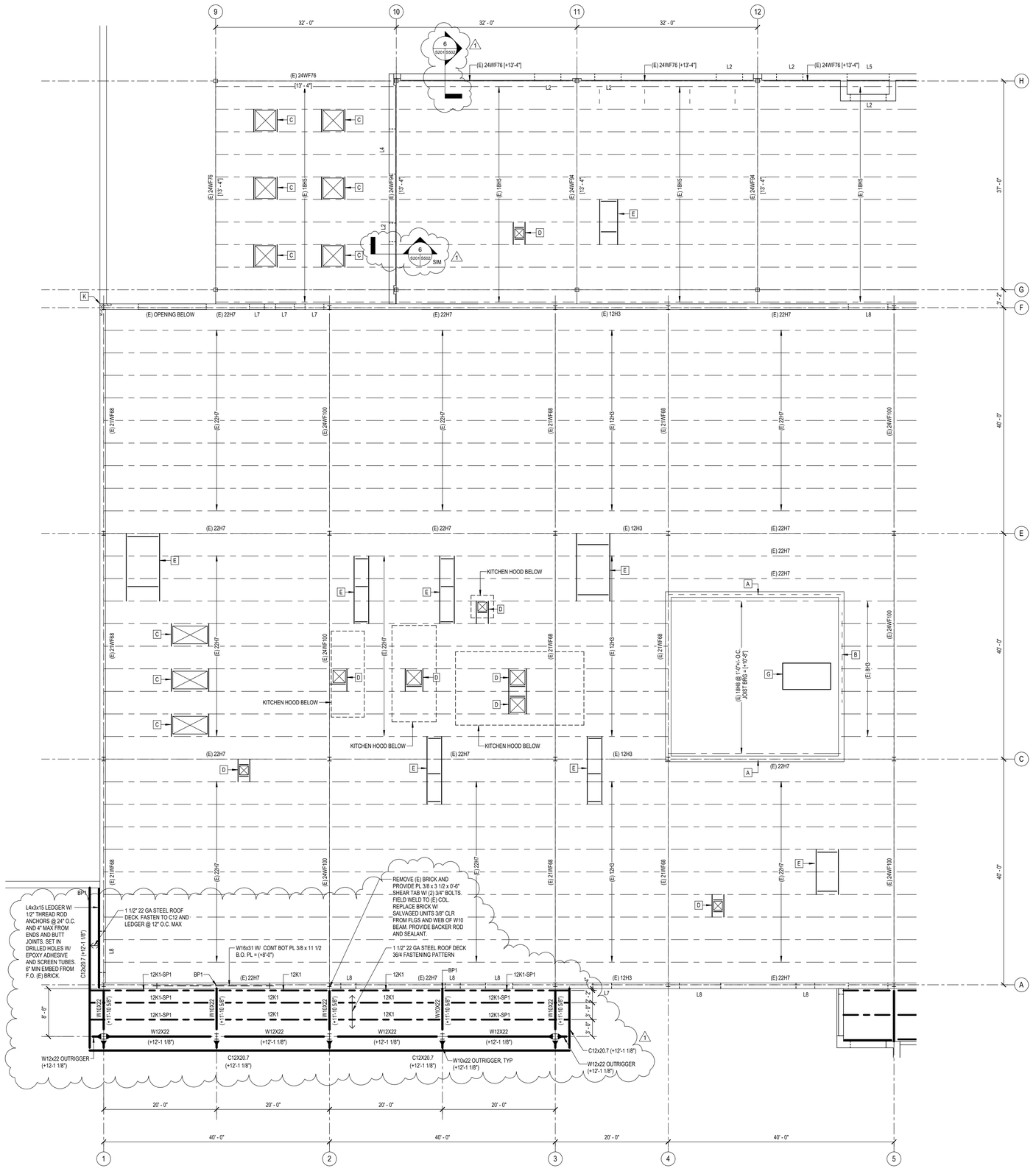

ROOF FRAMING PLAN - AREA A

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

NOTES

1. REFER TO GENERAL NOTES ON S001, TYPICAL DETAILS ON S002, AND SCHEDULES ON S601.
2. REFER TO ARCHITECTURAL DRAWINGS AND STRUCTURAL SECTIONS AND DETAILS FOR DIMENSIONS, ELEVATIONS, AND OFFSETS NOT INDICATED.
3. REFERENCE ELEVATION (+0'-0") IS 1066.15'. ALL ELEVATIONS ARE NOTED THUS: (+/- X'-X") RELATIVE TO THE REFERENCE ELEVATION.
4. "LX" INDICATES A LINTEL. ALL OPENINGS IN MASONRY WALLS SHALL HAVE A LINTEL. SEE LINTEL SCHEDULE ON S601.
5. "BPX" INDICATES BEAM BEARING PLATE. ALL STRUCTURAL STEEL BEAMS AND JOISTS BEARING ON CMU OR CONCRETE SHALL BE A BEARING PLATE. SEE SECTIONS AND BEARING PLATE SCHEDULE ON SHEET S601. BEARING PLATES SHOWN ON PLAN ARE FOR CLARITY OR EMPHASIS.
6. STEEL JOIST CALLOUTS W/ "-SPX" INDICATE A JOIST WITH NON-UNIFORM OR CONCENTRATED LOADS. JOIST LOADING DIAGRAMS WILL BE PROVIDED DURING SUBMITTALS.

0 4' 8' 16'

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

KEYED NOTES X

A. (E) 14WF30 W/ BOT PL 1/4 x 11 CENTERED IN (E) 12" CMU WALL. B.O.S. = [+10'-8"].
B. (E) 6WF25 W/ BOT PL 1/4 x 11. CENTERED IN (E) 8" CMU WALL AND SUPPORTING (E) BRICK. T.O.S. = [+15'-4"].
C. ANGLE FRAME FOR SKYLIGHT CURB. SEE TYPICAL DETAIL.
D. ANGLE FRAME FOR FAN CURB. SEE TYPICAL DETAIL.
E. ROOF-TOP HVAC UNIT CURB ANGLE FRAMING AT EXISTING ROOF FRAMING. SEE TYPICAL DETAIL.
F. ROOF-TOP HVAC UNIT CURB ANGLE FRAMING AT NEW ROOF FRAMING. SEE TYPICAL DETAIL.
G. MOUNT RTU ON EXISTING ELEVATED STEEL FRAME. FRAME NOT SHOWN.
H. REMOVE AND REPLACE TOP EIGHT (8) COURSES OF EXISTING BRICK.
I. REMOVE AND REPLACE DAMAGED MASONRY AT CORNER AND DISPLACED BRICK ABOVE EXISTING LINTEL.
J. REMOVE AND REPLACE DAMAGED AND DISPLACED BRICK ABOVE EXISTING LINTEL. PROVIDE BRICK EJ AT WINDOW JAMB.
K. REMOVE AND REPLACE DISPLACED BRICK AT TOP CORNER. EIGHT (8) COURSES FOR 2'-0"+/- FROM EACH CORNER.
L. MANUFACTURED CANOPY. REFER TO ARCHITECTURAL. PROVIDE DELEGATED DESIGN SUBMITTAL SEALED BY AN ENGINEER LICENSED IN VIRGINIA. SUBMITTAL HAVE CALCULATIONS AND CONNECTION DETAILS TO THE EXISTING AND NEW STRUCTURE.

ALL NOTES DO NOT OCCUR ON EVERY SHEET.

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RENOVATIONS & ADDITIONS TO
ROCKBRIDGE INNOVATION CENTER ROCKBRIDGE COUNTY HIGH SCHOOL

ROCKBRIDGE COUNTY PUBLIC SCHOOLS

VA DOE PROJECT NO.: **VA DOE 081-02-01-101**
SPECTRUM DESIGN PROJECT NO.: **21148**

COMMONWEALTH OF VIRGINIA
RONALD W. RODKEY
Lic. No. 33689
05.15.2023
PROFESSIONAL ENGINEER

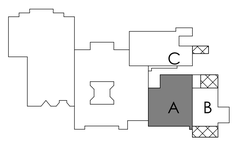
PROJ. MGR.:	CHECKED BY:	DRAWN BY:
GEG	**JM**	**RWR**

SHEET ISSUE DATE:
05.15.2023

PROJECT PHASE:
CONSTRUCTION DOCUMENTS

SHEET REVISIONS:
REV 1 06.21.23 ADDENDUM NO. 1

KEY PLAN:



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SITE NORTH

SHEET NAME:
ROOF FRAMING PLAN - AREA A

SHEET NUMBER:
S201

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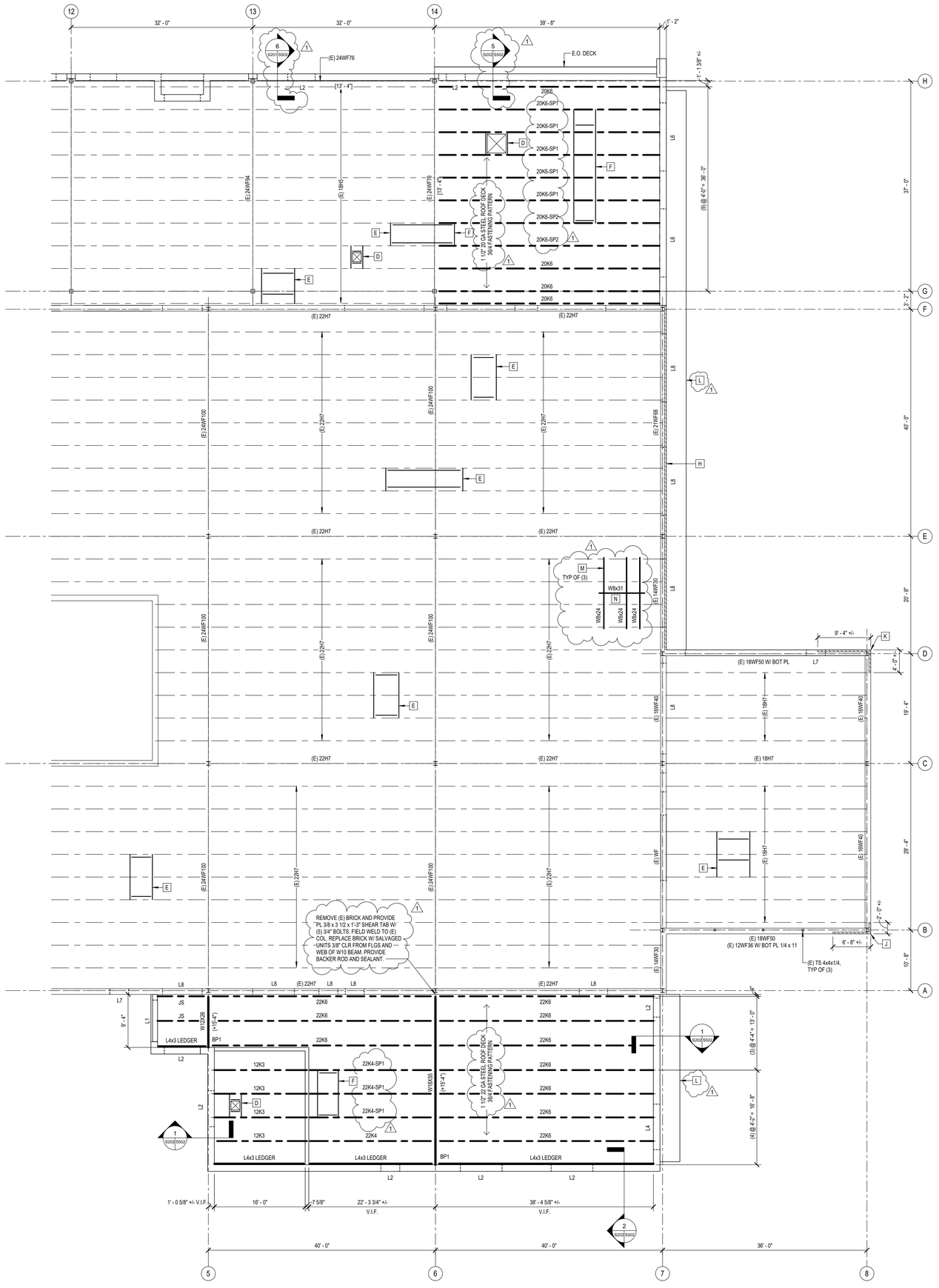

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C. ANGLE FRAME FOR SKYLIGHT CURB. SEE TYPICAL DETAIL.
D. ANGLE FRAME FOR FAN CURB. SEE TYPICAL DETAIL.
E. ROOF-TOP HVAC UNIT CURB ANGLE FRAMING AT EXISTING ROOF FRAMING. SEE TYPICAL DETAIL.
F. ROOF-TOP HVAC UNIT CURB ANGLE FRAMING AT NEW ROOF FRAMING. SEE TYPICAL DETAIL.
G. MOUNT RTU ON EXISTING ELEVATED STEEL FRAME. FRAME NOT SHOWN.
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L. MANUFACTURED CANOPY. REFER TO ARCHITECTURAL. PROVIDE DELEGATED DESIGN SUBMITTAL SEALED BY AN ENGINEER LICENSED IN VIRGINIA. SUBMITTAL HAVE CALCULATIONS AND CONNECTION DETAILS TO THE EXISTING AND NEW STRUCTURE.
M. W8x24 x 12'-6"+/- STEEL BEAMS LOCATED UNDER THE FIRST THREE EXISTING JOIST BOTTOM CHORD PANEL POINTS. FIELD WELD TO BOTTOM CHORDS W/ 3/16" FILLET WELDS ALL-AROUND. FIELD VERIFY LENGTH.
N. W8x31 x 8'-0" HOIST BEAM. PROVIDE L3x3x1/4 x 0'-4" STOPS EA SIDE AND EA END. WELD TO BEAM WEB W/ 3/16" FILLETS TOP AND BOTTOM. LABEL BEAM "0.5 TON MAX."

ALL NOTES DO NOT OCCUR ON EVERY SHEET. 1

ROOF FRAMING PLAN - AREA B

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

NOTES

1. REFER TO GENERAL NOTES ON S001, TYPICAL DETAILS ON S002, AND SCHEDULES ON S601.
2. REFER TO ARCHITECTURAL DRAWINGS AND STRUCTURAL SECTIONS AND DETAILS FOR DIMENSIONS, ELEVATIONS, AND OFFSETS NOT INDICATED.
3. REFERENCE ELEVATION (+0'-0") IS 1066.15'. ALL ELEVATIONS ARE NOTED THUS: (+/- X'-X") RELATIVE TO THE REFERENCE ELEVATION.
4. "L" INDICATES A LINTEL. ALL OPENINGS IN MASONRY WALLS SHALL HAVE A LINTEL. SEE LINTEL SCHEDULE ON S601.
5. "BPX" INDICATES BEAM BEARING PLATE. ALL STRUCTURAL STEEL BEAMS AND JOISTS BEARING ON CMU OR CONCRETE SHALL BE A BEARING PLATE. SEE SECTIONS AND BEARING PLATE SCHEDULE ON SHEET S601. BEARING PLATES SHOWN ON PLAN ARE FOR CLARITY OR EMPHASIS.
6. STEEL JOIST CALLOUTS W/ "-SPX" INDICATE A JOIST WITH NON-UNIFORM OR CONCENTRATED LOADS. JOIST LOADING DIAGRAMS WILL BE PROVIDED DURING SUBMITTALS.

0 4' 8' 16'
SCALE: 1/8" = 1' - 0"

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SPECTRUM DESIGN PROJECT NO.: **21148**

COMMONWEALTH OF VIRGINIA
RONALD W. RODKEY
Lic. No. 33689
05.15.2023
PROFESSIONAL ENGINEER

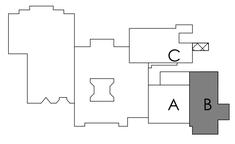
PROJ. MGR.: **GEG** CHECKED BY: **JM** DRAWN BY: **RWR**

SHEET ISSUE DATE:
05.15.2023

PROJECT PHASE:
CONSTRUCTION DOCUMENTS

SHEET REVISIONS:
REV 1 06.21.23 ADDENDUM NO. 1

KEY PLAN:



PLAN NORTH
SITE NORTH

SHEET NAME:
ROOF FRAMING PLAN - AREA B

SHEET NUMBER:
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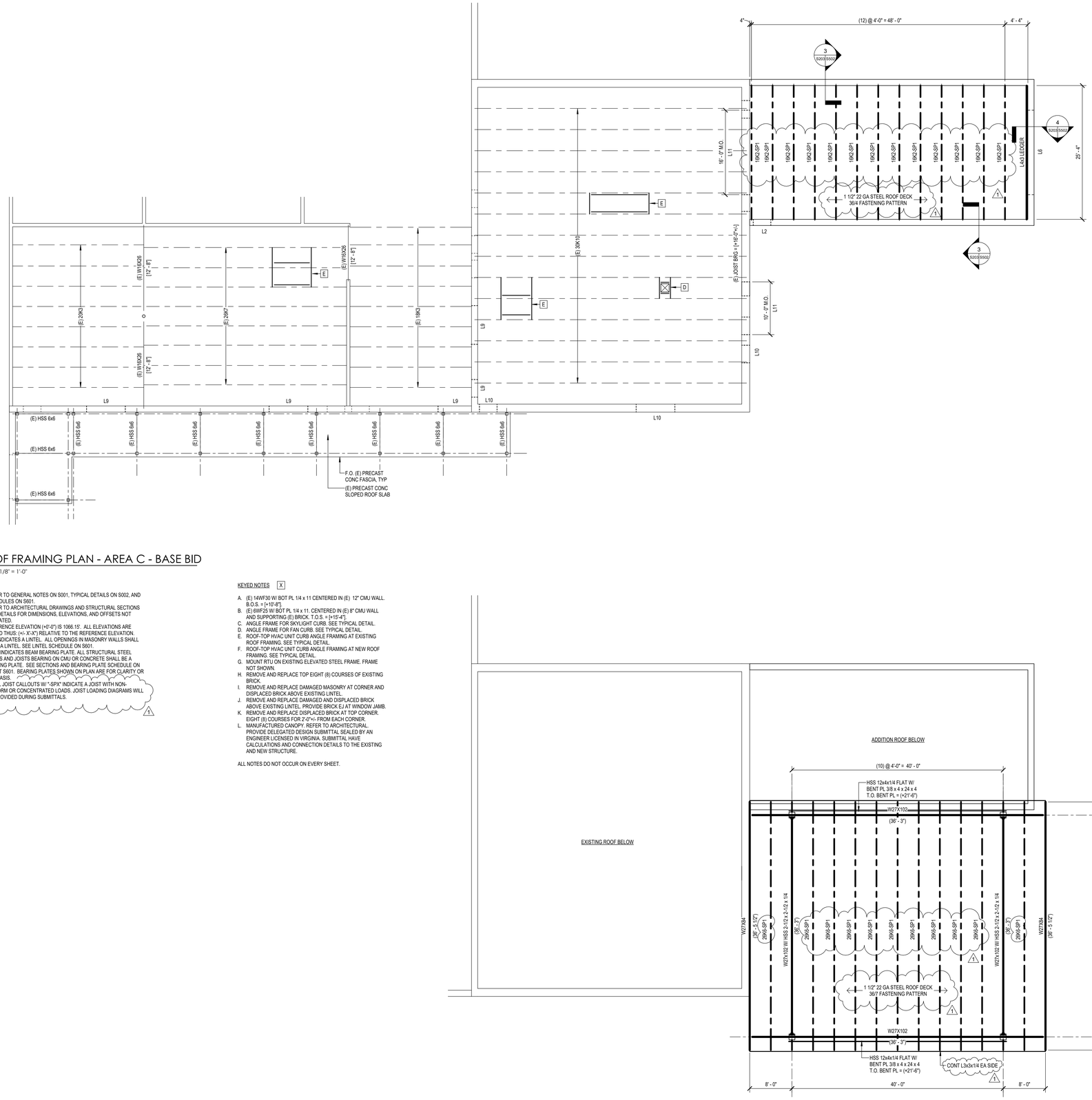

ROOF FRAMING PLAN - AREA C - BASE BID

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

NOTES

1. REFER TO GENERAL NOTES ON S001, TYPICAL DETAILS ON S002, AND SCHEDULES ON S601.
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6. STEEL JOIST CALLOUTS W/ "-SPX" INDICATE A JOIST WITH NON-UNIFORM OR CONCENTRATED LOADS. JOIST LOADING DIAGRAMS WILL BE PROVIDED DURING SUBMITTALS.

KEYED NOTES [X]

A. (E) 14WF30 W/ BOT PL 1/4 x 11 CENTERED IN (E) 12" CMU WALL. B.O.S. = [+10'-8"].
B. (E) 6WF25 W/ BOT PL 1/4 x 11. CENTERED IN (E) 8" CMU WALL AND SUPPORTING (E) BRICK. T.O.S. = [+15'-4"].
C. ANGLE FRAME FOR SKYLIGHT CURB. SEE TYPICAL DETAIL.
D. ANGLE FRAME FOR FAN CURB. SEE TYPICAL DETAIL.
E. ROOF-TOP HVAC UNIT CURB ANGLE FRAMING AT EXISTING ROOF FRAMING. SEE TYPICAL DETAIL.
F. ROOF-TOP HVAC UNIT CURB ANGLE FRAMING AT NEW ROOF FRAMING. SEE TYPICAL DETAIL.
G. MOUNT RTU ON EXISTING ELEVATED STEEL FRAME. FRAME NOT SHOWN.
H. REMOVE AND REPLACE TOP EIGHT (8) COURSES OF EXISTING BRICK.
I. REMOVE AND REPLACE DAMAGED MASONRY AT CORNER AND DISPLACED BRICK ABOVE EXISTING LINTEL.
J. REMOVE AND REPLACE DAMAGED AND DISPLACED BRICK ABOVE EXISTING LINTEL. PROVIDE BRICK EJ AT WINDOW JAMB.
K. REMOVE AND REPLACE DISPLACED BRICK AT TOP CORNER. EIGHT (8) COURSES FOR 2'-0"+/- FROM EACH CORNER.
L. MANUFACTURED CANOPY. REFER TO ARCHITECTURAL. PROVIDE DELEGATED DESIGN SUBMITTAL SEALED BY AN ENGINEER LICENSED IN VIRGINIA. SUBMITTAL HAVE CALCULATIONS AND CONNECTION DETAILS TO THE EXISTING AND NEW STRUCTURE.

ALL NOTES DO NOT OCCUR ON EVERY SHEET.

ROOF FRAMING PLAN - AREA C - ADDITIVE BID ITEM #1

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

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

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RENOVATIONS & ADDITIONS TO
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ROCKBRIDGE COUNTY PUBLIC SCHOOLS

VA DOE PROJECT NO.: **VA DOE 081-02-01-101**
SPECTRUM DESIGN PROJECT NO.: **21148**

COMMONWEALTH OF VIRGINIA
RONALD W. RODKEY
Lic. No. 33689
05.15.2023
PROFESSIONAL ENGINEER

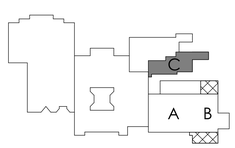
PROJ. MGR.: **GEG** CHECKED BY: **JM** DRAWN BY: **RWR**

SHEET ISSUE DATE:
05.15.2023

PROJECT PHASE:
CONSTRUCTION DOCUMENTS

SHEET REVISIONS:
REV 1 06.21.23 ADDENDUM NO. 1

KEY PLAN:



PLAN NORTH
SITE NORTH

SHEET NAME:
ROOF FRAMING PLAN - AREA C

SHEET NUMBER:
S203

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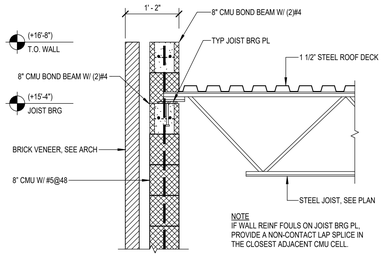

1 SECTION

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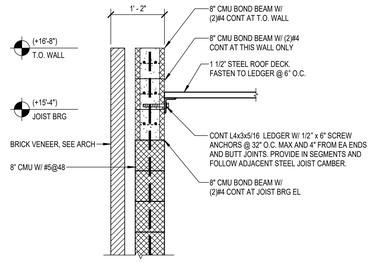
REF: S202



2 SECTION

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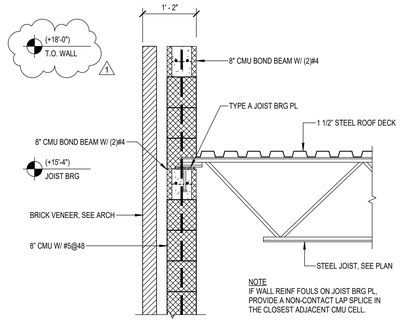

3 SECTION

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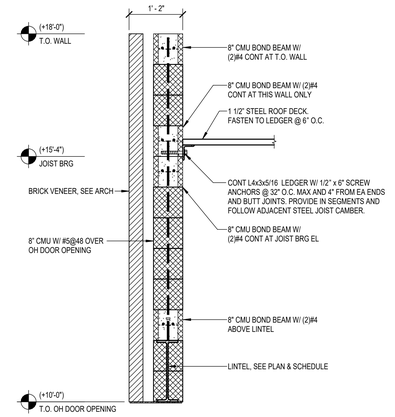
REF: S203



4 SECTION

S502 SCALE: 3/4" = 1'-0"
REF: S203

5 SECTION

S502 SCALE: 3/4" = 1'-0"
REF: S202

6 SECTION

S502 SCALE: 3/4" = 1'-0"
REF: S201

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05.15.2023
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05.15.2023

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REV 1 06.21.23 ADDENDUM NO. 1

SHEET NAME:
SECTIONS AND DETAILS

SHEET NUMBER:
S502

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SCALE: 3/4" = 1' - 0"

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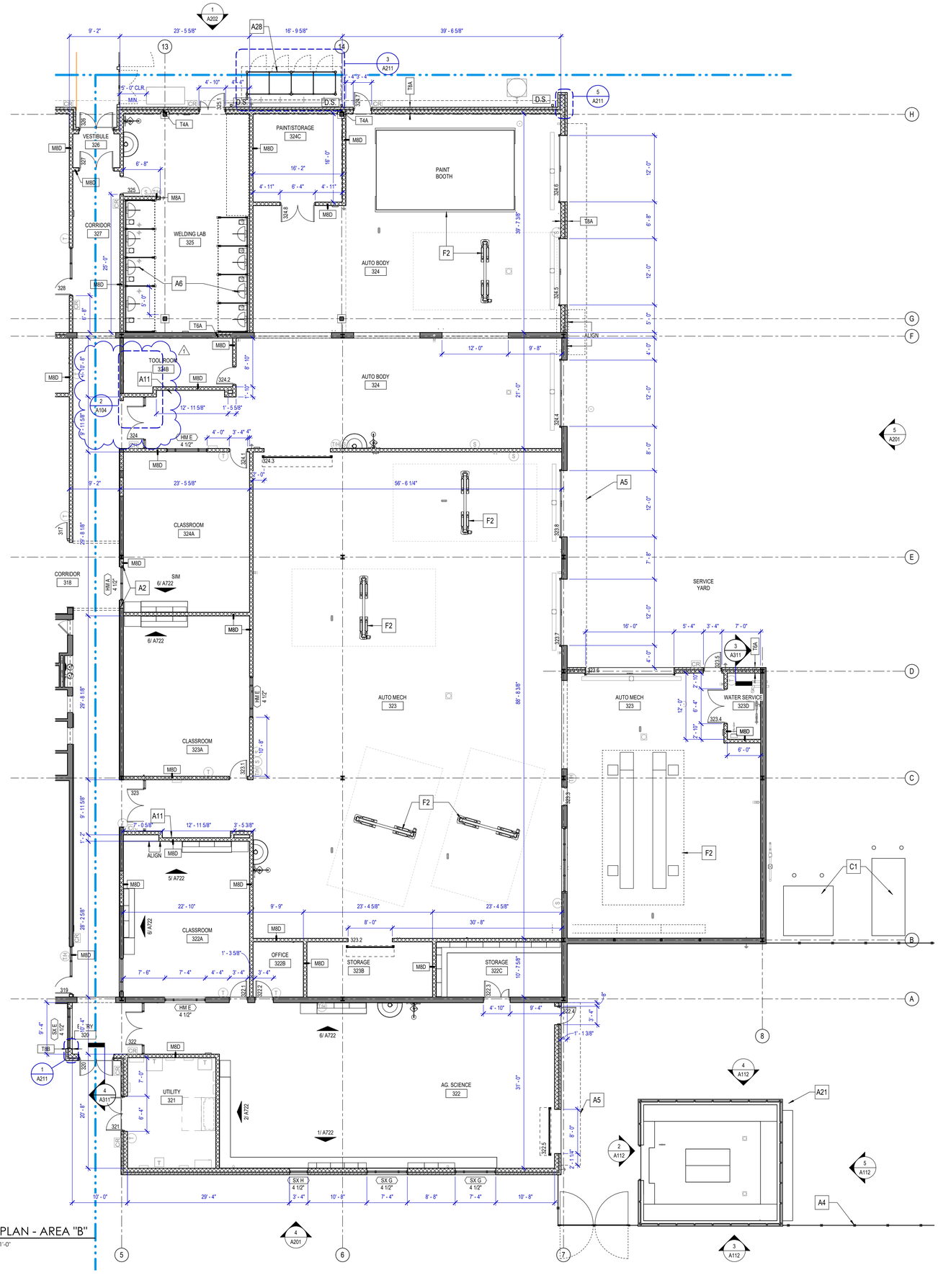
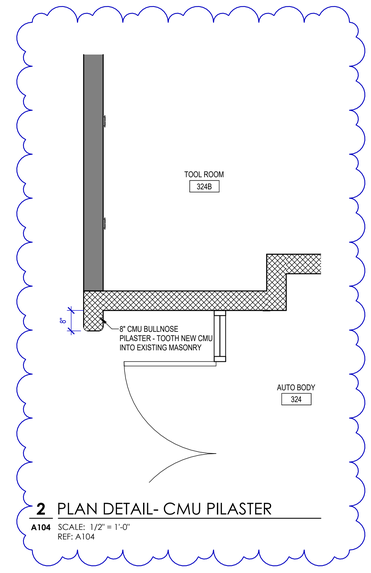


1 FLOOR PLAN - AREA "B"
A104 A104 SCALE: 1/8" = 1'-0"



2 PLAN DETAIL- CMU PILASTER
A104 SCALE: 1/2" = 1'-0"
REF: A104

FLOOR PLAN GENERAL NOTES

GN-1: DIMENSION GUIDELINES:
- NEW CONSTRUCTION = PLAN DIMENSIONS ARE TO FACE OF FRAMING MEMBERS AT GWB, FACE OF MASONRY, AND CENTERLINE OF STRUCTURAL GRID U.N.O.
- EXISTING CONSTRUCTION = PLAN DIMENSIONS ARE TO FACE OF FINISH OF EXISTING WALLS TO REMAIN U.N.O.
- PLUMBING FIXTURES = PLAN DIMENSIONS ARE FROM FACE OF FINISH (GWB, TILE, ETC) TO CENTERLINE OF FIXTURE.
- "CLEAR" = DIMENSIONS ARE TO FACE OF FINISH (GWB, TILE, ETC).

GN-2: WHERE PARTITIONS OF DIFFERENT THICKNESSES ABUT OR ADJOIN IN THE SAME LOCATION, THE EXPOSED / FINISH FACES SHALL BE INSTALLED FLUSH / ALIGNED.

GN-3: SEE LIFE SAFETY PLANS FOR FIRE EXTINGUISHER CABINET LOCATIONS.

GN-4: SEE FINISH PLANS FOR TILE LOCATIONS.

XX FLOOR PLAN KEYNOTES

A1: ROOF OVERHANG ABOVE

A2: ALIGN NEW CMU INFILL WITH EXISTING WALL FINISH

A3: NEW RAMP AND STAIR W/ PLANTER BED

A4: PREMANUFACTURED HORIZONTAL ALUMINUM SLAT FENCING SYSTEM WITH GATE

A5: NEW CANOPY OVERHEAD

A6: WELDING BOOTHS, TYP OF 8 TOTAL. SEE SPECS. SEE MECHANICAL, ELECTRICAL & PLUMBING DRAWINGS FOR WELDING SYSTEMS, CONNECTION & EQUIPMENT, TYP.

A7: NEW ALUMINUM STOREFRONT SYSTEM INBETWEEN EXISTING CANOPY COLUMNS (TYP. FOR ENTIRE CANOPY STRUCTURE).

A8: 8'-0" DISPLAY AND TROPHY CASE

A9: STACKED WASHER & DRYER- SEE FFE SHEETS FOR DETAILS. SEE PLUMBING, MECHANICAL, & ELECTRICAL DRAWINGS FOR CONNECTIONS & HOOKUPS

A10: GWB BULKHEAD, PTD.

A11: STUDENT LOCKERS; SEE FFE PLANS FOR MORE INFORMATION

A12: SEE FOOD SERVICE DRAWINGS FOR EQUIPMENT LIST & LAYOUT

A13: EXHAUST HOOD OVERHEAD. SEE FOOD SERVICE, MECHANICAL, AND ELECTRICAL DRAWINGS.

A14: WALK-IN COOLER. SEE FOOD SERVICE DRAWINGS AND SPECIFICATIONS.

A15: WALK-IN FREEZER. SEE FOOD SERVICE DRAWINGS AND SPECIFICATIONS.

A16: EXISTING PAINT BOOTH RELOCATED. PAINT BOOTH TO BE INSTALLED ON TOP TWO (2) CONC. PADS.

A17. NEW CONC. PAD & STEEL CANOPY (ADD-BID ITEM #1). SEE STRUCTURAL DRAWINGS.

A18. PLYWOOD ON THIS SIDE OF WALL, TYP.

A19. 2X BRACING AT TOP OF WOOD; ATTACH BRACING TO WALL

A20: EXISTING DUST COLLECTOR RELOCATED; SEE MECH SHEETS

A21. PREMANUFACTURED POLYCARBONATE GREENHOUSE (ADD-BID ITEM 2)- SEE SPECIFICATIONS

A22. TRANSLUCENT POLYCARBONATE WALL PANELS. SEE SPECIFICATIONS

A23. BENT PLATE WITH STRUCTURAL STIFFENER BEHIND. SEE STRUCTURAL DRAWINGS

A24. PRE ENGINEERED ROOF LADDER AS SPECIFIED. ALIGN TOP RUNG w/ HIGH ROOF EDGE AND PROVIDE 42" EXT ABV TOP RUNG AS REQ'D. FIELD VERIFY ROOF TO ROOF HGTS (TYP).

A25. CONCRETE WALL SEE STRUCTURAL DRAWINGS

A26. ALUM. COMP. PANEL (ACP) OVER VAPOR RETARDER ON 1/2" PLYWOOD SHEATHING OVER METAL FRAMING AT 16" O.C.

A27. ALUM. COMP. PANEL (ACP) SOFFIT OVER VAPOR RETARDER ON 1/2" PLYWOOD SHEATHING OVER METAL FRAMING AT 16" O.C.

A28. CHAIN-LINK FENCED GAS STORAGE AREA WITH SHED ROOF COVERING WITH 3'-0" GATE TO EACH, TYP OF 4

A29. NEW ROOF DRAINS AS SHOWN. SEE PLUMBING DRAWINGS

A30: WALL MOUNTED TV(S); SEE FFE SHEETS

F1: EXISTING WORKSTATIONS TO BE REFINISHED. SEE INFO ON CASEWORK SHEETS.

F2. SHOP EQUIPMENT; SEE FFE SHEETS FOR MORE INFORMATION

C1. CONC. PADS FOR ELECTRICAL EQUIPMENT. COORDINATE WITH CIVIL AND ELECTRICAL DRAWINGS

E1: WALL MOUNTED LIGHT FIXTURES; SEE ELEC.

P1: TRENCH DRAWINGS. SEE PLUMBING DRAWINGS

X1: EXISTING WASHER & DRYER RELOCATED- SEE PLUMBING, MECHANICAL, & ELECTRICAL DRAWINGS FOR CONNECTIONS & HOOKUPS

X2: EXISTING WALL-MOUNTED SERVER OVERHEAD TO REMAIN.

FLOOR PLAN WALL LEGEND

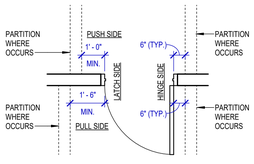
EXISTING WALLS TO REMAIN

NEW WALLS TO BE CONSTRUCTED

EXISTING DOOR

101 NEW DOOR

MINIMUM DOOR CLEARANCE LEGEND



ANSI 117.1 2009 / ADASAD 2010 FIG. 404.2.3.2 (A) (B)
WHERE LATCH SIDE OF DOORWAYS ARE LOCATED ADJACENT TO A PERPENDICULAR PARTITION AND NOT OTHERWISE DIMENSIONED:

- PUSH SIDE - PROVIDE 1'-0" MIN. CLEAR BETWEEN INSIDE EDGE OF FRAME OPENING AND FINISH FACE OF ADJACENT PARTITION.
- PULL SIDE - PROVIDE 1'-6" MIN. CLEAR BETWEEN INSIDE EDGE OF FRAME OPENING AND FINISH FACE OF ADJACENT PARTITION.

0 1' 2' 4'
SCALE: 1/2" = 1'-0"

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

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Lic. No. 14926
06.01.2023
ARCHITECT

PROJ. MGR.: **GEG**
CHECKED BY: **NLH/DCV**
DRAWN BY: **ZRB**

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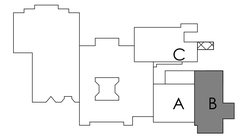
KEY PLAN:

KEY PLAN:



PLAN NORTH
SITE NORTH

SHEET NAME:
FLOOR PLAN- AREA B

SHEET NUMBER:
A104

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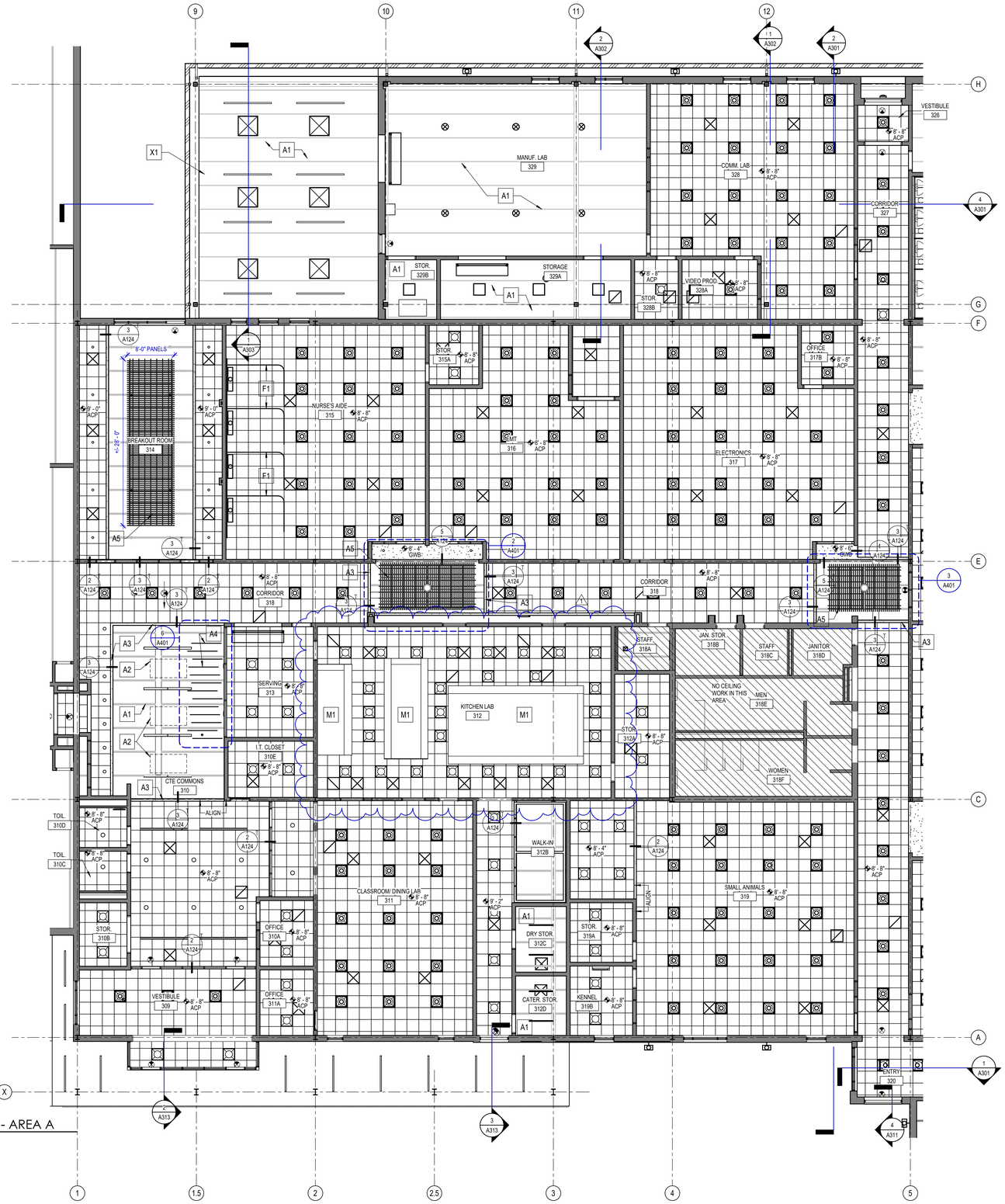

1 A122 A122 REFLECTED CEILING PLAN - AREA A

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

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REFLECTED CEILING GENERAL NOTES

GN-1: MECHANICAL SUPPLY AND RETURN GRILLES, ELECTRICAL FIXTURES AND EQUIPMENT, AND SPRINKLER HEADS (NOT SHOWN) TO BE CENTERED IN ACP OR WITHIN SPACE AT GWB CEILINGS. EXISTING SPRINKLER SYSTEM TO BE MODIFIED AS REQUIRED TO PROVIDE A FULLY FUNCTIONAL SYSTEM. EXISTING AND/OR NEW SPRINKLER HEADS TO BE RAISED OR LOWERED AS REQUIRED TO COORDINATE W/ NEW CEILING HEIGHTS & CONDITIONS. SPRINKLER CONTRACTOR TO VERIFY COVERAGE OF EXISTING HEADS & MODIFY ACCORDINGLY TO INSURE THAT THE SYSTEM MEETS ALL NATIONAL, STATE, & LOCAL BUILDING CODES.

GN-2: DIMENSION GUIDELINES:
- REFLECTED CEILING PLAN DIMENSIONS ARE FROM FACE OF WALL FINISH (GWB, CMU, ETC) TO FACE OF BULKHEAD FINISH , CENTERLINE OF ACP GRID, CENTERLINE OF STRUCTURAL GRID, ETC. U.N.O.

GN-3: SUPPORT FRAMING SHOWN AT GWB CEILINGS AND BULKHEADS INDICATES DIMENSIONAL DESIGN INTENT. AT CONTRACTOR'S OPTION, SUBSTITUTE SUSPENDED METAL GRID FRAMING SYSTEM FOR STUD FRAMING AT GWB . CONTRACTOR TO COORDINATE FRAMING AS REQUIRED FOR RECESSED AND SURFACE MOUNTED CEILING ELEMENTS, INCLUDING LIGHTS, BULKHEADS, TRANSITIONS, ROLLER SHADES, PROJECTORS, ETC.

GN-4: REFER TO MECHANICAL DRAWINGS FOR SIDEWALL MOUNTED SUPPLIES AND RETURNS NOT INDICATED ON RCP.

GN-5: REFER TO ELECTRICAL DRAWINGS FOR WALL MOUNTED AND UNDER CABINET FIXTURES AND SPEAKERS NOT INDICATED ON RCP.

GN-6: AT LOCATIONS WHERE ACP WILL BE 6" OR LESS IN WIDTH, USE A 2X4 ACP OF THE SAME TYPE AND MANUFACTURER. FOR EXAMPLE: IN LIEU OF A 8'X24' ACP NEXT TO A 24"X24' ACP, THE PANEL SHALL BE 30"X24" AND EXTEND TO THE WALL OR SOFFIT.

GN-7: PROVIDE ACCESS PANELS FOR ABOVE CEILING ACCESS AT GWB CEILINGS WHERE REQUIRED. SEE PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR EQUIPMENT REQUIRING ACCESS PANELS.

GN-8: PAINT ALL EXPOSED GWB, EXPOSED STRUCTURE, AND DECK U.N.O. - SEE FINISH LEGEND AND SCHEDULE.

GN-9: SEE CASEWORK DRAWINGS FOR EXTENT OF BULKHEADS AT CASEWORK LOCATIONS.

GN-10: SEE WALL SECTIONS AND DETAILS FOR CEILING TERMINATIONS AT EXTERIOR WALL.

GN-11: PAINT COLORS NOTED ARE FOR THE BOTTOM AND SIDES OF BULKHEADS AND SOFFITS - SEE FINISH LEGEND AND SCHEDULE.

XX REFLECTED CEILING PLAN KEYNOTES

A1: EXPOSED STRUCTURE- PAINT. SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION

A2: LOCATION OF NEW ROOF SKYLIGHT

A3. GWB BULKHEAD, PTD.

A4. ACOUSTIC BAFFLES- SEE SPECIFICATIONS

A5. OPEN REVEAL CONTINUOUS LINEAR WOOD CEILING

F1. TRACK CURTAIN SYSTEM; SEE FFE SHEETS

M1. APPROXIMATE LOCATION OF EXHAUST HOOD. SEE MECHANICAL AND FOOD SERVICE DRAWINGS

R1. NEW ROOF CANOPY

R2: NEW PRE-ENGINEERED ROOF CANOPY SYSTEM

X1: EXISTING ROOF CANOPY

REFLECTED CEILING PLAN LEGEND

- GWB CEILING - PAINTED
- EXPOSED STRUCTURE AND METAL DECK ABOVE - PAINTED
- SUSPENDED ACOUSTICAL CEILING PANEL SYSTEM (ACP)
- 2X4 LIGHT FIXTURE, RE: ELEC
- 2X2 LIGHT FIXTURE, RE: ELEC
- PENDANT LIGHT FIXTURE
- WALL MOUNTED LIGHT
- GROUND MOUNTED UP-LIGHT
- EXIT SIGN, w/ CHEVRONS AS INDICATED. RE: ELEC
- AS: AUDIO ENHANCEMENT SYSTEM SPEAKER
- S: CEILING MOUNTED SPEAKER
- OS: OCCUPANCY SENSOR
- HVAC SUPPLY DIFFUSER, RE: MECH
- HVAC RETURN GRILLE, RE: MECH
- ABOVE FINISH FLOOR (A.F.F.)
- ROLLER SHADE - SINGLE
- ROLLER SHADE - DOUBLE (RS-R1M)
  - R = RECESSED
  - S = SURFACE MOUNT
  - NO. OF ROLLERS
  - "M" IF MOTORIZED
  - NOTE: REFERENCE FRAMED OPENING ELEVATIONS FOR CORRESPONDING LENGTH

REFLECTED CEILING PLAN WALL LEGEND

- WALLS AND PARTITIONS TERMINATING ABOVE CEILING
- INTERIOR PARTITIONS TERMINATING BELOW CEILING

0 4' 8' 16'

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

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PROJ. MGR.: **GEG**
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DRAWN BY: **ZRB**

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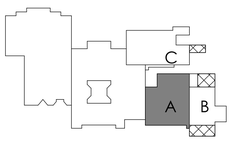
REV 1 06.20.2023 ADDENDUM 1

KEY PLAN:

KEY PLAN:



PLAN NORTH
SITE NORTH

SHEET NAME:
REFLECTED CEILING PLAN- AREA A

SHEET NUMBER:
A122

DOOR AND FRAME SCHEDULE

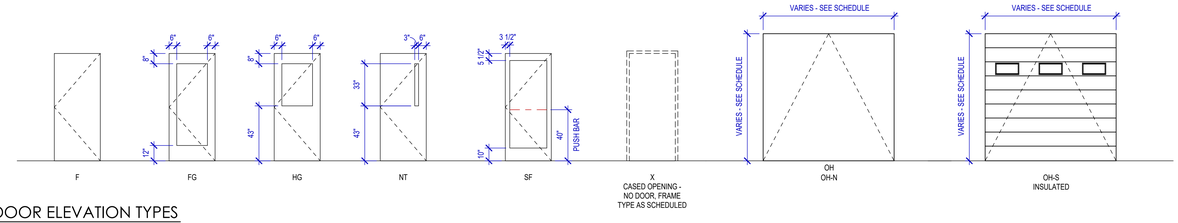
OPENING NO./ DOOR MARK	DOOR ELEV	DOOR PAIR	DOOR MATL	DOOR WIDTH	DOOR HEIGHT	FIRE RATING	FRAME ELEV	FRAME MATL	FRAME HEAD	FRAME JAMB	THRESH	HDWRE SET	KEYNOTES
FIRST FLOOR													
310	FG	--	WD	3' - 0"	7' - 0"		F9	HM	H7	J7	T1	18	ACCESS CONTROL
310.1	FG	--	WD	3' - 0"	7' - 0"		F9	HM	H7	J7	T1	28	
310.2	HG		WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	6	
310.3	F	PAIR	WD	6' - 0"	7' - 0"		F2	HM	H5	J5	T1	31	
310.4	F	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	23	
310.5	F	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	23	
310.6	F	--	WD	3' - 0"	7' - 0"		F3	HM	H5	J5	T1	13	NEW FRAME IN EXIST'G OPENING; ACCESS CONTROL
310.7	NT	PAIR	WD	6' - 8"	6' - 8"		F2	HM	H5	J5	T1	27	RECESSED ELECTROMAGNETIC DOOR HOLDER
311	FG	--	WD	3' - 0"	7' - 0"		F8	HM	H6	J5	T1	18	ACCESS CONTROL
311.1	F	--	WD	3' - 0"	7' - 0"		F3	HM	H5	J5	T1	6	NEW FRAME IN EXIST'G OPENING.
312	F	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	32	
312.1	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	32	
312.2	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	32	
312.3	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	11	
312.4	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	11	
313	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	13	ACCESS CONTROL
314	NT	--	WD	3' - 0"	7' - 0"		F9	HM	H7	J7	T1	25	
314.1	NT	--	WD	3' - 0"	7' - 0"		F9	HM	H7	J7	T1	25	
315.1	F	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	11	
316.1	NT	PAIR	WD	6' - 0"	7' - 0"		F2	HM	H5	J5	T1	3	
317	FG	--	WD	3' - 0"	7' - 0"		F5	HM	H6	J5	T1	13	ACCESS CONTROL
317.1	HG	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	6	
318	F	--	WD	3' - 0"	6' - 8"		F2	HM	H5	J5	T1	23	
318.1	F	--	WD	3' - 0"	6' - 8"		EX	HM	EX	EX	T1	20	EXISTING DOOR TO REMAIN
318.2	F	--	WD	3' - 0"	6' - 8"		F2	HM	H5	J5	T1	23	
318.3	F	--	--	2' - 6"	7' - 0"		EX	EX	EX	EX	T1	11	
319	NT	--	WD	3' - 0"	7' - 0"		F7	HM	H5	J5	T1	13	ACCESS CONTROL
319.1	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	11	
319.2	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	7	
322	NT	PAIR	WD	6' - 0"	7' - 0"		F6	HM	H6	J5	T1	9	ACCESS CONTROL
322.1	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T2	7	
322.2	HG	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T2	6	
322.3	FG	--	WD	4' - 6"	7' - 0"		F2	HM	H5	J5	T3	5	36" ACTIVE LEAF NARROW LITE & 18" INACTIVE LEAF SOLID
323	NT	PAIR	WD	6' - 0"	7' - 0"		F6	HM	H6	J5	T1	9	ACCESS CONTROL
323.1	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	7	
323.3	X	--	--	3' - 0"	7' - 0"		F2	EX	EX	EX	--	10	EXISTING FRAME TO REMAIN/ REMOVE DOOR
323.4	NT	PAIR	WD	6' - 0"	7' - 0"		F2	HM	H5	J5	T1	3	
324	NT	PAIR	WD	6' - 0"	7' - 0"		F6	HM	H6	J5	T1	9	ACCESS CONTROL
324.1	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	7	
324.2	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	11	
324.8	NT	PAIR	WD	6' - 0"	7' - 0"		F2	HM	H5	J5	T1	3	
325	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	13	ACCESS CONTROL
325.1	NT	PAIR	WD	4' - 6"	7' - 0"		SX4	HM	H1	J1	T1	4	36" ACTIVE LEAF & 18" INACTIVE LEAF/ ACCESS CONTROL
327	FG	PAIR	WD	6' - 0"	7' - 0"		F2	HM	H5	J5	T1	14	
328	NT	--	WD	2' - 10"	7' - 0"		F7	HM	H5	J5	T1	13	ACCESS CONTROL
328.1	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	6	
328.2	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	11	
329	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	7	
329.1	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	11	
329.3	F	--	HM	4' - 6"	7' - 0"		F2	HM	H5	J5	T1	5	
330	NT	PAIR	WD	7' - 0"	6' - 8"		F2	HM	H2	J2	T1	27	RECESSED ELECTROMAGNETIC DOOR HOLDER
331	EX	--	--	3' - 0"	6' - 8"		EX	EX	EX	EX	T1	22	EXISTING DOOR TO REMAIN/ACCESS CONTROL
331.1	EX	--	--	3' - 0"	6' - 8"		EX	EX	EX	EX	T1	22	EXISTING DOOR TO REMAIN/ACCESS CONTROL
331.2	EX	--	--	3' - 0"	6' - 8"		F2	HM	EX	EX	T1	20	EXISTING DOOR TO REMAIN
331.3	EX	--	--	3' - 0"	6' - 8"		F2	HM	EX	EX	T1	21	EXISTING DOOR TO REMAIN
332	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H2	J2	T1	18	ACCESS CONTROL
332.1	NT	--	WD	3' - 0"	7' - 0"		F2	HM	H5	J5	T1	13	ACCESS CONTROL
332.2	EX	--	--	3' - 0"	6' - 8"		F2	HM	EX	EX	T1	19	EXISTING DOOR TO REMAIN
332.3	EX	--	--	3' - 0"	6' - 8"		F2	HM	EX	EX	T1	20	EXISTING DOOR TO REMAIN
332.4	EX	--	--	3' - 0"	6' - 8"		F2	HM	EX	EX	T1	20	EXISTING DOOR TO REMAIN
332.7	F	PAIR	HM	6' - 0"	7' - 0"		F2	HM	H5	J5	T1	3	
334	EX.	--	--	3' - 0"	6' - 8"		EX.	EX	EX	EX	--	10	EXISTING FRAME TO REMAIN/ REMOVE DOORS
335	EX.	--	--	3' - 0"	6' - 8"		EX.	EX	EX	EX	--	10	EXISTING FRAME TO REMAIN/ REMOVE DOORS

DOOR AND FRAME SCHEDULE - ALUMINUM

OPENING NO./ DOOR MARK	DOOR ELEV	DOOR PAIR	DOOR MATL	DOOR WIDTH	DOOR HEIGHT	FIRE RATING	FRAME ELEV	FRAME MATL	FRAME HEAD	FRAME JAMB	THRESH	HDWRE SET	KEYNOTES
FIRST FLOOR													
309	SF	--	AL	3' - 0"	8' - 8"		SX2	AL	H7	J7	T3	29	ACCESS CONTROL
309.1	SF	--	AL	3' - 0"	8' - 8"		SX2	AL	H7	J7	T3	30	
312.5	F	--	AL	4' - 6"	7' - 0"		SX3	AL	H3	J3	T3	4	36" ACTIVE LEAF & 18" INACTIVE LEAF/ ACCESS CONTROL
314.2	SF	--	AL	3' - 0"	7' - 0"		SX1	AL	H3	J3	T3	24	ACCESS CONTROL
320	SF	PAIR	AL	6' - 0"	7' - 0"		SX4	AL	H1	J1	T3	15	ACCESS CONTROL
321	F	PAIR	AL	6' - 0"	7' - 0"		SX4	AL	H1	J1	T3	8	ACCESS CONTROL
322.4	NT	--	AL	3' - 0"	7' - 0"		SX4	AL	H1	J1	T1	1	ACCESS CONTROL
323.5	NT	--	AL	3' - 0"	7' - 0"		SX4	AL	H1	J1	T3	1	ACCESS CONTROL
324.7	NT	--	AL	3' - 0"	7' - 0"		SX4	AL	H1	J1	T3	1	ACCESS CONTROL
326	FG	PAIR	AL	6' - 0"	7' - 0"		SX4	AL	H1	J1	T3	12	ACCESS CONTROL
329.4	NT	--	AL	3' - 0"	7' - 0"		SX4	AL	H1	J1	T3	1	ACCESS CONTROL
330.1	SF	--	AL	6' - 0"	7' - 0"		SX3	AL	H9	J9	T3	15	ACCESS CONTROL
330.2	SF	--	AL	5' - 0"	7' - 0"		SX3	AL	H9	J9	T3	15	ACCESS CONTROL
332.5	NT	--	AL	3' - 0"	7' - 0"		SX4	AL	H1	J1	T3	1	ACCESS CONTROL
333	NT	--	AL	3' - 0"	7' - 0"		SX4	AL	H1	J1	T3	1	ACCESS CONTROL

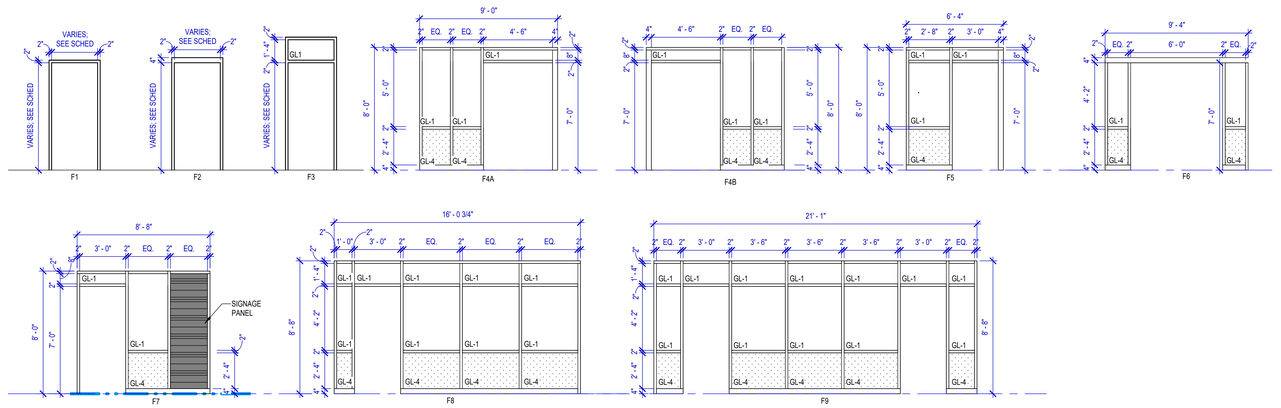
DOOR AND FRAME SCHEDULE - OVERHEAD

WT	DOOR ELEV	DOOR PAIR	DOOR MATL	DOOR WIDTH	DOOR HEIGHT	FIRE RATING	FRAME ELEV	FRAME MATL	HARDWARE SET	KEYNOTES
FIRST FLOOR										
313.1	OH-N	--		8' - 0"	7' - 0"		MANUF.	MANUF.	2	
322.5	OH-N	--		8' - 0"	7' - 0"		MANUF.	MANUF.	2	
323.2	OH-N	--		8' - 0"	7' - 0"		MANUF.	MANUF.	2	
323.6	OH-S	--		16' - 0"	10' - 0"		MANUF.	MANUF.	2	
323.7	OH-S	--		12' - 0"	10' - 0"		MANUF.	MANUF.	2	
323.8	OH-S	--		12' - 0"	10' - 0"		MANUF.	MANUF.	2	
324.3	OH-N	--		12' - 0"	10' - 0"		MANUF.	MANUF.	2	
324.4	OH-S	--		12' - 0"	10' - 0"		MANUF.	MANUF.	2	
324.5	OH-S	--		12' - 0"	10' - 0"		MANUF.	MANUF.	2	
324.6	OH-S	--		12' - 0"	10' - 0"		MANUF.	MANUF.	2	
329.2	OH-N	--		8' - 0"	7' - 0"		MANUF.	MANUF.	2	
329.5	OH-N	--		8' - 0"	7' - 0"		MANUF.	MANUF.	2	
332.6	OH-N	--		10' - 0"	10' - 0"		MANUF.	MANUF.	2	
333.1	OH-N	--		16' - 0"	10' - 0"		MANUF.	MANUF.	2	
333.2	OH	--		16' - 0"	10' - 0"		MANUF.	MANUF.	2	



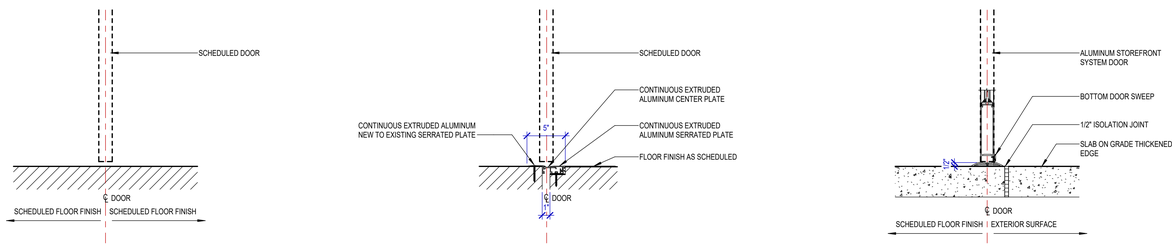
DOOR ELEVATION TYPES

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



FRAME ELEVATION TYPES

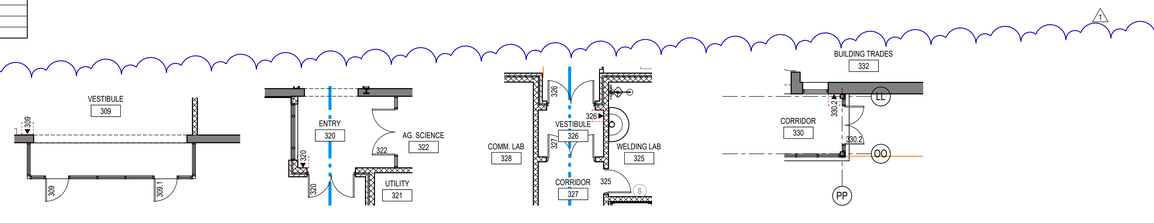
SCALE: 1/4" = 1'-0"



T1 TYP. DOOR THRESHOLD DETAIL
A601 SCALE: 1 1/2" = 1'-0"

T2 TYP. DOOR SILL DETAIL
A601 SCALE: 1 1/2" = 1'-0"

T3 TYP. DOOR SILL DETAIL
A601 SCALE: 1 1/2" = 1'-0"



1 SIGNAGE LOCATION
A601 SCALE: 1/8" = 1'-0"

2 SIGNAGE LOCATION
A601 SCALE: 1/8" = 1'-0"

3 SIGNAGE LOCATION
A601 SCALE: 1/8" = 1'-0"

4 SIGNAGE LOCATION
A601 SCALE: 1/8" = 1'-0"

SIGNAGE SCHEDULE

OPENING NO./ DOOR MARK	SIGNAGE TYPE	SIGNAGE ROOM NO.	SIGNAGE VERBIAGE
FIRST FLOOR			
309	A		EXIT
309.1	--		--
310	--		--
310.1	--		--
310.2	B		VERIFY WITH OWNER
310.3	B		STORAGE
310.4	C		RESTROOM
310.5	C		RESTROOM
310.6	B		VERIFY WITH OWNER
310.7	--		--
311	--		--
311.1	--		--
312	--		--
312.1	--		--
312.2	--		--
312.3	--		--
312.4	--		--
312.5	--		--
313	B		VERIFY WITH OWNER

SIGNAGE SCHEDULE

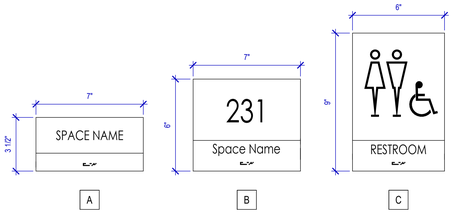
OPENING NO./ DOOR MARK	SIGNAGE TYPE	SIGNAGE ROOM NO.	SIGNAGE VERBIAGE
313.1	--		--
314	--		--
314.1	B		VERIFY WITH OWNER
314.2	--		--
315	--		--
315.1	--		--
316	--		--
316.1	--		--
317	--		--
317.1	--		--
318	C		RESTROOM
318.2	C		RESTROOM
319	--		--
319.1	--		--
319.2	--		--
320	A		EXIT
321	--		--
322	--		--
322.1	--		--
322.2	--		--
322.3	--		--

SIGNAGE SCHEDULE

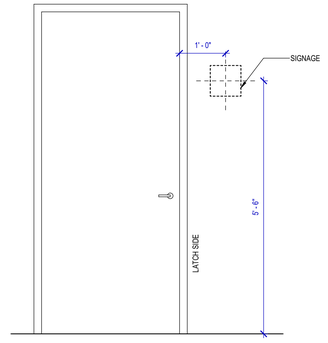
OPENING NO./ DOOR MARK	SIGNAGE TYPE	SIGNAGE ROOM NO.	SIGNAGE VERBIAGE
322.4	--		--
322.5	--		--
323	--		--
323.1	--		--
323.2	--		--
323.3	--		--
323.4	--		--
323.5	--		--
323.6	--		--
323.7	--		--
323.8	--		--
324	--		--
324.1	--		--
324.2	--		--
324.3	--		--
324.4	--		--
324.5	--		--
324.6	--		--
324.7	--		--
324.8	--		--
325	B		WELDING LAB
325.1	--		--

SIGNAGE SCHEDULE

OPENING NO./ DOOR MARK	SIGNAGE TYPE	SIGNAGE ROOM NO.	SIGNAGE VERBIAGE
326	A		EXIT
327	--		--
328	--		--
328.1	--		--
328.2	--		--
329	--		--
329.1	--		--
329.2	--		--
329.3	--		--
329.4	--		--
329.5	--		--
330	--		--
330.1	--		--
330.2	A		EXIT
332	--		--
332.1	--		--
332.5	--		--
332.6	--		--
332.7	--		--
333	--		--
333.1	--		--
333.2	--		--



SIGNAGE TYPES - INTERIOR (NEW)
SCALE: 3" = 1'-0"



TYPICAL SIGNAGE LOCATION
SCALE: 3/4" = 1'-0"

DOOR SCHEDULE INDICATORS

DOOR TYPES:
- F - FLUSH
- FG - FULL GLASS
- FL - FULL LOUVER
- HG - HALF GLASS
- HGL - HALF GLASS & LOUVER
- L - LOUVER (BOTTOM)
- LL - DOUBLE LOUVER
- LT - LOUVER (TOP)
- N - NARROW LITE
- NT - NARROW LITE (TOP)
- SF - STOREFRONT
- V - VISION LITE (CENTERED)
- VL - HALF VISION LITE & LOUVER
- VT - VISION LITE (TOP - CENTERED)
- X - CASED OPENING

OVERHEAD:
- OH - OVERHEAD COILING DOOR
- OH-N - OVERHEAD COILING DOOR (INSULATED)
- OH-S - OVERHEAD SECTIONAL (INSULATED)

MATERIAL / FINISH LEGEND:
- AL - ALUMINUM (SF/ CW)
- HM - HOLLOW METAL
- EPT - EPOXY PAINT
- PT - PAINT
- STL - STEEL
- S/V - STAIN / VARNISH
- WD - WOOD SOLID CORE

ADDITIONAL ABBREVIATIONS:
- AO - AUTO OPERATOR
- CR - CARD READER
- SF/CW - STOREFRONT / CURTAIN WALL

DOOR SCHEDULE & SIGNAGE GENERAL NOTES

GN-1: FIRE RATING INDICATED IN SCHEDULE APPLIES TO DOORS AND FRAMES.

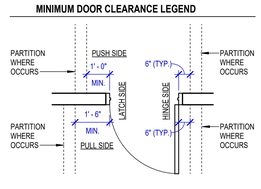
GN-2: ALL HOLLOW METAL DOOR FRAMES IN MASONRY OR CONCRETE WALLS SHALL BE GROUTED SOLID. BITUMINOUS COATING SHALL BE APPLIED TO BACK SIDE OF FRAMES BEFORE GROUTING.

GN-3: SEE SPECIFICATIONS FOR DOOR HARDWARE SETS. DOOR LOCKING HARDWARE SHALL BE "KEYED" TO OWNER'S STANDARD. CONTRACTOR TO COORDINATE WITH OWNER AND DOOR LOCKING HARDWARE MANUFACTURER.

GN-4: SIGNAGE SCHEDULE DOES NOT INCLUDE VINYL WALL COVERINGS AT CLASSROOM. SEE FINISH PLANS FOR DETAILS ON VINYL WALLCOVERINGS.

DOOR SCHEDULE & SIGNAGE KEYNOTES

MINIMUM DOOR CLEARANCE LEGEND



ANSI 117.1 2009 / ADASAD 2010 FIG. 404.2.3.2 (A) (B)
WHERE LATCH SIDE OF DOORWAYS ARE LOCATED ADJACENT TO A PERPENDICULAR PARTITION AND NOT OTHERWISE DIMENSIONED.

- PUSH SIDE - PROVIDE 1'-0" MIN. CLEAR BETWEEN INSIDE EDGE OF FRAME OPENING AND FINISH FACE OF ADJACENT PARTITION.
- PULL SIDE - PROVIDE 1'-6" MIN. CLEAR BETWEEN INSIDE EDGE OF FRAME OPENING AND FINISH FACE OF ADJACENT PARTITION.

SPECTRUM DESIGN
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RENOVATIONS & ADDITIONS TO
ROCKBRIDGE INNOVATION CENTER ROCKBRIDGE COUNTY HIGH SCHOOL

ROCKBRIDGE COUNTY PUBLIC SCHOOLS

VA DOE PROJECT NO.: **VA DOE# 081-02-01-101**
SPECTRUM DESIGN PROJECT NO.: **21148**

COMMONWEALTH OF VIRGINIA
NATHAN L. HARPER
Lic. No. 14926
06.01.2023
ARCHITECT

PROJ. MGR.: **GEG**
CHECKED BY: **NLH/DCV**
DRAWN BY: **ZRB**

SHEET ISSUE DATE: **06.01.2023**

PROJECT PHASE: **CONSTRUCTION DOCUMENTS**

SHEET REVISIONS:
REV 1 06.20.2023 ADDENDUM 1

PLAN NORTH / SITE NORTH

SHEET NAME:
DOOR SCHEDULES & DETAILS

SHEET NUMBER:
A601

PANELBOARD AND WIRING SCHEDULE

PANEL: HL1
VOLTAGE: 480/277 Wye,3P,4W
AMPERES: 200 A

MAINS TYPE: MLO
SPD:
MOUNTING: Surface

kAIC VALUE:
AIC RATING: 35KA
LOCATION: UTILITY 321
SUPPLY FROM: MDP

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A	B	C	CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
LIGHTING 318A-F 312 312A 313	12	12	3/4	20	1	1	0.9	1.8		2	1	20	3/4	12	12	LIGHTING 320 318 310 309 310B
LIGHTING 328 329 121 329A-B 328A-B	12	12	3/4	20	1	3		1.0	3.8	4	1	20	3/4	12	12	LIGHTING 322 322A-C 323 223A-C
LIGHTING 319 319A-B 311 311A 310A	12	12	3/4	20	1	5			1.1	3.7	6	1	20	3/4	12	LIGHTING 323 324 324A-C 325
LIGHTING 317-B 36 315-A 314	12	12	3/4	20	1	7	1.8	0.0			8	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	9		0.0	0.0		10	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	11			0.0	0.0	12	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	13	0.0	0.0			14	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	15		0.0	0.0		16	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	17			0.0	0.0	18	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	19	0.0	0.0			20	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	21		0.0	0.0		22	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	23			0.0	0.0	24	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	25	0.0	0.0			26	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	27		0.0	0.0		28	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	29			0.0	0.0	30	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	31	0.0	0.0			32	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	33		0.0	0.0		34	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	35			0.0	0.0	36	1	20	--	--	--	SPARE
SPACE	--	--	--	--	1	37	--	--			38	1	--	--	--	--	SPACE
SPACE	--	--	--	--	1	39		--	--		40	1	--	--	--	--	SPACE
SPACE	--	--	--	--	1	41			--	--	42	1	--	--	--	--	SPACE
						TOTAL LOAD (kVA):	4.5 kVA	4.8 kVA	4.7 kVA							
						TOTAL CURRENT (A):	16 A	17 A	17 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
LIGHTING	13892 VA	100.00%	13892 VA

PANEL TOTALS	
TOTAL CONNECTED LOAD:	13892 VA
TOTAL ESTIMATED DEMAND:	13892 VA
TOTAL CONNECTED CURRENT:	17 A
TOTAL ESTIMATED DEMAND CURRENT:	17 A
TOTAL EST. DEMAND + RESERVE CAPACITY:	21 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

SPECTRUM DESIGN
architects | engineers

PROJECT NO.: 21148
DATE: 06/20/23

RENOVATIONS AND ADDITION
ROCKBRIDGE INNOVATIONS CENTER
PANEL HL1

SCALE: N/A
SHEET REF. NO.: E605

DRAWN BY: CLH
CHECKED BY: JWW

E1

PANELBOARD AND WIRING SCHEDULE

PANEL: LE7
VOLTAGE: 120/208 Wye,3P,4W
AMPERES: 100 A

MAINS TYPE: 100A MCB
SPD:
MOUNTING: Surface

kAIC VALUE:
AIC RATING: 10kA
LOCATION: BUILDING TRADES 332
SUPPLY FROM: X5

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A		B		C		CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
SPARE	--	--	--	20	1	1	0.0	0.0					2	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	3			0.0	0.0			4	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	5					0.0	0.0	6	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	7	0.0	0.0					8	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	9			0.0	0.0			10	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	11					0.0	0.0	12	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	13	0.0	0.0					14	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	15			0.0	0.0			16	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	17					0.0	0.0	18	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	19	0.0	0.0					20	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	21			0.0	0.0			22	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	23					0.0	0.0	24	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	25	0.0	0.0					26	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	27			0.0	0.0			28	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	29					0.0	0.0	30	1	20	--	--	--	SPARE
						TOTAL LOAD (kVA):	0.0 kVA		0.0 kVA		0.0 kVA								
						TOTAL CURRENT (A):	0 A		0 A		0 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND

PANEL TOTALS

TOTAL CONNECTED LOAD: 0 VA
TOTAL ESTIMATED DEMAND: 0 VA
TOTAL CONNECTED CURRENT: 0 A
TOTAL ESTIMATED DEMAND CURRENT: 0 A
TOTAL EST. DEMAND + RESERVE CAPACITY: 0 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

SPECTRUM DESIGN
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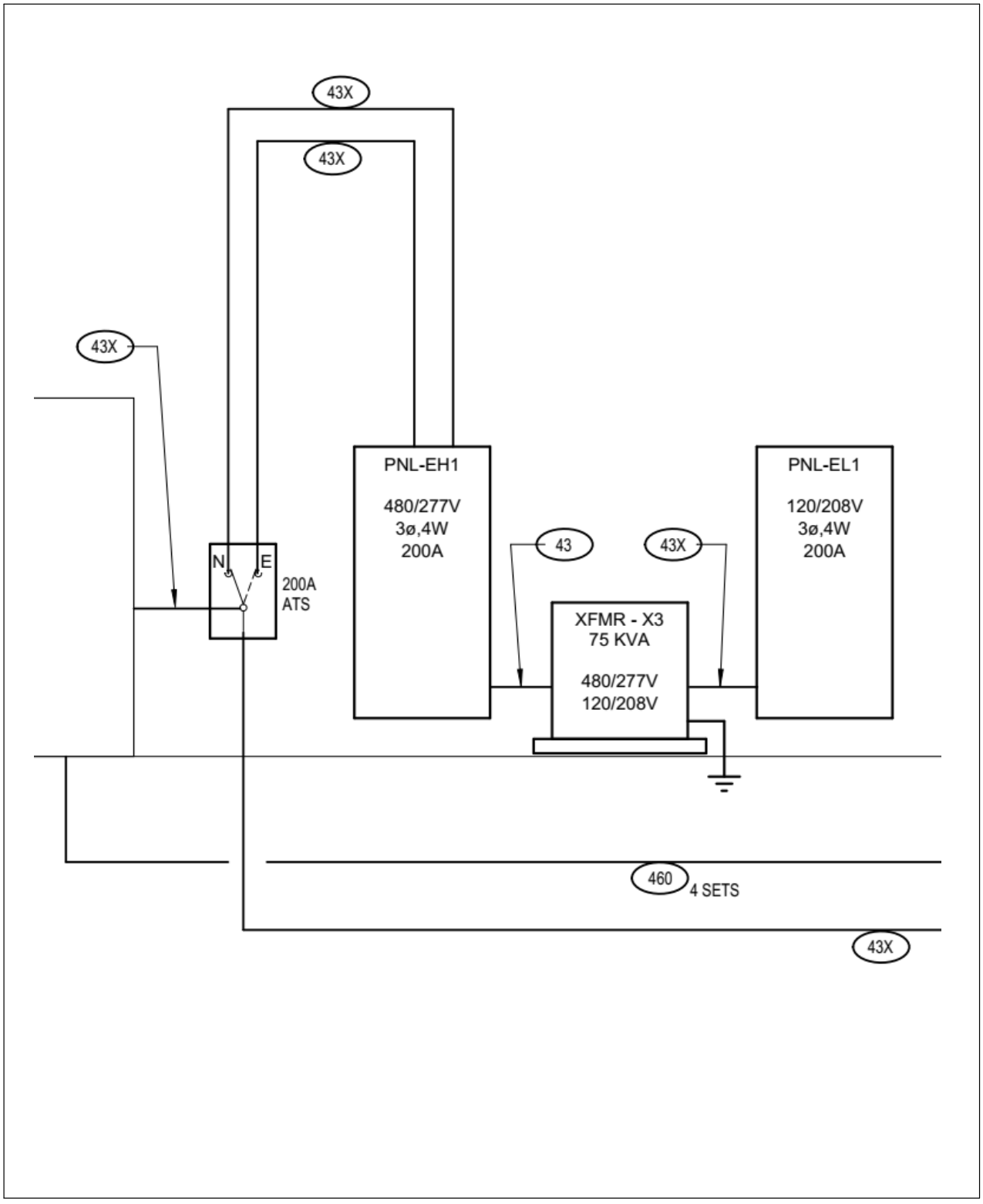
PROJECT NO.: 21148
DATE: 06/20/23

RENOVATIONS AND ADDITION
ROCKBRIDGE INNOVATIONS CENTER
PANEL LE7

SCALE: N/A
SHEET REF. NO.: E605

DRAWN BY: CLH
CHECKED BY: JWW

E2



SPECTRUM DESIGN
architects | engineers

PROJECT NO.: 21148	RENOVATIONS AND ADDITION ROCKBRIDGE INNOVATIONS CENTER		DRAWN BY: CLH
DATE: 06/20/23	ATS FEEDERS		CHECKED BY: JWW
	SCALE: N/A	SHEET REF. NO.: E651	E3

PANELBOARD AND WIRING SCHEDULE

PANEL: EL1
VOLTAGE: 120/208 Wye,3P,4W
AMPERES: 200 A

MAINS TYPE: 200A MCB
SPD:
MOUNTING: Surface

kAIC VALUE:
AIC RATING: 10KA
LOCATION: UTILITY 321
SUPPLY FROM: X3

CIRCUIT DESCRIPTION	WIRE	GND	C	OCP	P	CKT	A			B			C			CKT	P	OCP	C	GND	WIRE	CIRCUIT DESCRIPTION
RECEPTACLE WATER SERVICE 323D	12	12	3/4	20	1	1	0.2		1.0							2	1	20	3/4	12	12	ICE MACHINE KITCHEN 312
RECEPTACLE I.T. CLOSET 310E	12	12	3/4	20	1	3				0.4		0.5				4	1	20	3/4	12	12	WALK-IN EVAPORATOR 312B
WALK-IN EVAPORATOR 312B	12	12	3/4	20	1	5							0.5		1.3	6	1	20	3/4	12	12	EXST FREEZER KITCHEN 312
QUAD RECEPT I.T. CLOSET 310E	12	12	3/4	20	1	7	0.7		3.4							8						
REFRIDG I.T. CLOSET 310E	12	12	3/4	20	1	9				1.2		3.4				10	2	35	3/4	12	12	ODU-2 ROOF TOP
WALK-IN FREZR 3 HP 312B	12	12	3/4	20	2	11							1.8		1.8	12	2	20	3/4	12	12	WALK-IN REFRIG 3HP 312B
						13	1.8		1.8							14						
EUH-RIC-2 WATER SERVICE 323D	12	12	3/4	20	2	15				2.7		0.7				16	1	20	3/4	12	12	QUAD RECEPT I.T. CLOSET 310E
						17							2.7		0.7	18	1	20	3/4	12	12	QUAD RECEPT I.T. CLOSET 310E
EXISTING REFRIDG SERVING 313	12	12	3/4	20	1	19	0.9		1.2							20	1	20	3/4	12	12	BATTERY CHARGER - GENERATOR
EXISTING REFRIDG SERVING 313	12	12	3/4	20	1	21				0.9		1.2				22	1	20	3/4	12	12	JACKET HEATER - GENERATOR
EXST REFRIDGE KITCHEN 312	12	12	3/4	20	1	23							0.9		0.0	24	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	25	0.0		0.0							26	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	27				0.0		0.0				28	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	29							0.0		0.0	30	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	31	0.0		0.0							32	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	33				0.0		0.0				34	1	20	--	--	--	SPARE
SPARE	--	--	--	20	1	35							0.0		0.0	36	1	20	--	--	--	SPARE
SPACE	--	--	--	--	1	37	--		--							38	1	--	--	--	--	SPACE
SPACE	--	--	--	--	1	39				--		--				40	1	--	--	--	--	SPACE
SPACE	--	--	--	--	1	41							--		--	42	1	--	--	--	--	SPACE
				TOTAL LOAD (kVA):			11.0 kVA			11.0 kVA			9.8 kVA								
				TOTAL CURRENT (A):			93 A			93 A			81 A								

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
HVAC	14649 VA	70.00%	10254 VA
RECEPTACLE	7944 VA	100.00%	7944 VA
EQUIPMENT	9200 VA	70.00%	6440 VA

PANEL TOTALS	
TOTAL CONNECTED LOAD:	31793 VA
TOTAL ESTIMATED DEMAND:	24638 VA
TOTAL CONNECTED CURRENT:	88 A
TOTAL ESTIMATED DEMAND CURRENT:	68 A
TOTAL EST. DEMAND + RESERVE CAPACITY:	85 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

SPECTRUM DESIGN
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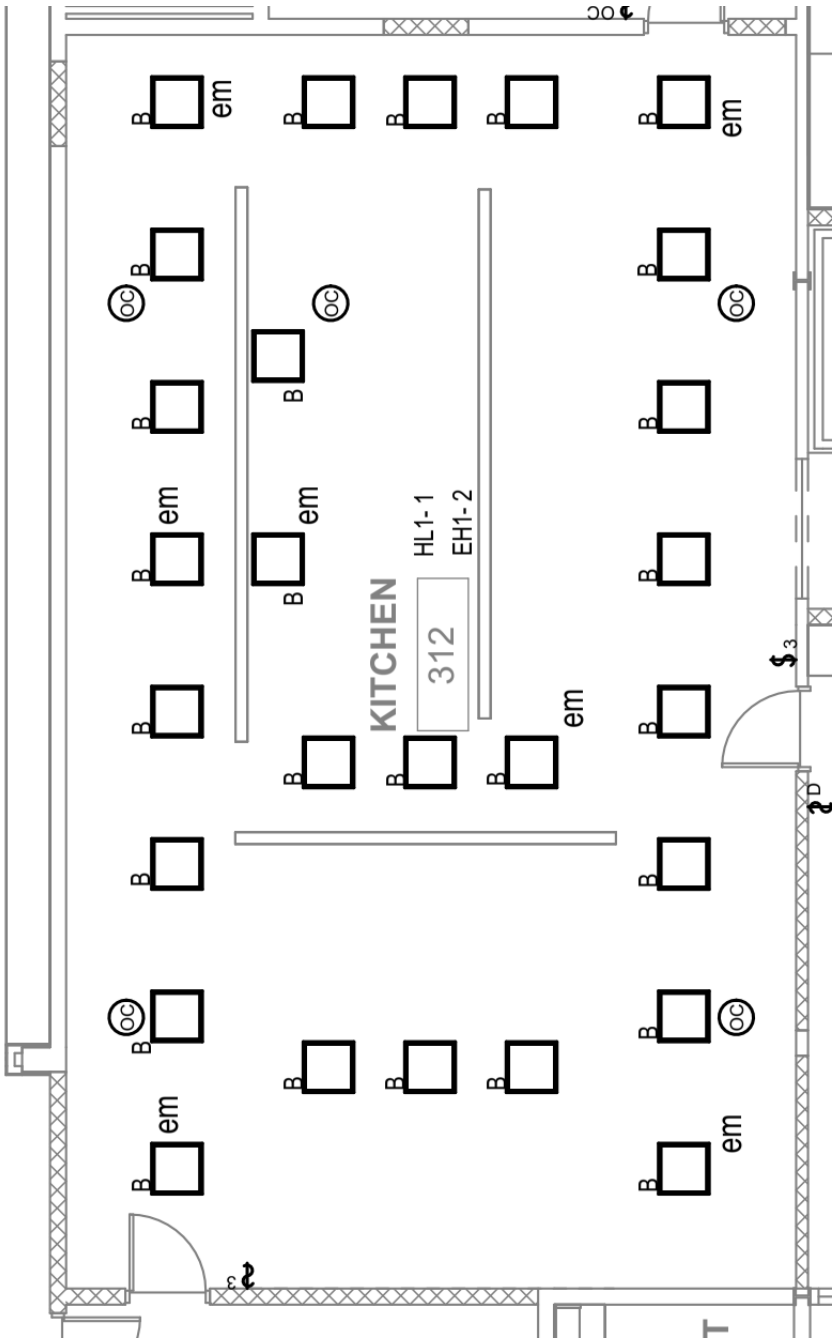
PROJECT NO.: 21148
DATE: 06/20/23

RENOVATIONS AND ADDITION
ROCKBRIDGE INNOVATIONS CENTER
PANEL EL1

SCALE: N/A
SHEET REF. NO.: E604

DRAWN BY: CLH
CHECKED BY: JWW

E4



SPECTRUM DESIGN
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PROJECT NO.: 21148	RENOVATIONS AND ADDITION ROCKBRIDGE INNOVATIONS CENTER		DRAWN BY: CLH
DATE: 06/20/23	KITCHEN LIGHTING LAYOUT		CHECKED BY: JWW
	SCALE: N/A	SHEET REF. NO.: E103L	

E5