



Riverside MS FEI

100% Bid Documents

East Providence, RI

Ai3 Project # - 1903.03

Addendum #3

October 5, 2023

The attention of Bidders submitting proposals for the Riverside MS FEI 100% Bid Documents is called to the following changes to the Bidding Contract Documents dated September 18, 2023 as prepared by Ai3 Architects, LLC. The items set forth therein below, whether of revision, omission, addition, substitution or clarification are all to be included as changes to Information to Bidders, the Conditions of the Contract, Specifications and Drawings of the Contract.

The number of this Addendum (Number 3) must be entered in the appropriate spaces provided on the Bid Form.

CLARIFICATIONS:

- ADD 3-001 Bidders shall carry an allowance of \$32,000 for additional structural steel to support the additional weight of the concrete pavers located on the roof. Refer to Addendum #2 dated October 2, 2023, for approximate extents of added concrete pavers. Truss reinforcement included in Addendum #1 is no longer required, and therefore will be removed from bidding documents.
- ADD 3-002 Question: Is a bid bond required for the project? If so, what is the percentage and to whom is it payable?
Answer: Yes, a bid bond of 10% of the bid amount is required as part of the bid package. The bid bond should be payable to the East Providence School District.
- ADD 3-003 Correction from Addendum #2; Glass type 4 should be used for the Aluminum Storefronts in section 1/A10.33, including window numbers W242-01, W242-02, and W242-03.

Riverside MS FEI

100% BID DOCUMENTS

EAST PROVIDENCE, RI

ADD #3 – PAGE 1

SPECIFICATIONS:

- ADD 3-004 Document 00 01 10 "TABLE OF CONTENTS"; REMOVE in entirety and REPLACE with new Document 00 01 10, Dated October 5, 2023, Addendum #3.
- ADD 3-005 Section 12 24 00 "WINDOW SHADES"; REMOVE in entirety and REPLACE with new Section 12 24 00, Dated October 5, 2023, Addendum #3
- ADD 3-006 Section 27 10 00 "STRUCTURE CABLING"; ADD Section 27 10 00, dated October 5, 2023, Addendum #3. (*Section erroneously not originally bound in Project Manual*).

ATTACHMENTS:

Architectural:

- ADD 3-007 Architectural Drawings: REMOVE drawings A1.10, A6.00A, A9.21, A10.31, and A10.32 in their entirety and replace with drawings A1.10, A6.00A, A9.21, A10.31, and A10.32 bound here within Addendum #3.

END OF ADDENDUM #3

Riverside MS FEI
100% BID DOCUMENTS
EAST PROVIDENCE, RI
ADD #3 – PAGE 2

TABLE OF CONTENTS

DIVISION 00 — PROCUREMENT AND CONTRACTING REQUIREMENTS

ADD #3

Document 00 01 01 Project Cover
 Document 00 01 02 Project Directory
 Document 00 01 10 Table of Contents
 Document 00 11 19 Request for Proposal
 Document 00 43 13 Bid Bond (*AIA Document A310 – 2010*)
 Document 00 45 13 Disadvantaged Business Enterprise Affidavit
 Document 00 45 15 Bidder’s Qualifications (*AIA Form A305*)
 Document 00 52 00 Agreement Form (*AIA Form A101*), *Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum.*
(Document not bound herewith)
 Document 00 61 13 Performance and Payment Bond (*AIA Document A312 – 2010*)
 Document 00 62 12 Product Submittal) Form
 Document 00 63 13 Request for Interpretation (RFI) Form
 Document 00 63 25 Product Substitution Form
 Document 00 72 00 General Conditions of the Contract for Construction (*AIA Document A201*) *with Owner’s amendments.*
(Document not bound herewith)
 Document 00 73 46 Prevailing Wage Determination Schedule

DIVISION 01 — GENERAL REQUIREMENTS

ADD #2

Section 01 10 00 Summary
 Section 01 14 00 Work Restrictions
 Section 01 25 13 Product Substitution Procedures
 Section 01 26 13 Request for Interpretation
 Section 01 29 00 Payment Procedures
 Section 01 31 00 Project Management and Coordination
 Section 01 32 00 Construction Progress Documentation
 Section 01 33 00 Submittal Procedures
 Section 01 35 16 Alteration Project Procedures
 Section 01 41 00 Regulatory Requirements
 Section 01 41 17 Utilities Notification
 Section 01 42 00 References
 Section 01 45 00 Quality Control
 Section 01 50 00 Temporary Facilities and Controls
 Section 01 60 00 Product Requirements
 Section 01 73 00 Execution
 Section 01 73 29 Cutting and Patching
 Section 01 74 19 Construction Waste Management and Disposal
 Section 01 75 00 Starting and Adjusting
 Section 01 77 00 Closeout Procedures
 Section 01 78 00 Closeout Submittals
 Section 01 78 36 Warranties
 Section 01 79 00 Demonstration and Training
 Section 01 81 13 Sustainable Design Requirements
 Section 01 81 19 Indoor Air Quality Requirements

DIVISION 02 — DEMOLITION

Section 02 41 19 Selective Demolition

DIVISION 05 — METALS

Section 05 51 00 Metal Stairs and Railings

DIVISION 06 — WOOD, PLASTICS AND COMPOSITES

Section 06 10 00 Rough Carpentry
 Section 06 20 00 Finish Carpentry
 Section 06 40 00 Architectural Woodwork
 Section 06 61 16 Solid Surfacing Fabrications

DIVISION 07 — THERMAL AND MOISTURE PROTECTION

ADD #2 Section 07 59 00 Cutting and Patching Membrane Roofing
ADD #2 Section 07 72 00 Roofing Accessories
 Section 07 84 00 Firestopping
 Section 07 92 00 Joint Sealants

DIVISION 08 — OPENINGS

Section 08 05 13 Common Work Results - Door and Hardware Installation
 Section 08 11 13 Hollow Metal Doors and Frames
 Section 08 14 16 Flush Wood Doors
 Section 08 31 00 Access Doors and Panels
 Section 08 43 13 Aluminum-Framed Storefronts
 Section 08 71 00 Door Hardware
 Section 08 80 00 Glazing
 Section 08 87 00 Glazing Surface Films

DIVISION 09 — FINISHES

Section 09 05 06 Common Work Results for Flooring
 Section 09 22 16 Non-Structural Metal Framing
 Section 09 29 00 Gypsum Board
 Section 09 51 00 Acoustical Ceilings
ADD #2 Section 09 65 13 Resilient Base and Accessories
 Section 09 65 19 Resilient Tile Flooring
 Section 09 81 00 Acoustical Insulation
 Section 09 84 00 Acoustic Room Components
 Section 09 91 00 Painting

DIVISION 10 — SPECIALTIES

Section 10 11 16 Markerboards
 Section 10 14 00 Signage
 Section 10 22 39 Folding Panel Partitions

DIVISION 11 — EQUIPMENT

Section 11 52 13 Projection Screens

DIVISION 12 — FURNISHINGS

ADD #3 Section 12 24 00 Window Shades
 Section 12 30 00 Casework
ADD #2 Section 12 36 53 Laboratory Countertops

DIVISION 21 — FIRE SUPPRESSION

Section 21 00 00 Fire Protection

DIVISION 22 — PLUMBING

Section 22 00 00 Plumbing

DIVISION 23 — HEATING, VENTILATING AND AIR CONDITIONING

Section 23 00 00 Heating, Ventilating and Air Conditioning

DIVISION 26 — ELECTRICAL

Section 26 00 00 Electrical

DIVISION 27 — COMMUNICATIONS

Section 27 10 00 Structured Cabling

| ADD #3

APPENDICES

Appendix A Keynote List

Appendix B NE-CHPS Project Scorecard

End - Table of Contents

**DO NOT REMOVE
THIS PAGE INTENTIONALLY LEFT BLANK**

Section 12 24 00
WINDOW SHADES**PART 1 - GENERAL**

1.1 SUMMARY

- A. Furnish and install the following:
1. Chain driven manually operated or motorized roller-screen system with vinyl-coated glass fiber fabric for interior shading, ~~and AV blackout~~ including all supplementary items required for shade installation. [ADD #3]
 - a. Provide manually operated roller-screens at exterior windows and interior windows, where indicated on Drawings.
 - b. ~~Provide manually operated blackout roller screens where indicated.~~
 - c. Provide motorized roller-screens ~~with low voltage option output for control from local sound rack~~ where indicated.
 - d. ~~Provide shades at all exterior windows, except as otherwise specified herein below, refer to plans, interior and exterior elevations for sizes. Field verify all openings.~~
 - e. ~~Do not provide shades at the following locations:~~
 - 1) ~~All corridors, stairs, gymnasium and vestibules.~~

1.2 RELATED REQUIREMENTS

- A. Section 01 60 00 - PRODUCT REQUIREMENTS: Listing of VOC requirements for adhesives, cleaning/maintenance materials, paints, coatings, and sealants.
- B. Section 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL: Procedural and administrative requirements for construction and demolition recycling.
- C. Section 01 81 13 - SUSTAINABLE DESIGN REQUIREMENTS: Procedural and administrative requirements relating to required *Northeast CHPS Verified Program*, (NE-CHPS) Certification.
- D. Section 06 10 00 - ROUGH CARPENTRY: Blocking for window shade systems.

1.3 REFERENCES

- A. Referenced Standards: Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Section 01 42 00 - REFERENCES. The standards referenced herein are included to establish recognized minimum quality only. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern. Equivalent quality and testing standards will be acceptable, subject to their timely submission, review and acceptance by the Architect.
1. NFPA 701 - Standard Methods of Fire Tests for Flame-resistance Textiles and Films.
 2. UL 214 - Standard for Tests for Flame Propagation of Fabrics and Films.

B. Sustainability Requirement Reference: The following sustainability requirements are hereby made a part of this Section by reference thereto:

1. High Performance Schools Exchange, Northeast Energy Efficiency Partnerships NE-CHPS, (referred to herein as "NE-CHPS").

1.4 PERFORMANCE REQUIREMENTS

A. Fire performance characteristics; shade material tested in accordance with NFPA 701- Vertical Burn Test, rated "FR".

1.5 SUBMITTALS

A. Information and Review Submittals: Submit the following under provisions of Section 01 33 00 - SUBMITTAL PROCEDURES:

1. Product Literature: Manufacturer's product data sheets, specifications, performance data, physical properties and installation instructions for each item furnished hereunder.
 - a. Provide additional information required for fabric, including: Size limitations, fire resistance information. Identify available shade cloth colors and materials.
2. Maintenance Information: Fabric maintenance data and recommended cleaning materials, and cleaning and stain removal methods.
3. Warranty: Provide sample copies of manufacturers' actual warranties for all materials to be furnished under this Section, clearly defining all terms, conditions, and time periods for the coverage thereof.
4. Certifications:
 - a. Manufacturer shall submit notarized certificate indicating compliance with requirements of specifications and that specified warranty will be provided without restriction.
 - b. Certification of compliance with current building code and environmental regulations: Manufacturer shall certify that materials proposed for use comply with applicable building code and environmental regulations.
5. Shop drawings:
 - a. Dimensioned 1/4 inch scale drawings, bearing dimensions of actual measurements taken at the project, where practical.
 - b. Include complete fabrication details and erection drawings.
6. Selection Samples:
 - a. 3 by 5 inch size shade cloth and liner sample swatches indicating Manufacturer's full range of colors and patterns available for initial selection.
 - b. Provide additional shade cloth and liner samples, of size requested by Architect, to aid in the Architect's selection.
7. Verification Samples:
 - a. 12 by 12 inch samples of blind fabric illustrating material and color.
 - b. 12 inch lengths of roller assembly.
8. Sustainable Design Submittals: As required by NE CHPS.

1.6 QUALITY ASSURANCE

- A. Obtain shade operators and fabric products from a single manufacturer, or from manufacturers recommended by the prime manufacturer of operator.
- B. Notify the Architect where conflicts apply between referenced standards and existing materials, and existing methods of construction.
- C. Provide 6 separate full size classroom mock-ups of different fabric color and density for review and approval by architect prior to installation. Coordinate locations of mockup with architect prior to installation.

1.7 QUALIFICATIONS

- A. Installer, with a minimum of 3 years documented experience demonstrating previously successful work of the type specified herein.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Do not deliver items to the site, until all specified submittals have been submitted to, and approved by, the Architect.
- B. Do not deliver shades to the project until all concrete, masonry, plaster and other wet work has been completed and is dry.
- C. Deliver prefabricated shades to site in labeled protective packages, uniquely identified for each intended location. Schedule delivery of panels to prevent delays of the Work, and minimize on-site storage.
- D. Store materials in manner recommended by shade manufacturer, inside, under cover, and in manner to keep them dry, protected from weather, direct sunlight, surface contamination, corrosion and damage from construction traffic and other causes.
- E. Maintain ambient temperature between 60 and 85 degrees Fahrenheit, and a relative humidity between 20 and 50 percent for a period starting 24 hours before installation of window shades, and maintain until Owner's Final Acceptance.

1.9 FIELD MEASUREMENTS

- A. Take field measurements before preparation of shop drawings and fabrication, where possible, to ensure proper fitting of Work.
- B. Allow for adjustments within specified tolerances wherever taking of field measurements before fabrication might delay Work.

1.10 SEQUENCING AND SCHEDULING

- A. Coordinate the work of this Section with the respective trades responsible for installing interfacing work, and ensure that the work performed hereunder is acceptable to such trades for the installation of their work.
- B. Sequence deliveries to avoid delays, but minimize on-site storage.

1.11 WARRANTY

- A. Furnish the following warranties under provisions of Section 01 78 00 - CLOSEOUT SUBMITTALS.
- B. Manual operating components: Manufacturer's 10 year warranty from Date of Substantial Completion of shade installation. Warranty shall include provisions that installation shall remain operational without fault and include all operating parts, except for the bead chain which is not warranted.
- C. Shade cloth: Manufacturer's 10 year warranty from Date of Substantial Completion of shade installation. Warranty shall include provision that shade cloth will not fade, deteriorate, sag or warp for the warranty period.

1.12 EXTRA MATERIALS

- A. Provide to Owner, 1 percent extra shade fabric for each size, color and type installed.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Specified Manufacturer: To establish a standard of quality, design and function desired, Drawings and specifications have been based on products from Draper Shade and Screen Co., Spiceland IN as follows:
 - 1. Typical shades: Draper, product: "FlexShade" shades, motorized and manual types as indicated, manually operated. [ADD #3]
 - 2. Dual roller shades: ~~Draper, product: "Dual Roller FlexShade" shades, manually operated.~~ [ADD #3]
 - a. ~~Blackout shades: Science prep, Science classrooms: Draper, product: "Lightbloc" shades, manually operated.~~
 - b. ~~Blackout shades: Media Center, where indicated: Draper, product: "Lightbloc" shades, electrically operated with Draper "Intelliflex" control system.~~
- B. Acceptable Manufacturers: Subject to compliance with the requirements specified herein, manufacturers offering products which may be incorporated in the work include the following, or approved equal:
 - 1. Draper Shade and Screen Co., Spiceland, IN.
 - 2. Levolar Corporation, Sunnyvale, CA.
 - 3. MechoShade, Long Island City, NY.

2.2 SHADE COMPONENTS

- A. Rollers: Removable, 1-1/2 inch or larger diameter, extruded aluminum alloy 6063-T5 or alloy 6063-T6 tube with a minimum wall thickness of 0.065 inch.
 - 1. Shade mounting spline: Extruded vinyl spline, enabling shade cloth to be removed without having to remove the tube from retainer brackets or without removing brackets from wall

-
2. Tube Support: Delrin cover plate shall provide protection from tube dislocation. In the event the tube is pushed out of place, the delrin end of the mounting plates shall contain the tube preventing the tube from falling out of the bracket.
 - B. Mounting Brackets: Zinc chromate finished 16 gage steel in manufacturer's standard configuration for head or wall mounting.
 - C. Roller idler assembly: Type 6/6 injected molded nylon or high-strength glass-fiber - reinforced polyester outside sleeve, with zinc plated steel pin.
 - D. Typical shade fabric: 63 percent PVC coated fiberglass and 37 percent fiberglass yarn, woven into a 2 inch by 2 inch non-directional basket weave with Microban Protection. Draper Series: SW 2400 or approved equal meeting the following minimal requirements:
 1. Openness Factor: 3 percent in accordance with ASHRAE 74.
 2. Minimum weight: 14.26 ounces per square yard.
 3. Minimum thickness: 0.019 inch.
 4. Flame retardant treated certified in conformance with NFPA 701 and UL 214.
 5. Color: As selected by Architect from full manufacturer's available range.
 6. Seamless up to 72 inch width.
 7. Hem pocket: Provide hem pocket, heat sealed or sewn with bottom weight enclosed.
 8. Locations: All South, East, and West oriented openings scheduled or indicated to receive work of this Section.
 - E. ~~Blackout shade fabric: Glass fiber yarn coated with vinyl, close woven. Draper Series: SB9100 or approved equal meeting the following minimal requirements: [ADD #3]~~
 - ~~1. Minimum weight: 12 ounces per square yard.~~
 - ~~2. Minimum thickness: 0.013 inch.~~
 - ~~3. Flame retardant treated certified in conformance with NFPA 701 and UL 214.~~
 - ~~4. Maximum open in weave: 0 percent.~~
 - ~~5. Color: As selected by Architect from full manufacturer's available range.~~
 - ~~6. Seamless up to 72 inch width.~~
 - ~~7. Hem pocket: Provide hem pocket, heat sealed or sewn with bottom weight enclosed.~~

2.3 MANUAL OPERATION

- A. General: Bi-directional clutch and beaded chain mechanism with adjustable brake to permit dynamic mode with predetermined stop positions or, static mode with infinite stop positions.
 1. Sprocket: One piece injection molded high density Delrin, capable of full engagement with ball chain.
 2. Control loop chain shall endless nickel-plated brass bead chain; plastic bead chain is not acceptable.

3. Brake mount: Shake-proof steel and nylon vibration-resistant locking nut to maintain selected braking friction
4. Self-Adjusting linear disc brake (flat steel backing plate is not acceptable as a substitution) with concealed tension adjustment device.
 - a. System shall consist of a compression spring with two friction-absorbing nylon washers on a 1/4" steel shaft which provides continuous uniform compensating brake pressure on the one-piece sprocket brake drive component with a braking surface of not less than 2.89 square inches.
 - b. Provide a compression spring which also acts as a vibration absorber.
5. Flexible offset drive, where required, with universal joint permitting up to 12 degree angle between any two shades with a single operator.

2.4 ELECTRIC OPERATION

- A. Motor: 110 VAC, single phase, 60 HZ, instantly reversible, lifetime lubricated, and equipped with internal thermal overload protector, electric brake, and pre-set accessible limit switches. Tubular motor concealed inside each shade roller tube.
 1. Controls: Equal to Draper "Intelliflex Wall Switches" low voltage switch to provide control via bus cable or dry contacts.

2.5 MOUNTING SYSTEM

- A. Mounting: Wall, jamb, or overhead mounted as indicated, brackets made of 1/8 inch sheet steel to which drive assembly, idle end assembly and center support systems are attached.
 1. Furnish center support brackets to meet span or weight requirements.
 2. Components of brackets shall be interchangeable or replaced without removing bracket from wall or ceiling, inside or outside mount.
 3. Metal support brackets cadmium plated steel. Custom color as selected by the Architect.

2.6 ACCESSORIES

- A. Fascia: One-piece extruded aluminum 6063-T5 alloy with average thickness of 0.062 inches, snap-loc clipped to the brackets without the use of glue, magnetic strip or screws, concealed fastening.
- B. ~~Black-out side and sill channels; extruded aluminum with polybond edge seals, and snap-loc mounting brackets; [ADD #3]~~
 1. ~~Manual shade jamb channels, 1 15/16 inches wide by 1 3/16 inches deep; double jamb channels 2 5/8 inches wide by 1 3/16 inches deep.~~
 2. ~~Electric shade jamb channels, 2 1/2 inches wide by 1 3/16 inches deep; double jamb channels 5 inches wide by 1 3/16 inches deep.~~
- C. Recessed housing, for acoustical plaster ceilings with removable closure plate for access.
- D. Guide cables provide where recommended by manufacturer.

2.7 FABRICATION

- A. Fabrication: Fabricate units to completely fill existing openings, from head-to-sill and jamb-to-jamb. Do not commence fabrication of shade units until field measurements are confirmed.
- B. Fabric shall hang straight and flat without buckling or distortion. Fabric edges shall be straight and without ravel.

2.8 FACTORY FINISHES

- A. Aluminum: PPG Duracron baked enamel in standard colors.
- B. Steel parts, cadmium plated, satin finished, or bonderized prior to painting with baked enamel finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspect all surfaces and verify that they are in proper condition to receive the work of this Section. Ensure that supporting substrate is adequate.
- B. Beginning of installation means acceptance of existing project conditions.

3.2 INSTALLATION

- A. Install units to comply with manufacturer's instructions for type of mountings and operations required. Provide units plumb and true, securely anchored in place with recommended hardware and accessories to provide smooth, easy operation.

3.3 TOLERANCES

- A. Maximum variation of gap at window opening perimeter: 1/4 inch.
- B. Maximum offset from level: 1/8 inch.

3.4 ADJUSTING

- A. Adjust units for smooth operation. Replace any units or components which do not operate smoothly and without hindrance.

End of Section

**DO NOT REMOVE
THIS PAGE INTENTIONALLY LEFT BLANK**

Section 27 10 00

STRUCTURED CABLING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The General Provisions of a Contract, including conditions of the Contract and Division 1 of the Specifications, shall apply to the Work in this Section.
- B. Drawings and general provisions of the Contract, including all portions of the Project Manual are hereby made a part of this Section. Refer to paragraph titled "Quality Assurance" in this section and to Division 1 for requirements for Communications Subcontractors. Throughout this and related Sections, "Subcontractor" shall not be limited to the singular and masculine and shall refer to one, or more than one, Communications Subcontractor. The Terms "Communications Subcontractor" and "Communications System Integrator" and "Integrator" shall be used interchangeably and shall be understood to represent the communications subcontractor responsible for the furnishing, configuring, testing, programming, warranting and ensuring all work is performed in accordance with manufacturer's requirements and recommendations for the work identified in this SECTION.
- C. Any qualifications or certificates required in this specification may be requested by the Architect as part of the post-bid qualifications review. Such review shall commence subsequent to the bid submission, as none of this information is required as part of the bid submission. In the event that the Architect requests qualification or certification documentation such documentation shall be provided within 3 business days.

1.2 SUMMARY

- A. Work Included. The scope of work of this Section consists of the installation of all materials to be furnished under this SECTION, and without limiting the generality thereof, consists of providing all labor, materials, equipment, plant, transportation, appurtenances and services necessary and/or incidental to properly complete all cabling work as shown on the drawings, as described in the specifications, or as reasonable inferred from either or, in the opinion of the Owner, as being required and in general, is as follows:
 - 1. Horizontal Category 6A, and shielded Category 6 wiring, connecting devices, terminations, faceplates, patch panels, and all related equipment, to complete installation, and testing of the systems to be used as signal pathways for voice, high-speed data and wireless access point cabling.
 - 2. Copper patch cords for every cabled port in the IDF/MDF closets.
 - 3. Provide and install the following faceplates and jacks: V1, WAP4, WAP2, D2, and D4. Furnish and install blank port inserts for blank ports in all faceplates and patch panels.
 - 4. Nameplates, labels and tags for cables and faceplates. Coordinate with Owner.
 - 5. Testing and Certification.

6. Label all Tel/Data conduit ends that terminate in different rooms (do not label stub ups from faceplates).
7. All above ceiling WAP4 and D4 outlets shall be denoted on the ceiling tile grid below the outlet with a ½ in. yellow dot sticker. Any data back boxes above ceiling tiles shall be denoted below on ceiling tile grids with a ½ in. yellow dot sticker.
8. All faceplates shall be white Mini-Com by Panduit unless specified or noted on the drawings otherwise.
9. All above ceiling mounted back boxes shall have the jacks face to the side or down. No above ceiling mounted back boxes shall have the data jacks facing toward the deck above.
10. Owner shall furnish all wireless access points.
11. Furnish and install all voicelift systems. Electrical subcontractor shall connect hardwired power to each unit. These are denoted on the drawings with a TCVL symbol.
12. Furnish and provide in each designated room a media connector unit paired to the voicelift system in that room. Provide and pair a unit in each room with a TCVL symbol.
13. Furnish and install conduits as shown on the drawings unless coordinated with electrical subcontractor to furnish and install the conduits shown on the drawings.
14. Furnish and install HDBASE-T transmitter and receiver (transmitter at V1 location, receiver on projector at projector location in media center. Twisted pair for this connection shall be shielded Cat6 twisted pair, plenum rated.
15. Furnish and install projector lift in media center
16. Furnish and install 4k projector and lens in media center on projector lift
17. Electrical contractor shall furnish and install pole at circulation desk. Install D2 in this pole above counter. Coordinate jacks required (jacks must be Cat6A) with electrical subcontractor. Mini-Com faceplate and jacks preferred.
18. Remove and discard all data voice and wap cabling and surface mounted raceway, conduit and back boxes in the 6 science rooms and media center (both floors). After all cabling is removed, remove and replace patch panels in media center IDF with specified (below) patch panels. All remaining cabling shall be removed from patch panels and re-terminated on new patch panels. No PA system or other cabling shall be removed. All data voice and wap cabling from outside the 6 science rooms and media center shall not be disturbed except as noted above (re-termination on new patch panels).
19. When removing media center floor box data cabling, install pull string from floor box to media center IDF. Label pull strings in IDF.
20. Furnish a portable sound system and HDMI de-embedder with audio cable

B. The work of this Section is shown on Technology Drawings numbers designated by a T.

C. All cabling shall be plenum rated.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. All Sections of Division 27 and Division 28

B. SECTION 05 31 00 – STEEL DECKING See for restrictions concerning the hanging of material, cable tray, mounts, brackets, hooks, and other items from the

roof or decking

- C. SECTION 01 23 00 - ALTERNATES
- D. The following related work or material shall be provided under the designated trades and under the listed SECTION:
1. Specialty Equipment: DIVISION 11, "EQUIPMENT"
 2. Field Painting: DIVISION 9, "FINISHES"
 3. SECTION 23 00 00- HVAC
 4. SECTION 26 00 00 - ELECTRICAL
 5. SECTION 22 00 00 - PLUMBING
 6. SECTION 27 08 00 – COMMISSIONING OF COMMUNICATIONS
- E. Unless otherwise indicated, the following work is not included as part of the 27 10 00 Communication Systems Integrator's responsibilities in this SECTION, except for coordination, and is to be performed by others as indicated:
1. Empty conduits for faceplates and cable pathways to accessible point above finished ceiling or below floor shall be provided by the electrical subcontractor to ensure distance limitations of cables as determined by standards. Coordinate with RCDD of this section and notify architect of any discrepancies.
 2. Device boxes with reducer trim rings for V1, data, voice and waps shall be provided and installed by the electrical subcontractor.
 3. Structural blocking to support projector lift shall be provided by the General Contractor.
 4. Computers and monitors and final connections to wall outlets shall be provided by the Owner.
 5. Interface with public utilities telephone service shall be arranged and provided by the Owner.
 6. Wide Area Network connections shall be arranged and provided by the Owner.
 7. CATV service and connections to installed systems shall be arranged and provided by the Owner.
- F. The installation, operating cost and maintenance of the controlled environmental conditions, for equipment located on site by the manufacturer, NFPA 70B, or as specified in these specifications shall be the responsibility of the General Contractor.

1.4 PROPRIETARY EQUIPMENT

Proprietary Equipment: Specified Manufacturer: To establish a standard of quality, design and function desired, Drawings and specifications have been based on the following equipment listed below:

Manufacturer:	Item:	Part Number:
PANDUIT	PATCH PANELS	CPPL48WBLY & CPPL24WBLY
PANDUIT	FACEPLATES	CFPE SERIES, 2 & 4 PORT
PANDUIT	RJ45 JACKS	CJ6X88TG SERIES
LIGHTSPEED	VOICELIFT	TCN & MCN

Acceptable Substitutions: The product(s) specified above have been determined to be in the public interest based on sound reasoning and voted as proprietary by the Owner. There is no guarantee that a proposed substitutions will be approved, and the Communications Subcontractor shall not order any materials until approval(s) are received in writing.

1. Requesting substitutions shall be at the Communications Subcontractor's own risk, with regard to uncompensated delays of the Project. Time will be required for sufficient review and additional requests for information by the Architect and Owner. Delays which result from substitution reviews and resubmissions are not grounds for additional time or cost change orders, and will not be considered by the Awarding Authority.

1.5 SYSTEM DESCRIPTION

- A. General: This system shall provide a cabling infrastructure system for voice and high speed data. Furnish and install complete systems consisting of horizontal cabling, patch cords and patch panels. Remove old data, voice and wap cabling. Furnish, install and terminate cabling. The horizontal four pair Category 6A copper cabling system shall be guaranteed to exceed all TIA-568-C.2 link and channel performance requirements and be capable of supporting 10G Base-T (802.3an) and ISO/IEC 11801 applications for a total distance of 100 meters with equipment cords. The system shall be guaranteed to meet all Cat6A requirements
- B. This specification describes the desired form, function and performance of the horizontal cabling system. It is the responsibility of the installer of this section to provide a fully functional system in accordance with the intent and stated performance of this specification or better. Provide all communications wire, cable, devices and related facilities installed complete as shown or as implied on the Contract Documents for fully functional systems, including, but not limited to:
 1. Data, Voice, WAP and video horizontal cabling, including but not limited to:
 - a. Category 6A Data cabling (YELLOW)
 - b. Category 6A WAP cabling (YELLOW, ORANGE, VIOLET)

-
- c. Category 6A Voice cabling (YELLOW)
 - d. Category 6 shielded twisted pair at V1 to projector location (GREY).
 - e. Category 6A RJ-45 Mini-Com Jacks (colors specified below)
 - f. Category 6A front loading Patch Panels
 - g. Category 6A Patch Cables as specified below.
 - h. Cabling Distribution Support (J hooks where no cable tray provided)
 - i. Ensure all cabling is protected from paint and paint overspray. Any cabling found with paint on the jacket shall be removed and replaced at no expense to the owner.
 - j. All cabling shall be terminated in the IDFs or MDF (depending on where current cabling is terminated). Any deviations shall be brought to the attention of the architect.

C. Work Not Included: The following work is not included in this section:

1. All computer workstations / printers and associated software (Provided by Owner)
2. Telephone system and instruments (existing)
3. Public Address / Intercom System (existing)
4. Master clock system and secondary clocks (existing)
5. Network electronic switches (existing)
6. Wireless access point devices and controllers (existing).

D. Coordination: Coordinate device locations with furnishings and equipment.

1.6 REFERENCE SPECIFICATIONS, STANDARDS AND CODES

A. Comply with the referenced codes and standards and with the Contract Documents. Where conflicts occur, the more stringent shall apply.

B. Work shall meet or exceed the standards and procedures of the following:

1. ANSI/TIA 568-C.1 Commercial Building Telecommunications Cabling Standard, Part 1: General Requirements.
2. ANSI/TIA 568-C.2, Commercial Building Telecommunications Cabling Standard, Part 2: Balanced Twisted-Pair Cabling Components
3. ANSI/TIA/ 568.3-D Commercial Building Telecommunications Cabling Standard, Part 3: Optical Fiber Cabling Components Standard
4. ANSI/TIA/ 569-D Commercial Building Standards For Telecommunications Pathways And Spaces

-
5. TIA-568.0-D Generic Telecommunications Cabling for Customer Premises
 6. TIA-568.1-D Commercial Building Telecommunications Cabling Standard
 7. TIA-568-C.2 Balanced Twisted Pair Cabling Components
 8. TIA-568.3-D Optical Fiber Cabling Components Standard
 9. ANSI/TIA 606-B Administration Standard for Commercial Telecommunications Infrastructure
 10. ANSITIA TIA-607-C Generic Telecommunications Bonding And Grounding (Earthing) for Customer Premises
 11. ANSI/TIA -862-B Intelligent Building Systems Cabling Standard
 12. ANSI/TIA-942-A Telecommunications Infrastructure Standard for Data Centers
 13. ASTM D 4566-05, Standard Test Methods for Electrical Performance Properties of Insulations and Jackets for Telecommunications Wire and Cable, 2005
 14. BICSI Telecommunications Distribution Methods Manual (TDMM) Current Edition
 15. BICSI Information Transport Installation Manual (ITSM) Current Edition
 16. ISO/IEC 11801 – Information Technology – Generic Cabling for Customer Premise
 17. IEEE 802.3 Standard for Information technology -Telecommunications and information exchange between systems - Local and metropolitan area networks – Specific requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications
 18. IEC 61156-1, Multicore and Symmetrical Pair/Quad Cables for Digital Communications – Part 1: Generic Specification, 2005
 19. NFPA-70 National Electrical Code current edition
 20. NECA/BICSI-568-A Standard for Installing Commercial Building Telecommunications Cabling
 21. Federal Communications Commission Part 15 and Part 68
 22. UL 444 – Standard for Safety of Communications Cable
 23. UL 1666 – Standard for Safety of Flame Propagation Height (CMR)

24. NFPA 262 – Flame Travel and Smoke of Wires and Cables (CMP)

25. BICSI Outside Plant Design Reference Manual, Current Edition

In the event of conflicts, the more stringent provisions shall apply.

1.7 COORDINATION

- A. When articles, materials, operations, or methods related to execution of telecommunications work are noted, specified, or described in the specifications or are indicated or reasonably implied on drawings and schedules, execute work as appropriate to provide complete and proper function, operation and installation.
- B. The drawings utilize symbols and schematic diagrams to indicate items of work. These symbols and diagrams will not typically identify dimensions, nor will they identify inclusion of specific accessories, appurtenances and related items necessary and appropriate for a complete and proper installation and operation. The Communications Subcontractor shall install work complete and ready for proper operation, including related items not specifically identified, shown, indicated, or specified. The work shall be installed, in accordance with the intent diagrammatically expressed on the drawings, and in conformity with the dimensions indicated on architectural drawings and on shop drawings approved by the Communications System Integrator and Architect. When abbreviations appear on the drawings or specifications in upper or lower case letters, with or without periods, the resultant work shall be as stated above.
- C. The drawings include details for various items, which are specific with regard to the dimensions and positioning of the work. These details are intended only for the purpose of establishing general feasibility. They do not obviate field coordination for the indicated work. Work shall not proceed until actual field conditions and requirements are verified by the Communications Subcontractor.
- D. The drawings are diagrammatic and indicate the general arrangement of systems and equipment unless indicated otherwise by dimensions.
- E. The communications subcontractor of this section shall ensure that the General Contractor and painting subcontractor acknowledge that painting of or over spray on any four pair horizontal category cable or video shielded twisted pair cable is not allowed. Any painted or over sprayed cable(s) shall be replaced at no cost to the Owner. Painted Cable will not be covered as part of a manufacturer's extended warranty. Painted cable, in addition to obscuring the print legend may act as an accelerant or create an additional flame spread and smoke hazard in the event of a fire, and as such, this is considered a life safety issue.
- F. Coordinate with Owner the termination labeling scheme to be used in the IDFs/MDF and room faceplates.

1.8 SUBMITTALS

-
- A. General: Architect may require submittal submission within 45 days of bid award. Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections, Section 01300 and Section 26 00 00. Submittals shall be made as one complete package.
- B. The Submittal shall include, but shall not be limited to the following:
1. Product Data for each component specified, including detailed manufacturer's specifications. Include data on features, ratings, and performance. Include dimensioned plan and elevation views of components. Provide an index and tabulated pages referencing the equipment in the specification. Any submittal received without a full index and tabulated pages shall be returned without action.
 2. Provide qualification/certification data for firms and persons specified in the "Quality Assurance" article to demonstrate their capabilities and experience. Provide evidence of applicable registration or certification.
 3. Field test and observation reports from qualified inspecting and testing personnel indicating and interpreting test results relative to compliance with performance requirements of the installed systems.
 4. Final schedule of cables as specified in Part 3.
 5. Shop drawings, prepared in AutoCAD, readable in AutoCAD Release 2010 or newer, detailing the cabling systems.
- C. Shop drawing submittals shall include but shall not be limited to the following:
1. Construction plans indicating the following:
 - a. Locations of all voice, data, video & wap cables with identification numbers.
 - b. Location of termination racks and backboards.
- D. Cable Schedules: Prior to substantial completion, prepare and submit cable schedules for each of the communication systems installed under this section describing the as-built condition of the systems. Prepare cabling schedules in tabular form. Include the following information in each schedule:
1. Horizontal Cabling System Schedule:
 - a. IDF/MDF room number
 - b. Cable ID
 - c. Origination Patch Panel & Port Number.
 - d. Destination Room (old and new numbers if they change during construction)
 - e. Destination Room faceplate location and jack number.
- E. It is intended for the Submittal data to be complete and accurate at the first

submission. If the submittal is returned marked "Resubmit" only one additional submission will be permitted. IF THE SECOND SUBMITTAL IS NOT ACCEPTABLE, OR IF THE SUBMITTAL IS NOT MADE WITHIN THE SPECIFIED TIME FRAME, THE RIGHT OF SUBSTITUTION AND SELECTION WILL BE LOST. THE OWNER WILL SELECT THE SPECIFIED ITEM. THAT ITEM IS TO BE PROVIDED AND SHALL BE PROVIDED AT NO ADDITIONAL COST.

- F. A minimum period of 15 working days, exclusive of transmittal time, will be required in the Owner's office each time Shop Drawings, Product Data, layout drawings, catalog data and brochures are submitted or resubmitted for review. A minimum period of 20 working days exclusive of transmittal time will be required for reviewing substitute materials or manufacturer. These time periods shall be considered when scheduling the work.
- G. If proposed equipment deviates from the Specification or Drawings, indicate in writing on Company letterhead those differences and provide sufficient data to justify acceptance. FAILURE TO INDICATE DEVIATION OR SUBSTITUTIONS IMPLIES FULL COMPLIANCE WITH DRAWINGS AND SPECIFICATIONS.
- 1.9 RECORD DRAWINGS
Provide Record Drawings in accordance with Division 1 for requirements regarding Project Record Documents.

"As- Built" record documentation for telecommunications work shall include:

- System function diagrams.
- Communications flow diagrams.
- Manufacturers' description literature for equipment.
- Connection and programming schedules as appropriate.
- Equipment material list including quantities.
- Spare parts list with quantities.
- Details not on original Contract Documents.
- Test Results
- Warranties
- Release of Liens

Operation and Maintenance Manual:

Refer to Section 01 33 00 - Submittals for requirements pertaining to Operation and Maintenance Data.

The Communication System Integrator shall submit manuals in accordance with Division 1 containing manufacturers' brochures of items installed by the Communication System Integrator.

The manual shall be subdivided into separate sections with tab dividers to identify subsystems of the integrated system. Reference appropriate specification sections.

Provide the following additional information for each electronic system. Information shall be edited for this project where applicable.

Operations manuals for components and for system as a whole.

Maintenance manuals for components and for system as a whole.

Point-to-point diagrams, cabling diagrams, construction details and cable labeling details.

List of spare parts, materials and suppliers of components. Provide name, address and telephone number for each supplier.

Emergency instructions for operational and maintenance requirements.

Delivery time frame for replacement of component parts from suppliers.

Recommend inspection schedule and procedures for components and for system as a whole.

Complete "Reviewed" shop drawings and product data for components and system as a whole.

Troubleshooting procedures for each system and for each major system component.

Closeout Submittals:

1. As-Built Drawings: Update Shop Drawings to create final As-Built Drawings. Submit digitally in AutoCAD 2010 or later format on a CD. Each faceplate shall show the faceplate port number and terminating servicing closet room number with patch panel letter and port number.
2. Maintenance Data: Include three copies: maintenance and repair procedures.
3. Digital copies of all training materials and videos of all training provided on USB drives.
4. Horizontal cable warranty paperwork certified and provided by both the installer (installer/subcontractor warranty min 15 years) and the cable manufacturer warranty (min 15 years). Warranty certificates shall include contact numbers.
5. Submit costs for repairs and service not covered under warranty (ie: owner requested changes, acts of God, vandalism, misuse).
6. PDF of product data and O&M manuals shall contain bookmarks for every section and item submitted.

1.10 QUALITY ASSURANCE

Equipment and materials required for installation under these specifications shall be the current model and new (less than one year from date of manufacture), unused and without blemish or defect.

- A. Manufacturer Qualifications: Manufacturers shall be experienced in manufacturing components listed and labeled under TIA-568.0-D, TIA-568.D-1, TIA-568-C.2, TIA 568C.3-D.
- C. Comply with the following:
 - 1. TIA-568.0-D, Generic Telecommunications Cabling for Customer Premises
 - 2. TIA-568.1-D, Commercial Building Telecommunications Cabling Standard
 - 3. TIA-568-C.2, Balanced Twisted-Pair Telecommunications Cabling and Components Standards
 - 4. TIA-568.3-D, Optical Fiber Cabling Components Standard
 - 5. ANSI/TIA/EIA-526-7 Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant.
 - 6. ANSI/TIA/EIA-14A Measurement of Optical Power Loss of Installed Multimode Fiber Cable Plant.
 - 7. ANSI/TIA -569-D, Telecommunications Pathways and Spaces.
 - 8. ANSI/TIA -606-B, Administration Standard for Commercial Telecommunications Infrastructure
 - 9. ANSI/TIA-607-C, Generic Telecommunications Bonding and Grounding (Earthing) For Customer Premises.
 - 10. BISC Telecommunications Distribution Methods Manual Standards, most recent volume.
- D. All wiring must be run end to end with no splices (except for fiber, where splices may be specified to be provided in certain locations). Terminated cables shall be punched down meeting approved methods. Any cables found to be spliced must be replaced at communications subcontractor's expense.
- E. Listing and Labeling: Provide products specified in this Section that are listed and labeled.
 - 1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.

-
- F. Communications subcontractor must be certified by the cabling manufacturer to install, terminate and warrant cabling systems. Provide proof of manufacturers' certification for systems to be installed.

1.11 WARRANTY

- A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the communications subcontractor under other requirements of the Contract Documents.
- B. Special Warranty: The data cabling system, including workstation outlets, cabling, connectors, patch panels and other connecting hardware, shall be warranted to be free from defects in material or faulty workmanship, and shall meet the performance requirements of TIA-568.0-D, TIA-568.1-D, TIA-568-C.2, TIA 568.3-D. The cabling system shall conform to the ANSI/TIA/EIA-568-C, specifications for any current or future application, which supports transmission over a properly constructed horizontal cabling system, which meets the channel, and/or basic link performance as described in TIA-568.0-D, TIA-568.1-D, TIA-568-C.2, TIA 568.3-D.
- C. The warranty shall cover material, services, and operation of the cabling system, end to end to include connectors/terminations. The warranty shall cover the operation of system to run minimum 1GB transmission on horizontal cabling category 6 systems, and 10GB transmission on horizontal cabling category 6A systems.
 - 1. Special Warranty Period by Installer and Manufacturer: 15 Year MINIMUM from date of acceptance. Provide warranty from Installer and Manufacturer. Installer shall submit warranty tests to manufacturer on behalf of the owner and deliver the manufacturer warranty to the owner when complete. Provide copies of warranties to the Architect.
- D. The manufacturers of connectivity and cabling will certify installing communications subcontractor on the project to be warranted.
- E. The communications subcontractor at both the company and installing technician level must be certified with the connectivity and structured cabling to be installed in the project that the communications subcontractor will be installing.
- F. The communications subcontractor will supply a letter or other document that will detail the certification in regard to the connectivity and cabling systems installed to the Technology Services Department and/or Construction Manager prior to the final inspection and close of the project.
- G. All test results and warranties for connectivity and structured cabling shall be submitted to the Technology Director (Minimum two copies of test results will be required in electronic format). Submittals must be received prior to substantial completion. Communications subcontractor is responsible for obtaining warranties for cabling. Provide ALL warranties the cabling system qualifies for.
- H. Uncertified communications subcontractors will be required to remove structured

cabling and pay for replacement by another certified communications subcontractor if the installation is not in compliance with certifying manufacturer or contract standards at no additional expense to the Owner.

- J. Certifying manufacturers may be required to do inspections of cabling systems on project.

1.12 DELIVERY, STORAGE, AND HANDLING

- A. Materials shall be suitably packaged by manufacturers to prevent damage during shipment and handling. Damaged materials will not be acceptable for use.
- B. Store materials on site in clean, dry storage area. Materials stored below 32°F; are required to be reconditioned and stored at room temperature (68°F) for 24 hours prior to installation. Do not install cable below 32°F.

PART 2 - PRODUCTS

MATERIALS:

Manufactured Products:

Materials and equipment furnished shall be of current production by manufacturers regularly engaged in the manufacture of such items, for which replacement parts are available.

When more than one unit of the same class of equipment or material is required, such units shall be the products of a single manufacturer.

Equipment Assemblies and Components:

Components of an assembled unit need not be products of the same manufacturer, but must meet TIA Category 6A or 6, depending on cable type, criteria as a complete permanent link.

Manufacturers of equipment assemblies shall assume complete responsibility for the final assembled unit.

Components shall be compatible with each other and with the total assembly for the intended service.

Moving parts or elements of equipment of the unit normally requiring lubrication shall have means provided for such lubrication and shall be adequately lubricated at the factory prior to delivery.

Factory cabling shall be identified on the equipment being furnished and on cabling diagrams.

Any equipment listed by manufacturer and/or model number is for performance criteria comparison only. In no way is it implied that the specific product must be provided. All equipment to be provided shall be 'or equal' unless noted as proprietary in the specification.

2.0 PROPRIETARY EQUIPMENT

Proprietary Equipment: Specified Manufacturer: To establish a standard of quality, design and function desired, Drawings and specifications have been based on the following equipment listed below:

Manufacturer:	Item:	Part Number:
PANDUIT	PATCH PANELS	CPPL48WBLY & CPPL24WBLY
PANDUIT	FACEPLATES	CFPE SERIES, 2 & 4 PORT
PANDUIT	RJ45 JACKS	CJ6X88TG SERIES
LIGHTSPEED	VOICELIFT	TCN & MCN

Acceptable Substitutions: The product(s) specified above have been determined to be in the public interest based on sound reasoning and voted as proprietary by the Owner. There is no guarantee that a proposed substitutions will be approved, and the Communications Subcontractor shall not order any materials until approval(s) are received in writing.

1. Requesting substitutions shall be at the Communications Subcontractor's own risk, with regard to uncompensated delays of the Project. Time will be required for sufficient review and additional requests for information by the Architect and Owner. Delays which result from substitution reviews and resubmissions are not grounds for additional time or cost change orders, and will not be considered by the Awarding Authority.

2.1 NETWORK HORIZONTAL CABLING

A. General:

1. The following types of data/signal cables shall be used on this project:
 - a. 4 pair Category 6A cable for distribution of Data & Voice signals. (Yellow)
 - b. 4 pair Category 6A cable for distribution of wireless signals. (Yellow, Orange, Violet)
 - c. 4-pair shielded Category 6 cable for distribution video. (Grey)
2. **TERMINATION HARDWARE:** The following types of connectors shall be used on this project:

-
- a. Category 6A Jacks, YELLOW, ORANGE, VIOLET
- B. Augmented Category 6 (6A) Cable DATA, VOICE, WAP2, WAP4
1. The Category 6A cable shall use the color code indicated below:
 - a. All Category 6A cable for DATA (voice is included as data) shall be Yellow.
 - b. All Category 6A cable for WAP2 and OWAP shall be Yellow
 - c. All Category 6A cable for WAP4 shall be yellow (qty 2), orange and violet as shown on T2.10
 - d. Colored tape may not be used to re-identify jacket color.
 2. The cable shall be composed of 23-gauge solid copper conductors. Cable shall be jacketed with the appropriate material to meet applicable CMP flame ratings and printed every two feet with the print legend. There shall be no shield required in the sheath.
 3. Each sheath shall contain four unshielded copper twisted pairs. Each pair shall have a different twist ratio per foot from the other pairs to achieve the necessary crosstalk requirements.
 4. The cable shall be sweep tested to 500MHz minimum.
 5. The cables shall meet or exceed the following standards:
 - a. PoE compliant, meets: IEEE 802.3af, at, and bt. UL PoH certified per UL4299
 - b. Cable manufacturer must be ISO-9002 Certified.
 - c. Certified channel performance meeting or exceeding TIA-568.2-D Category 6A requirements and ISO 11801 Class Ea standards supporting 10GBASE-T transmission over twisted pair cabling systems.
 - d. Certified component performance meeting or exceeding TIA-568.2-D Category 6A requirements and IEC 61156-5 Category 6A standards for supporting 10GBASE-T transmission over twisted pair cabling systems.
 - e. UL Listed CMP-LP
 - f. Flame Rating: Plenum (CMP): NFPA 262
 6. In addition to complying with the above listed standards, all Augmented Category 6 (6A) cables shall meet or exceed the following criteria:
 - a. Nominal OD: .275" or less
 - c. Conductor DCR: 9.38 ohms/100m MAX
 - d. DCR Unbalanced: 5% MAX
 - e. Mutual capacitance: 5.6nF/100m NOM
 - f. Capacitance unbalance pair/ground: 330pF/100m MAX
 - g. Nominal velocity of propagation: 70%
 - h. Operating temp range: -20C to 75C min

7. Testing shall be in accordance with procedures in the referenced standards unless otherwise stated.

The cable shall be TX6A 10Gig UTP part number PUP6XHD04*-G by Panduit or equal. All cabling shall be plenum rated. (* = color designator (YL (yellow), OR (orange), VL (violet))

2.2 TERMINATION HARDWARE

A. Modular 8 position modules:

1. Termination hardware shall be designed with an integral locking mechanism, which upon insertion of a modular plug provides maximum pullout strength at the plug/jack interface.
2. All modular 8-position jacks shall be RJ-45, T 568B wired.
3. The jacks shall meet or exceed the following standards:
 - a. TIA/EIA-568-C.2 Transmission Performance Specifications for 4-pair 100 Ω Augmented Category 6 (6A) Cabling and the TIA-568-C.2 Balanced Twisted Pair Cabling Standards
4. The modular jacks shall meet the following electrical performance and certification requirements:
 - a. The modular jacks shall meet TIA/EIA-568-C.2 Transmission Performance Specifications for 4-pair 100 Ω Augmented Category 6 (6A) Cabling and the TIA-568-C.2 Balanced Twisted Pair Cabling Standards
 - b. Near End Crosstalk (NEXT) and Attenuation measurements shall be made per applicable TIA-568-C.2 standards for Cat 6A.
5. The modular jacks shall meet the following requirements:
 - a. Connector-insulation displacement connectors shall be capable of accepting 23 gauge AWG solid conductor wire.
 - b. Terminated in accordance with TIA-568-C specifications.
 - c. Jacks shall be RJ45.
6. The jack shall be approved to work in all applications up to 10 Gb/sec, including, but not limited to 1Gb/sec and 100 Mb/sec TP-PMD (100 meters over UTP, per ANSI X3T9.5), proposed 155 Mb/sec ATM, 16 Mb/sec token ring, 10GBase-T and 4Mb/sec token ring.
7. The modular jacks shall use the color code indicated on the drawings, specifically T2.10. Jack colors shall match the cabling color.

Category 6A jacks shall be Panduit Mini-Com CJ6X88TG series of the same

color as the cable they are terminated on. and shall be used at the faceplates and patch panels.

2.3 FACEPLATES

- A. Faceplates shall be loadable. Panduit Mini-Com part numbers CFPE2WHY (2 port) and CFPE4WHY (4 port). Faceplates shall be loaded with specified Mini-Com modules specified above in paragraph 2.2. Unused ports have blank inserts, Mini-Com CMBWH-X by Panduit

2.4 PATCH PANELS

- A. Category 6A
 - 1. All copper patch panels shall be quick port "loadable" patch panels. Copper cables shall be terminated with specified Cat6A jacks, (see paragraph 2.2 above) of the appropriate color to match the cabling. Furnish and install cable management at the rear of the patch panel to support Cat6A cabling. Cat6A jacks shall be the same color as the jacks at the far end of the cable (see Technology Drawing T2.10). Blanks inserts shall be installed in all unused ports in the patch panel (Mini-Com, part number CMBBL-X by Panduit). Mini-Com patch panels by Panduit, part number CPPL48WBLY and CPPL24WBLY.
 - 2. Patch panel ports shall be color coded as per the jack color at the far end of the jack as specified above.
 - 3. After existing cabling that is to be removed from the IDFs is removed, before cable terminations and installation of any patch panels, coordinate position/location in racks with owner.

2.5 PATCH CORDS

- A. Furnish and install 1' Cat-6A patch cords as follows: provide a patch cord for every port terminated with new cabling in a closet. Color code the patch cords according to the jack color. In addition, provide 24 violet, 36 yellow, and 36 green, all 1' Cta6A snag less. Cords shall be Cat6a, 24awg, snag less with rubber boot.

2.6 PROJECTOR LIFT – MEDIA CENTER

- A. Furnish and install a projector lift, concealed in act ceiling at location shown on drawings. Lift by Draper, part number AeroLift 150. Coordinate with owner for lift switch placement near circulation desk. Furnish and install the following accessories for the lift: ceiling finish kit (conceals the lift in the up position and covers the rough opening) and the medium universal projector mount. Secure projector to lift assembly. Set stops for display of full screen image.

2.7 4K PROJECTOR

- A. Furnish and install a 4k 11,000 lumen projector and lens sized to fir the 16'x10' screen 45' from the projector location. Projector shall be the 4K10HS by Christie or equal with 2.12-2.83:1 zoom lens, part number 140-110103-XX by Christie or equal. Verify field conditions for proper lens before ordering lens. Provide patch cord from projector to a D4 port at lift location. Adjust projector and lens for full screen image.

2.8 HDBASE-T HDMI EXTENDER

-
- A. Furnish an HDBaseT transmitter (must be powered by receiver at projector location) at V1 location. Use Cat6 shielded plenum cable, Panduit TX6 part number PFP6C04IG-UG (Gray) to connect transmitter to receiver. Place receiver on top of projector at lift location. Secure to projector with Velcro. Transmitter part number HD-TX-4KZ-101-1G-W by Crestron or equal. Receiver is HD-RX-4K-210-C-E by Crestron or equal.
- 2.9 VOICE AMPLIFICATION SYSTEM AND MEDIA CONNECTOR. Furnish and install in locations listed as TCVL on schedule on T2.10
- A. Provide and install TOPCAT voice lift system (TCVL location), or equal.
- B. Provide one (1) FLEXMIKE® pendant microphone (or equal) for teacher use and one (1) SHAREMIKE® microphone (or equal) as a share transmitter for student use per room. Provide cables and charging units.
- C. Install page over ride cabling to TOPCAT unit, using equipment and sensors to mute system in the event of a page in the space. Coordinate with 27 50 00 communications subcontractor.
- D. Furnish and install in every room with a TCVL a media connector, part number MCN by Lightspeed or equal. Place on teachers desk.
- E. Electrical subcontractor shall hard wire power to each TOPCAT unit. Coordinate with 26 00 00 subcontractor.
- F. Voice Amplification System is TOPCAT by Lightspeed or equal. Install at TCVL location shown on the drawings. Pair each microphone and media connector with its respective Topcat unit.
- 2.10 PORTABLE SOUND SYSTEM & HDMI AUDIO DE-EMBEDDER
- A. Furnish one Yamaha portable STAGEPAS 600BT system, with two YBSP600I rolling cases, one on-stage SS550P speaker stand pack, two microphones with mic stand, clip and cords and Hosa CMM-103 stereo interconnect 1/8" to 1/8" 3' cable.
- B. Furnish a Tripp-lite P130000 Audio HDMI de-embedder.
- C. Furnish two 6' HDMI cables.
- D. Furnish a 10' 3.5mm to dual RCA audio stereo cable.

PART 3 - EXECUTION

3.1 PROTECTION OF SYSTEMS AND EQUIPMENT

Protect materials and equipment from damage during storage at the site and throughout the construction period. Equipment and materials shall be protected during shipment and storage against physical damage, dirt, theft, moisture, extreme temperature, and rain.

Damage from rain, dirt, sun, and ground water shall be prevented by storing the equipment on elevated supports and covering them on sides with securely fastened protective rigid or flexible waterproof coverings.

During installation, equipment shall be protected against entry of foreign matter on the inside and be vacuum cleaned both inside and outside before testing, operating, or painting.

As determined by the Owner, damaged equipment shall be fully repaired or shall be removed and replaced with new equipment to fully comply with the requirements of the Contract Documents. The decision of the Owner shall be final.

Painted surfaces shall be protected with removable heavy kraft paper, sheet vinyl or equal, installed at the factory and removed prior to final inspection.

Damaged paint on equipment and materials shall be repainted with painting equipment and finished with the same quality of paint and workmanship as used by the manufacturer.

3.2 WORK PERFORMANCE

Coordinate location of equipment and conduit with other trades to minimize interference.

Coring, cutting and fire stopping shall be provided by 26 00 00

3.3 ACCESS TO EQUIPMENT

Equipment shall be installed in a location and manner that will allow convenient access for maintenance and inspection.

Working spaces shall be not less than specified in the National Electrical Code for voltages specified.

Where the ARCHITECT and OWNER determine that the Communications Subcontractor has installed equipment not conveniently accessible for operation and maintenance, equipment shall be removed and reinstalled, one time only, as directed by the ARCHITECT and OWNER, at no additional cost to the Owner. "Conveniently accessible" is defined as being capable of being reached without the use of ladders or without climbing or crawling under or over obstacles such as motors, pumps, belt guards, transformers, piping and duct work.

3.4 CABLE TERMINATIONS AND DRESS

Installation of signal, video, communication, and control conductors shall adhere to the following:

Cables shall be dressed, labeled and tie wrapped in cabinets, racks and/or at cross connect backboard to present a neat, logical, and orderly installation. At the discretion of the Communications Subcontractor, cable duct with removable covers may be installed in equipment cabinets and control consoles to facilitate satisfying this requirement.

Cables shall be secured to equipment cabinet backboards, console members or to

other system components using cable clamps and wraps. The Communications Subcontractor shall furnish and install cable support posts to facilitate system installation.

Cables and conductors shall be terminated with cable termination connectors compatible with the specific termination.

Metallic cables and conductors entering the facility from a point exterior to the building shall be equipped with lightning protection. The protector shall be located at the nearest point of cable entry in the building.

3.5 EXAMINATION

- A. Examine pathway elements to receive cable. Check raceways, wire ways, cable trays and other elements for compliance with space allocations, installation tolerances, hazards to cable installation, and other conditions affecting installation. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Prior to the start of actual installation, the communications subcontractor shall review the exact location of all cables, outlets, and equipment with the Owner, Construction Manager and the suppliers of related equipment.
- C. The communications subcontractor shall coordinate the equipment installation with the installation of raceways, to eliminate potential damage to cables.

3.6 INSTALLATION

- A. Wiring Method: Install wiring with J-Hooks (except where cable tray is available). Comply with ANSI/TIA-569-D for conduit sizing not indicated on Contract Drawings. Do not exceed the manufacturer's minimum bend radius. Comply with requirements listed in STELL DECKING specification (see related work section of this specification). The horizontal system cables shall be run using a star topology format from the MDF and/or IDFs rooms to the technology outlets as shown on the technology drawings. The length of each individual CAT 6A cable run between patch panels in the MDF and IDFs to each technology outlet or termination shall not exceed 300 ft. Cables may be routed through rooms and other spaces in the event that cable routing through main hallways negatively affects the requirement that the length of each individual cable run not to exceed 300 ft. (90m) (terminated end to terminated end). Cabling which deviates from the main pathways shall be identified on the floor plans by the communications subcontractor.
- B. Install components as indicated, according to manufacturers' written instructions. Use techniques, practices, and methods that are consistent with the Category 6A rating of the components and that assure Category 6A performance of completed and linked signal paths, end-to-end.
- C. Install cable without damaging conductors, shield, or jacket.
- D. Do not bend cable in handling or installation to smaller radii than minimums recommended by manufacturers. Maintain recommended manufacturer's minimum

bend radii of all UTP and fiber optic cabling at all times.

- E. Pull cables without exceeding cable manufacturer's recommended pulling tensions.
 - 1. Pull cables simultaneously where more than one is being installed in the same raceway.
 - 2. Use "thin film" pulling lubricants only. It has been shown that lubricants will affect testing as the cable needs several weeks to dry before attenuation levels recover.
 - 3. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage media or raceway.
- F. Install exposed raceway parallel and perpendicular to surfaces or exposed structural members, and follow surface contours where possible.
- G. Secure and support cable at intervals not exceeding 30 in. and not more than 6 in. from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
- H. Wiring within Wiring Closets and Enclosures: Provide adequate length of conductors. Train the conductors to terminal points with 24 in. extra cable neatly looped and secured properly. Use lacing bars to restrain cables, to prevent straining connections, and to prevent bending cables to radii smaller than allowed.
- I. Separation of Wires: Comply with ANSI/TIA-569-D rules for separation of unshielded copper voice and data system cables from potential EMI sources, including electrical power lines and equipment and NEC Article 800-S2.
- J. Make terminations only at indicated outlets, terminals, and cross-connect and patch panels.
- K. Cables for data and voice shall be installed and terminated exactly as shown or described in the manufacturer's instructions.
- L. Standards for each type of cable are very specific. Cable length, the bending radius of each turn, cutting back the sheath, length of untwisting and termination of the individual wires, stripping of the insulation displacing connections to the push-on terminals shall be performed strictly per manufacturer's instructions and any applicable standards.
- M. Work area communications outlets shall be installed as shown on walls, floor or ceilings.
- N. Jacks shall be installed as depicted on technology detail plans. Questions or discrepancies shall be reported to the owner.
- O. Devices installed in the school will be of the same "Type and Manufacture".
- P. All cables shall be routed in large groupings, through main hallways, until cable can be distributed directly to the communication outlet. Route individual cables to the appropriate outlet locations in accordance with all standards described herein.

-
- Q. In suspended ceilings and corridors cable shall be bundled by type using Velcro cables ties snug, but not deforming the cable geometry and be supported via approved “J” style hooks attached to the existing building structure at a maximum of 4 ft. intervals. Use of ceiling tiles, grid or hanger wires for support of cabling is prohibited.
- R. Do not install random or diagonal cable runs except for the reasons specified in item A above. Cable turns and bends shall be made at 90-degree angles whenever possible but always maintaining manufacturer’s requirements for bending radius.
- S. All cables, which enter conduit stubs of technology outlets in fixed wall locations, shall be installed with a minimum of a 3 ft. service loop of cable secured above the ceiling where the cable enters the conduit at each outlet. A 3 ft. service loop of cable shall also be provided in the cable tray above the data patch panel racks. Provide a service loop of cabling for each cable installed above the ceiling.
- T. All cables which penetrate a steel stud or steel wall cap, wall section and where a cable enters a conduit shall be protected from damage with a “stud liner”.
- U. All cables entering power poles, surface mounted raceway, or other cable management systems shall be protected from damage.
- V. Cabling shall be extended between floors utilizing inter-floor conduit provided under 26 00 00. See network riser drawing for cable pathways.
- W. Conduit and sleeves provided as a means of routing cables between various rooms and floors, and those which remain (empty) as spare, shall be sealed with an approved fireproof, removable safing material. Sleeves, which pass vertically from floor to floor, shall be sealed in a similar manner using an approved re-enterable system. Additional penetrations through rated assemblies necessary for passage of wiring shall be made using an approved method, coordination with the General Contractor and permanently sealed after installation of cables.
- X. Meet all requirements regarding use of cable in return air plenums (SEE 1.2.C. above) and in raised floor systems. Provide wiring that complies with all applicable state, local building codes, and the National Electrical Code. All cables run in raised floor systems with forced air-cooling shall meet the requirements of Article 645, “Electronic Computer Data Processing Equipment” of the NEC.
- Y. Cables installed partially or fully within the MDF and IDFs are to be routed through and secured in the cable tray wherever possible. Cables placed in the cable tray are to be laced or tie wrapped with Velcro tie wraps frequently to keep them neatly bundled and not permitted to shift from one side of the tray to the other as they are routed in the tray.

3.7 CLEANING

During construction, and prior to Owner acceptance of the building, remove from the premises and dispose of packing material and debris caused by telecommunications

work.

Remove dust and debris from interiors and exteriors of electrical equipment. Clean accessible current carrying elements prior to being energized.

3.8 COMPLETION

General: Upon completion of the work, remove excess debris, materials, equipment, apparatus, tools and similar items. Leave the premises clean, neat and orderly.

Results Expected: Systems shall be complete and operational, and controls shall be set and calibrated. Testing, start-up and cleaning work shall be complete.

Maintenance Materials: Special tools for proper operation and maintenance of the equipment provided under this Specification shall be delivered to the Owner.

3.9 TESTING AND ACCEPTANCE CRITERIA

A. UTP Cabling (Data/Voice/WAP/V, Other)

1. If cable manufacturer requires field AXT testing for its Cat 6a solution/warranty, Communications Subcontractor is to test to the TIA-568-C.2 and TIA 568-C permanent link testing standards and the following requirements within this specification.
2. Test each Permanent Link cable drop for full Category 6A compliance with ANEXT exception as noted. Cabling systems shall meet or exceed the electrical and transmission characteristics of the systems specified.
3. Cable segments and links shall be tested from both ends of the cable for each of the construction phases. (Verify that cable labeling matches at both ends).
4. The system shall not be considered certified until the tester has acknowledged that the performance of the physical layer of the system has been fully tested and is operational at the completion of the installation phase.
5. After the installation is complete, in addition to any other required testing as described herein, and at such times as the Owner/Engineer directs, the communications subcontractor shall be present while the Owner conducts an operating test for approval. The installation shall be demonstrated to be in accordance with the requirements of this specification. Any defects revealed shall be corrected promptly at the communications subcontractor's expense and the tests performed again.
6. After review of the completed test results, the Owner reserves the right to retest cables, utilizing the communications subcontractor's tester and the communications subcontractor's labor.
7. Alien Crosstalk Testing Preparation:
 - a) Alien Crosstalk (AXT) testing measures the unwanted noise coupled to the cable

being tested (called the “Victim” or “Disturbed”) by six surrounding cables (called “Disturbers”). Two tests need to be performed: the Power Sum Alien Near-end Crosstalk (PSANEXT) test and the Power Sum Alien Attenuation-to-Crosstalk Ratio, Far-end (PSAACRF) test. Results for the remaining AXT tests are taken as part of these two, so although they are not directly provided, a “pass” result for PSANEXT and PSAACRF ensures passing results for AACRF, AFEXT, ANEXT, and PSAFEXT. A 2% sample of the installed cables is typically recommended: testing the longest cables in the installation will provide the most meaningful results.

- b) AXT testing requires special planning, equipment and training:
 - 1. AXT tests are time consuming. Budget AXT test time into the project bid.
 - 2. Handheld test instruments (field testers) require an adjunct AXT module.
 - 3. A laptop computer is also used with the field tester.
 - 4. The field tester’s AXT application software must be loaded onto the laptop.
 - 5. Installation personnel will require training prior to performing AXT testing.
- 8. Field Testing Equipment: Submit during shop drawing review on the testing equipment to be utilized on this project. The communications subcontractor shall test all cables installed under this Section.
 - a) Category 6a Testing Equipment:
 - 1. Testing shall be accomplished using a UL Level IV field tester capable of testing to 500 MHz. Ensure that the tester has any necessary hardware or software upgrades, including AXT testing capabilities for testing Cat 6A installations.
 - 2. Provide factory calibration report of field test equipment.
- 9. Testing Procedures:
 - a) Testing shall conform to the TIA 568-C.2 standards.
 - b) Testing will be to the Permanent Link Test Parameters.
 - c) For ANEXT A 2% sample of the installed cables is typically recommended: testing the longest cables in the installation will provide the most meaningful results.
 - d) Tests shall be based on each pair of conductors and not the aggregate multiple pair results.
 - e) Test cable segments end-to-end, from the telecommunications room horizontal patch panel/cross connect block panel to each work area outlet and from each

telecommunications room backbone patch panel/cross-connect block panel to respective main cross connect, and from the work area outlet to the main cross-connect (through patch cables or cross-connect wiring) with a Signal Injector, Graphical Link Testing Meter and Time Domain Reflectometer (TDR) for compliance to latest TIA performance requirements.

- f) Provide report indicating failures and what actions were taken to ensure a passing horizontal cable and its terminations. Any cable failing the certification test (Fail, Fail* or, Pass*) must have remedial work done to provide a full pass test result; Remediation may include re-termination or replacement of the cable, which fails. No cables passing within tolerance only (Conditional Pass*) will be accepted. Remedial work shall be at no cost to the Owner.

C. Test Plan

1. All test equipment, test procedures, and testing techniques shall be specified in the acceptance test plan and will require approval prior to execution. All test equipment shall indicate a current manufacturer calibration.
2. Tests shall be conducted by the communications subcontractor of this section in accordance with the approved Test Plan.
3. The purpose of this testing is to verify that the installed system meets all specified attenuation and bandwidth requirements and is capable of being used for its intended purpose.
4. Test results shall be submitted for approval. Manufactured or assembled products or equipment shall be tested as indicated, and the results submitted to the District's technical representative for approval, prior to shipment to the site.
5. The communications subcontractor of this section shall prepare a test plan which provides a detailed outline of all testing to be accomplished.
6. The test plan shall include, as a minimum, a schedule of when tests will be performed (relative to installation milestones), specific test procedure that will be used, a list of test equipment that will be used (manufacturer, model number, range, resolution accuracy) and shall conform to the specified requirements of other sections of this specification.

D. Test results:

1. The test results information for each link shall be recorded in the memory of the field tester upon completion of the test. The tester shall be capable of storing test data in either internal or external memory. The external media used shall be left to the discretion of the user.
2. Test results saved by the tester shall be transferred into a Windows based database utility that allows for maintenance, inspection and archiving of these test records. A guarantee must be made that the measurement results are transferred to the PC unaltered as well as any printed reports generated from the software application.

3. Optional formats of data reporting are: comma separated variable (.csv), Portable Document File (.pdf) or compatible, plain text (.txt), or hypertext markup language (.html/.htm).
4. Test Results shall include the following:
 - a) Applicable room number of jack location (room number per Contract Documents)
 - b) Applicable Telecommunications Room number
 - c) Circuit I.D. number with corresponding jack identifier
 - d) Wire Map – shall include the following:
 1. Continuity to the remote end
 2. Shorts between any two or more conductors
 3. Crossed pairs
 4. Reversed pairs
 5. Split pairs
 6. Any other miswiring
 - e) Length
 - f) Insertion Loss
 - g) Near-end Crosstalk (NEXT) Loss
 - h) PS-NEXT (Power Sum Near End Cross Talk)
 - i) FEXT (Far End Crosstalk)
 - j) ELFEXT (Equal Level Far End Cross Talk)
 - k) PS-ELFEXT (Power Sum Equal Level Far End Cross Talk)
 - l) Propagation Delay
 - m) Delay Skew
 - n) Return loss
 - o) PSFEXT (Power Sum Far End Crosstalk)
 - p) PSACRF (Power Sum Attenuation to Crosstalk Ratio, Far End)
 - q) AACRF (Alien Attenuation to Crosstalk ratio, Far End)
 - r) AFEXT (Alien Far End Crosstalk)
 - s) ANEXT (Alien Near End Crosstalk)
 - t) PSANEXT (Power Sum Alien Near End Crosstalk)
 - u) PSAACRF (Power Sum Alien Attenuation to Crosstalk Ratio, Far End)

END OF SECTION



179 FORBES STREET,
RIVERSIDE, RI 02915

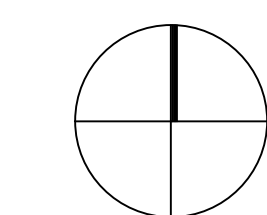
KEYNOTE LEGEND:

GENERAL NOTES:
1. FIRST FLOOR ELEVATION = 102'-0"
FINISH FLOOR ELEVATION OF 100'-0" CORRESPONDS TO ELEVATION 'XXX'-X" ON THE CIVIL DRAWINGS.

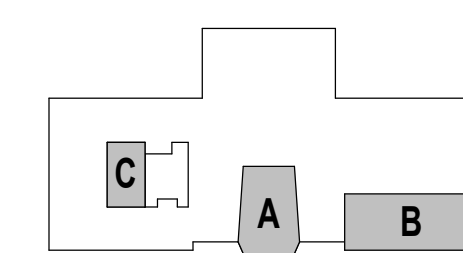
ADDENDUM #3 ADD-3 10.05.2023

100% CONSTRUCTION DOCUMENTS

KEY PLAN NORTH ARROW



KEYPLAN



DRAWING NAME:

OVERALL FIRST FLOOR PLAN

DRAWN BY: MS

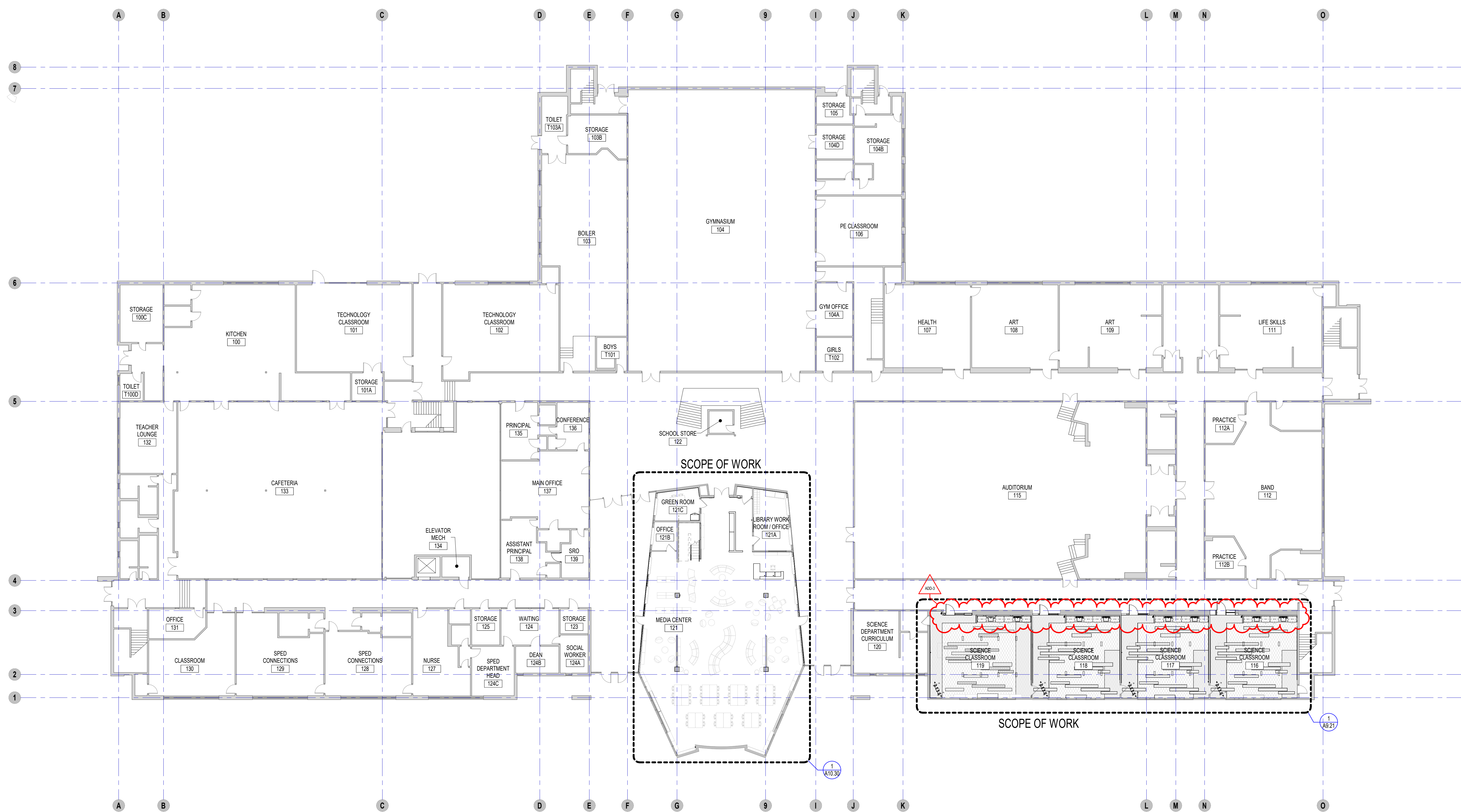
REVIEWED BY: JQ

SCALE: AS INDICATED | DRAWING NUMBER:

JOB NO.: 1903.03

DATE: September 15, 2023

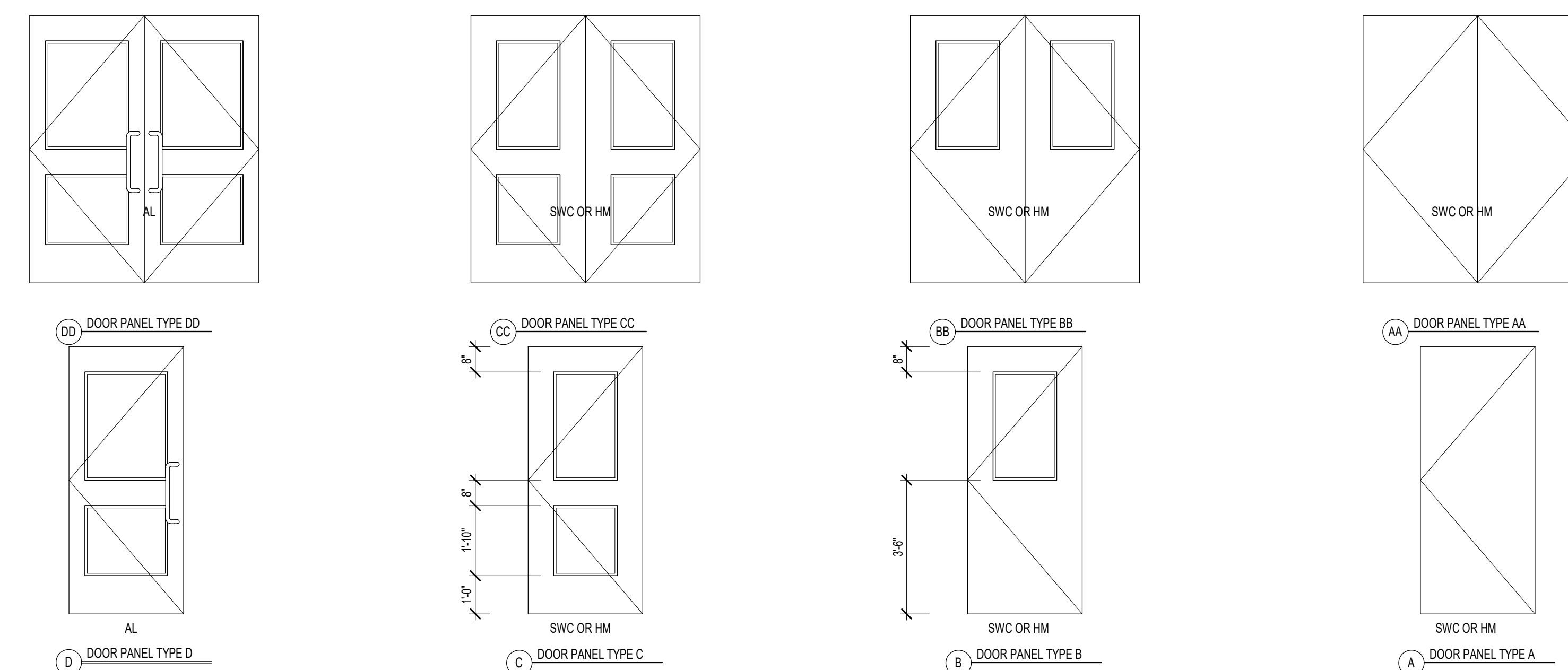
A1.10



1 FIRST FLOOR: OVERALL FLOOR PLAN
1/16" = 1'-0"

DOOR SCHEDULE															
FIRST FLOOR															
DOOR #	ROOM NAME	DOOR					FRAME					HWD SET	FIRE RATING	REMARKS	
		DR SIZE	TYPE	MATL	THK.	DR FIN	TYPE	MATL	FIN.	HEAD	JAMB				SILL
116-01	SCIENCE CLASSROOM	3'-0" X 7'-0"	A	SCW		CLR	F3.1	HM	P				1		NEW
116-02	SCIENCE CLASSROOM	3'-0" X 7'-0"										ETR	2		EXISTING REUSED
116-03	STORAGE	2'-0" X 7'-0"										ETR	3		EXISTING REUSED
117-01	SCIENCE CLASSROOM	3'-0" X 7'-0"	A	SCW		CLR	F3.1	HM	P				1		NEW
117-02	SCIENCE CLASSROOM	3'-0" X 7'-0"										ETR	2		EXISTING REUSED
118-01	SCIENCE CLASSROOM	3'-0" X 7'-0"	A	SCW		CLR	F3.1	HM	P				1		NEW
118-02	SCIENCE CLASSROOM	3'-0" X 7'-0"										ETR	2		EXISTING REUSED
119-01	SCIENCE CLASSROOM	3'-0" X 7'-0"	A	SCW		CLR	F3.1	HM	P				1		NEW
119-02	STORAGE	3'-0" X 7'-0"										ETR	2		EXISTING REUSED
121-00	MEDIA CENTER	3'-0" X 7'-0"										ETR	3		EXISTING REUSED
121-01	MEDIA CENTER	PR 2'-6" X 7'-0"	AA	SCW		CLR	F2.1	HM	P	ETR	ETR	ETR	4		NEW DOORS IN EXISTING FRAME
121-02	MEDIA CENTER	2'-10 5/8" X 7'-0 3/4"										ETR	5		EXISTING REUSED
121-03	MEDIA CENTER	3'-0 1/2" X 7'-0 3/4"										ETR	5		EXISTING REUSED
123A-01	LIBRARY WORK ROOM / OFFICE	3'-0" X 7'-0"										ETR	6		EXISTING REUSED
123B-01	OFFICE	3'-0" X 7'-0"										ETR	6		EXISTING REUSED
123C-01	MEDIA CENTER	3'-0" X 7'-0"										ETR	6		EXISTING REUSED

DOOR SCHEDULE															
SECOND FLOOR															
DOOR #	ROOM NAME	DOOR					FRAME					HWD SET	FIRE RATING	REMARKS	
		DR SIZE	TYPE	MATL	THK.	DR FIN	TYPE	MATL	FIN.	HEAD	JAMB				SILL
209-00	SCIENCE CLASSROOM	2'-6" X 7'-0"										ETR	3		EXISTING REUSED
209-01	SCIENCE CLASSROOM	3'-0" X 7'-0"										ETR	1		EXISTING REUSED
211-01	SCIENCE CLASSROOM	3'-0" X 7'-0"										ETR	2		EXISTING REUSED
211-02	SCIENCE CLASSROOM	3'-0" X 7'-0"										ETR	2		EXISTING REUSED
242-01	MEDIA CENTER BALCONY	PR 2'-6" X 7'-0"	AA	SCW		CLR	F2.1	HM	P	ETR	ETR	ETR	4		NEW DOORS IN EXISTING FRAME
242-02	MEDIA CENTER BALCONY	3'-0" X 6'-10"	A	SCW		CLR	F3.1	HM	P				5		NEW
242A-01	IDF	2'-11" X 7'-0"										ETR	3		EXISTING REUSED
242B-01	MEDIA CENTER BALCONY	3'-0" X 7'-0"										ETR	6		EXISTING REUSED
242C-01	SMALL GROUP COLLAB 1	3'-0" X 6'-10"	A	SCW		CLR	F3.1	HM	P				1		NEW
242D-01	SMALL GROUP COLLAB 2	3'-0" X 6'-10"	A	SCW		CLR	F3.1	HM	P				1		NEW
242E-01	SMALL GROUP COLLAB 3	3'-0" X 6'-10"	A	SCW		CLR	F3.1	HM	P				1		NEW



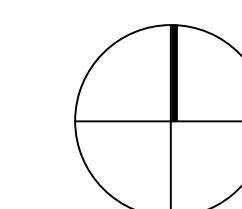
1 DOOR PANEL TYPES
3/8" = 1'-0"

ABBREVIATIONS	
ACST	ACOUSTIC
AL	ALUMINUM
ALG	ALUMINUM AND GLASS
CLR	CLEAR FINISH
HM	HOLLOW METAL
GL	GLASS
MFR	MANUFACTURERS STANDARD
OH	OVERHEAD DOOR
OHCC	OVERHEAD COILING DOOR
OHG	OVERHEAD COILING GRILLE
P	PAINTED FINISH
PC	POWDER COAT FINISH
PS	POWER SUPPLY REQUIRED FOR DOOR HARDWARE
PS1	POWER SUPPLY REQUIRED FOR DOOR OPERATOR ONLY. NO ELECTRIFIED DOOR HARDWARE.
PVFD	POLYVINYLIDENE FLUORIDE
SCW	SOLID CORE WOOD (FLUSH)
STL	STEEL
TBHM	THERMALLY BROKEN HOLLOW METAL FRAME

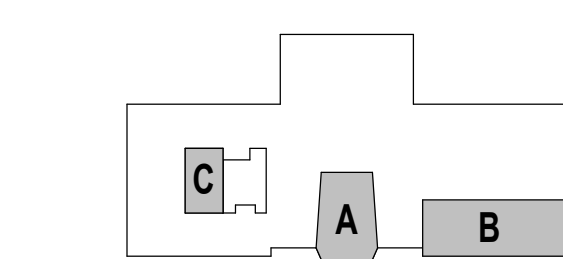
GLASS TYPE NOTES	
REFER TO SPECIFICATIONS IN ADDITION TO PROVIDED NOTES FOR REQUIREMENTS. COORDINATE WITH SPECIFICATION SECTIONS.	1. LAMINATED AND TEMPERED GLAZING: 08 00 00 - GLAZING COORDINATE GLASS TYPE 1 AND GLASS TYPE 2 LOCATIONS AS REQUIRED PER SPECIFICATIONS.
08 00 00 - GLAZING FOR INTERIOR GLASS TYPES	2. RATED GLAZING: 08 88 60 - FIRE-RATED GLAZING AND FRAMING SYSTEMS LAMINATED GLASS AS REQUIRED. • THE FIRE RATING OF GLASS SHALL EQUAL THE FIRE RATING OF THE SYSTEM IN WHICH IT IS FABRICATED AND PARTITION IN WHICH THE SYSTEM IS INSTALLED.
08 11 13 - HOLLOW METAL DOORS AND FRAMES FOR INTERIOR GLASS TYPES	3. RATED GLAZING: 08 80 00 - GLAZING TYPE 3 GLASS AS REQUIRED. • THE FIRE RATING OF GLASS TYPE 3 WHERE SCHEDULED IN SHALL COORDINATE WITH THE RATING OF THE PARTITION IN WHICH THE FRAME IS INSTALLED. • THE FIRE RATING OF GLASS TYPE 3 SHALL EQUAL THE FIRE RATING OF THE DOOR IN WHICH IT IS FABRICATED.
08 43 13 - ALUMINUM-FRAMED STOREFRONTS FOR INTERIOR GLASS TYPES	4. ACOUSTIC GLAZING: 08 80 00 - GLAZING TYPE 4 GLASS INSTALLED AT ALL PANELS OF FRAME.
	5. SECURITY STRENGTHENED GLAZING: 08 80 00 - GLAZING COORDINATE GLASS TYPE 5 LOCATIONS AS REQUIRED PER SPECIFICATIONS.

REMARKS: GENERAL NOTES	
A. PROVIDE INSULATION, WEATHERSTRIPPING AND THRESHOLD AT EXTERIOR DOORS.	
B. ALL EXTERIOR HOLLOW METAL DOORS AND FRAMES TO BE GALVANIZED UNLESS NOTED OTHERWISE.	
C. ELECTRICAL (28 00 00) SHALL INSTALL FLEXIBLE CONDUIT IN ALL FRAMES THAT HAVE DOOR POSITION SENSORS AND/OR ACCESS CONTROL DEVICES. COORDINATE CONDUIT REQUIRED & LOCATION WITH ACCESS CONTROL (28 00 00).	
D. ALL EXTERIOR DOOR FRAMES SHALL BE PREPARED TO RECEIVE DOOR POSITION INDICATORS AND/OR ACCESS CONTROL DEVICES AS IDENTIFIED IN THE HARDWARE SET. REFER TO SPECIFICATION SECTIONS: 08 71 00 - DOOR HARDWARE AND 28 00 00 - ACCESS CONTROL.	
E. REFER TO FLOOR PLANS FOR DOUBLE EGRESS DOOR FRAMES.	
F. REFER TO MECHANICAL DRAWINGS FOR DOORS THAT REQUIRE UNDERCUTTING.	
G. REFER TO DRAWING A7 02 FOR FLOOR TRANSITION DETAILS. COORDINATE LOCATIONS WITH A7 01 - ROOM FINISH SCHEDULE.	
H. ELECTRICAL & DOOR HARDWARE SHALL COORDINATE WITH HOLLOW METAL AND STOREFRONT FOR ACCESS CONTROL WIRING, REQUIREMENTS, PATHING, AND LOCATION.	
I. FIELD VERIFY ROUGH OPENING PRIOR TO FABRICATION - IF ANY DISCREPANCY BRING TO THE NOTICE OF THE ARCHITECT.	

REMARKS: SPECIAL CONDITION NOTES	
1. PROVIDE FULL ACOUSTICAL PERIMETER GASKETING SYSTEM. REFER TO SPECIFICATION SECTION 08 71 00 - DOOR HARDWARE.	
2. PROVIDE FULL ACOUSTICAL PERIMETER GASKETING SYSTEM AND SWEEPS. REFER TO SPECIFICATION SECTION 08 71 00 - DOOR HARDWARE.	
3. PROVIDE ACOUSTIC DOOR, HARDWARE AND GLAZING. REFER TO SPECIFICATION SECTIONS: 08 71 00 - DOOR HARDWARE AND 08 80 00 - GLAZING.	
4. PROVIDE MAGNETIC HOLD OPEN. REFER TO SPECIFICATION SECTION 26 00 00 - ELECTRICAL.	
5. (NOTE NOT USED)	
6. PROVIDE DOOR POSITION SENSOR. REFER TO SPECIFICATION SECTIONS: 08 71 00 - DOOR HARDWARE AND 28 00 00 - ACCESS CONTROL.	
7. REQUEST TO EXIT PROVIDED IN DOOR HARDWARE BY SECTION: 08 71 00. COORDINATE WITH DOOR HARDWARE SUPPLIER.	
8. PROVIDE CARD READER. REFER TO SPECIFICATION SECTIONS: 08 71 00 - DOOR HARDWARE AND 28 00 00 - ACCESS CONTROL.	
9. PROVIDE ALUMINUM THRESHOLD. REFER TO SPECIFICATION SECTION 08 71 00 - DOOR HARDWARE.	
10. PROVIDE HARDWARE THAT IS LOCKABLE ON BOTH SIDES.	
11. UNDER CUT DOOR PER MECHANICAL REQUIREMENTS.	
12. DOOR OPERATOR	
13. REFER TO SPECIFICATION SECTION 08 88 60 - FIRE-RATED GLAZING AND FRAMING SYSTEMS.	
14. DOOR SIZE REFERS TO ROUGH OPENING HEIGHT AND WIDTH. COORDINATE WITH MFR.	
15. ELECTRIFIED DOOR, CARD ACCESS REQUIRED FROM EITHER SIDE. DOOR CAN BE DOGGED OPEN FOR EXTENDED PERIODS OF TIME BY ACCESS CONTROL SYSTEM.	
16. GLASS APPLIED SIGNAGE. REFER TO SIGNAGE DOCUMENTS FOR MORE INFORMATION.	



KEYPLAN





179 FORBES STREET,
RIVERSIDE, RI 02915

KEYNOTE LEGEND:

- 08 87 00.01 GLAZING SURFACE FILM TYPE 1
- 09 29 00.01 5/8 INCH OSB/PSUM BOARD - LEVEL 4 FINISH - 1 LAYER
- 09 65 13.01 RUBBER BASE - 4 INCH
- 09 84 00.11 ACOUSTICAL PANEL - WALL MOUNTED - FABRIC WRAPPED - TYPE 1
- 09 91 00.01 PAINT - SEE SCHEDULE
- 10 14 00.02 INTERIOR SIGNAGE - VINYL WALL GRAPHIC
- 12 24 00.02 ROLLER SHADE - ELECTRICALLY OPERATED

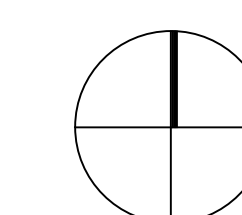
GENERAL NOTES:

1. NOT ALL POWER AND DATA OUTLET/ SWITCHING LOCATIONS SHOWN. COORDINATE WITH ELECTRICAL AND TECHNOLOGY DRAWINGS FOR ALL LOCATIONS.
2. REFER TO DETAILS ON A7.51 FOR FIRE EXTINGUISHER DETAILS AND MOUNTING HEIGHTS.
3. REFERENCE TOILET ACCESSORIES LEGEND AND SCHEDULE ON DRAWING A8.31 FOR ADDITIONAL INFORMATION.
4. WHERE EXPOSED, ALL STRUCTURAL MEMBERS & MEPP SHALL RECEIVE PAINTED FINISH, U.N.O. HORIZONTAL PAINT TRANSITION LINE TO BE COORDINATED ON WALLS OF SPACES WITH EXPOSED DECKING.

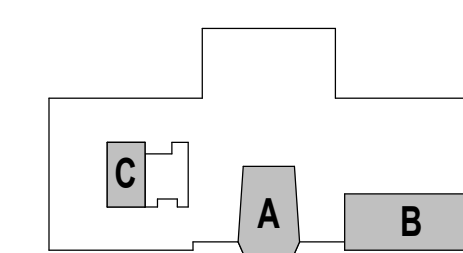
ADDENDUM #3 ADD-3 10.05.2023

100% CONSTRUCTION DOCUMENTS

KEY PLAN NORTH ARROW



KEYPLAN



DRAWING NAME:

MEDIA CENTER INTERIOR ELEVATIONS

DRAWN BY: MS

REVIEWED BY: JQ

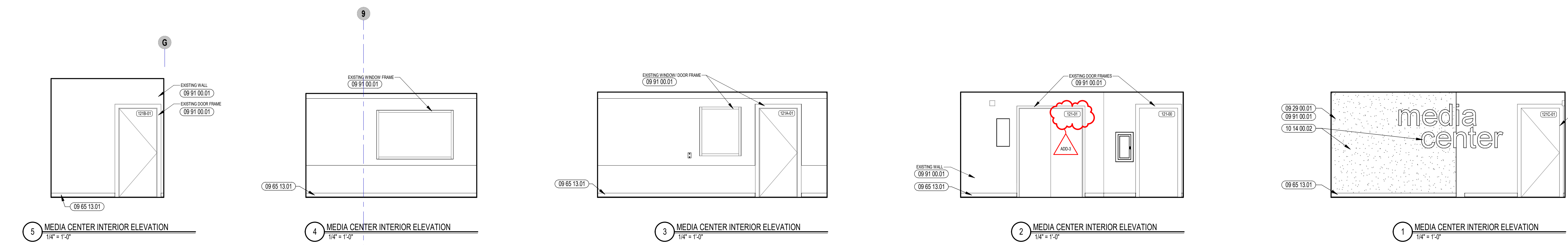
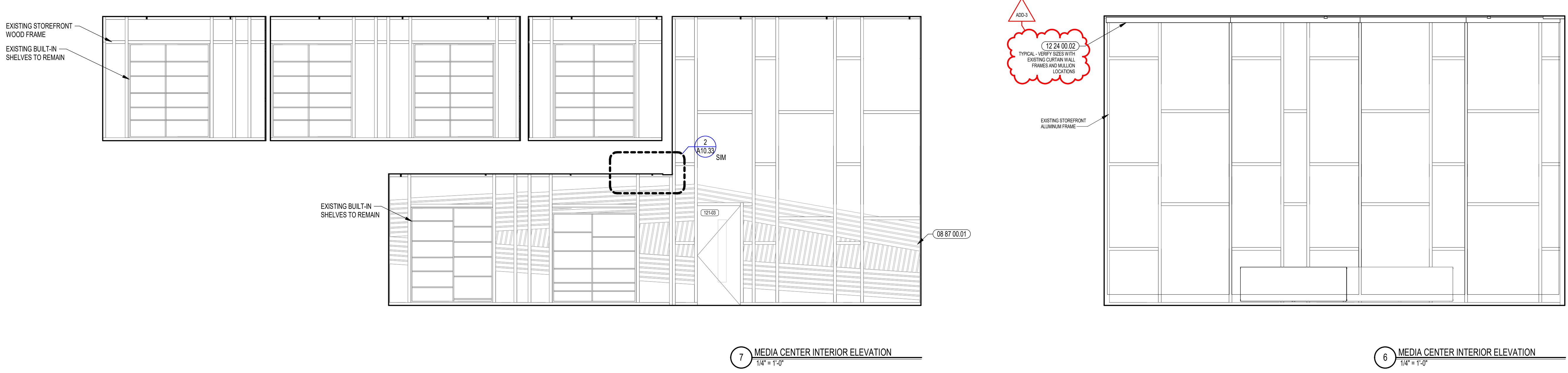
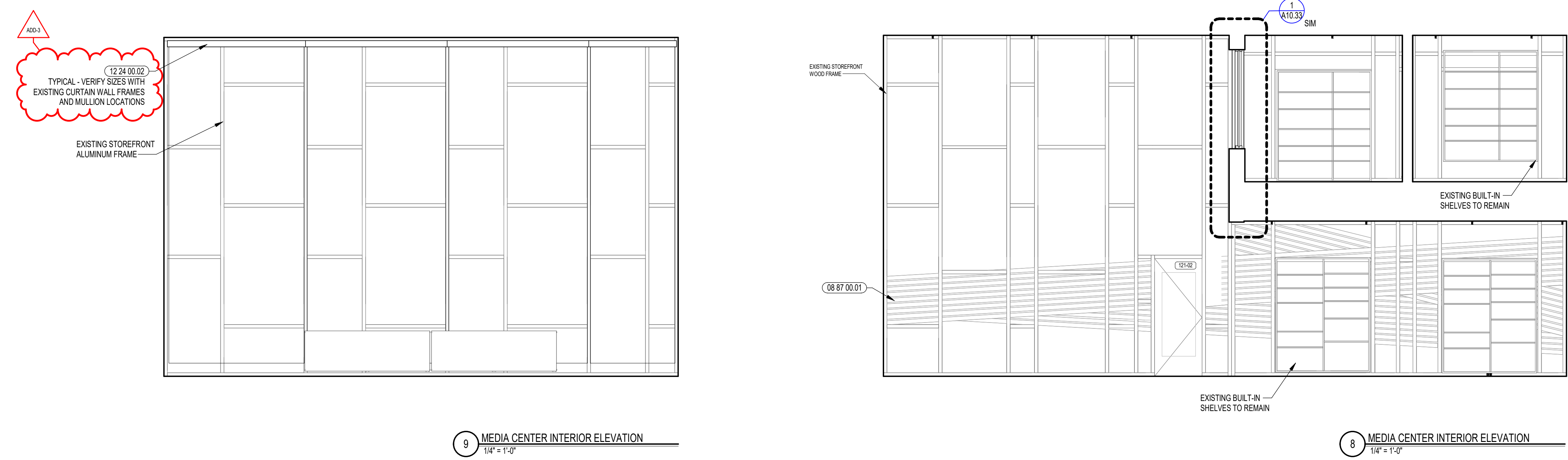
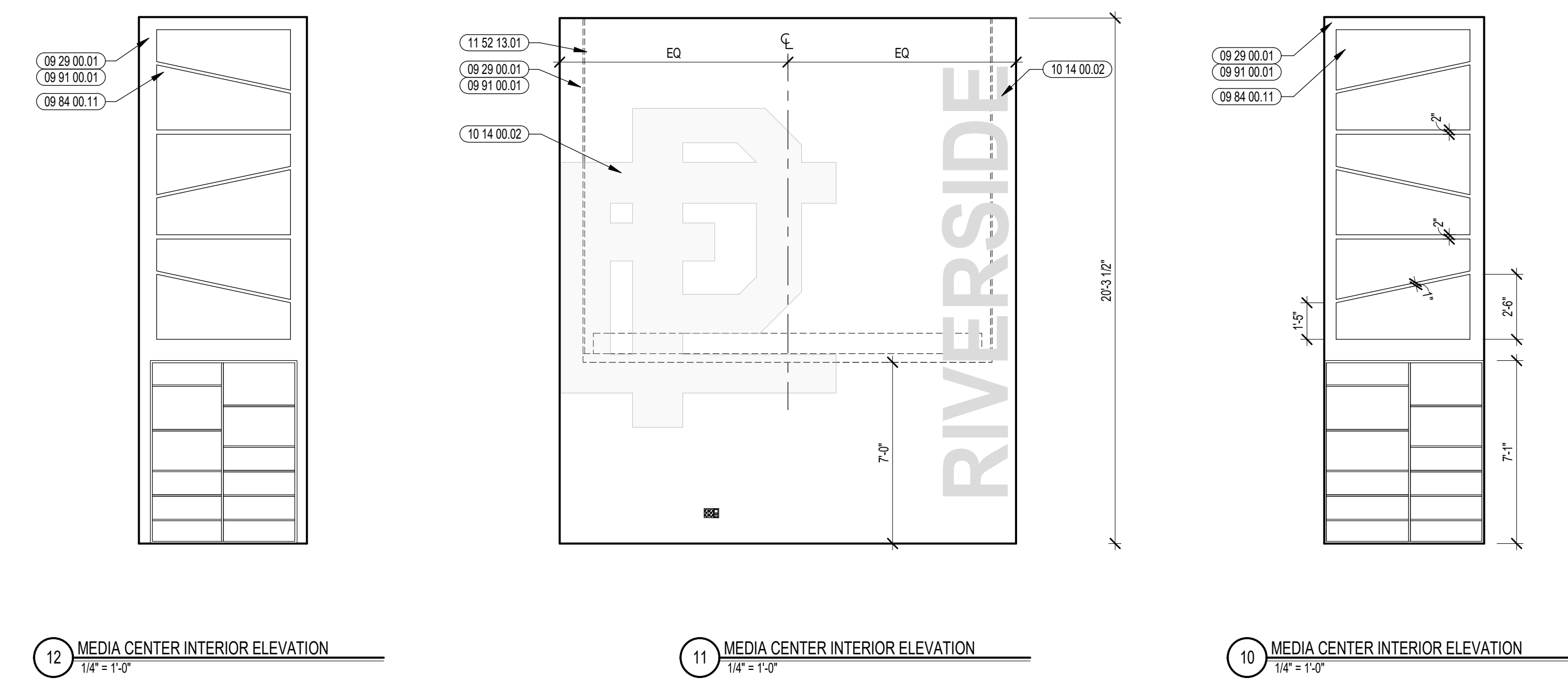
SCALE: AS INDICATED | DRAWING NUMBER:

JOB NO.: 1903.03

DATE: September 15, 2023

A10.31

Copyright © 2017, AI3 Architects, LLC





179 FORBES STREET,
RIVERSIDE, RI 02915

KEYNOTE LEGEND:

- 08 11 13.01 DOOR AND FRAME - SEE DOOR SCHEDULE
- 08 11 13.11 STEEL FRAME - SEE SCHEDULE FOR TYPES
- 08 14 16.01 SOLID CORE FLUSH WOOD DOOR - SEE DOOR SCHEDULE
- 08 43 13.01 ALUMINUM STOREFRONT FRAME
- 08 80 00.04 GLASS TYPE 4
- 08 80 00.05 GLASS TYPE 5
- 08 87 00.01 GLAZING SURFACE FILM TYPE 1
- 09 29 00.01 5/8 INCH GYPSUM BOARD - LEVEL 4 FINISH - 1 LAYER
- 09 29 00.02 REVEAL TRIM - PAINTABLE 1 INCH
- 09 65 13.01 RUBBER BASE - 4 INCH
- 09 72 00.01 VINYL WALL COVERING - TYPE 1
- 09 91 00.01 PAINT - SEE SCHEDULE
- 12 30 00.03 TALL CABINET

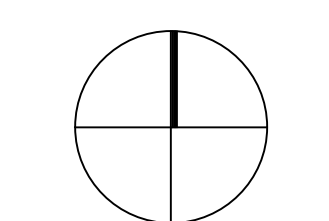
GENERAL NOTES:

1. NOT ALL POWER AND DATA OUTLET/ SWITCHING LOCATIONS SHOWN. COORDINATE WITH ELECTRICAL AND TECHNOLOGY DRAWINGS FOR ALL LOCATIONS.
2. REFER TO DETAILS ON A7.51 FOR FIRE EXTINGUISHER DETAILS AND MOUNTING HEIGHTS.
3. REFERENCE TOILET ACCESSORIES LEGEND AND SCHEDULE ON DRAWING A8.31 FOR ADDITIONAL INFORMATION.
4. WHERE EXPOSED, ALL STRUCTURAL MEMBERS & MEPP SHALL RECEIVE PAINTED FINISH, U.N.O. HORIZONTAL PAINT TRANSITION LINE TO BE COORDINATED ON WALLS OF SPACES WITH EXPOSED DECKING.

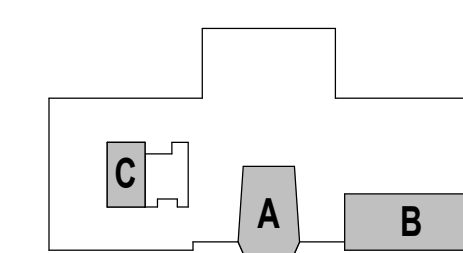
ADDENDUM #3 ADD-3 10.05.2023

100% CONSTRUCTION DOCUMENTS

KEY PLAN NORTH ARROW



KEYPLAN



DRAWING NAME:

MEDIA CENTER INTERIOR ELEVATIONS

DRAWN BY: MS

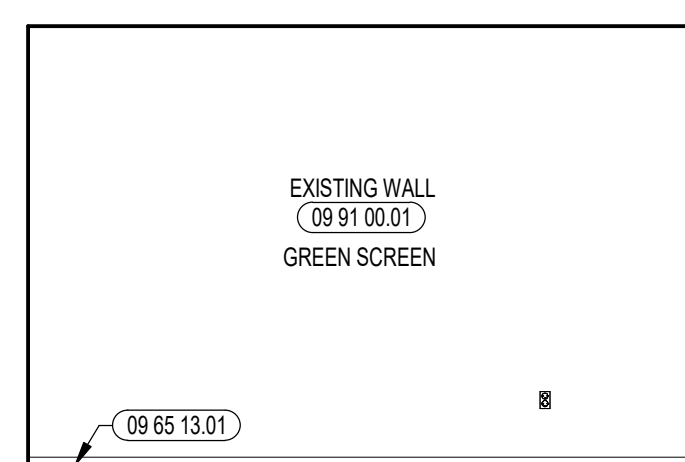
REVIEWED BY: JQ

SCALE: AS INDICATED | DRAWING NUMBER:

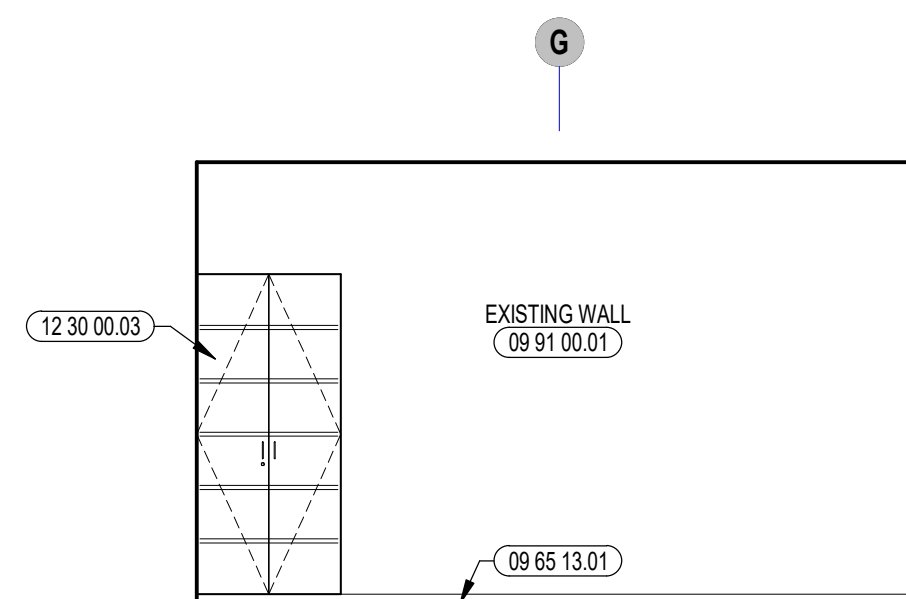
JOB NO.: 1903.03

DATE: September 15, 2023

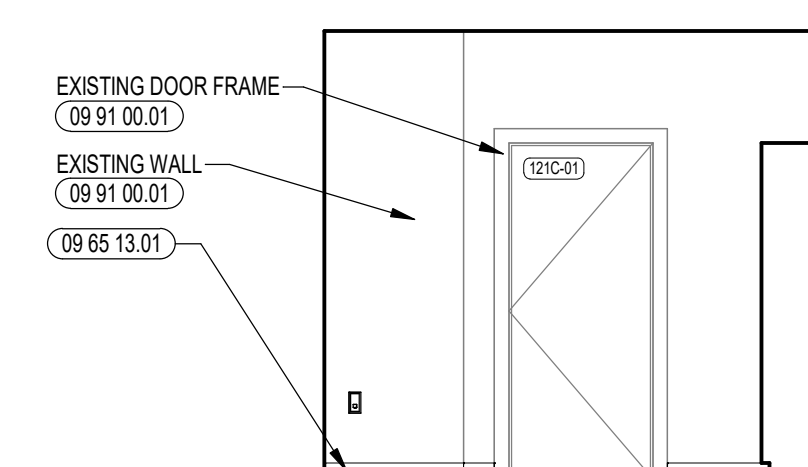
A10.32



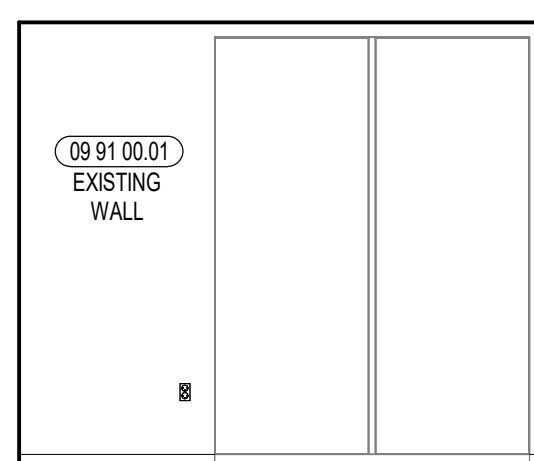
12 GREEN ROOM INTERIOR ELEVATION
1/4" = 1'-0"



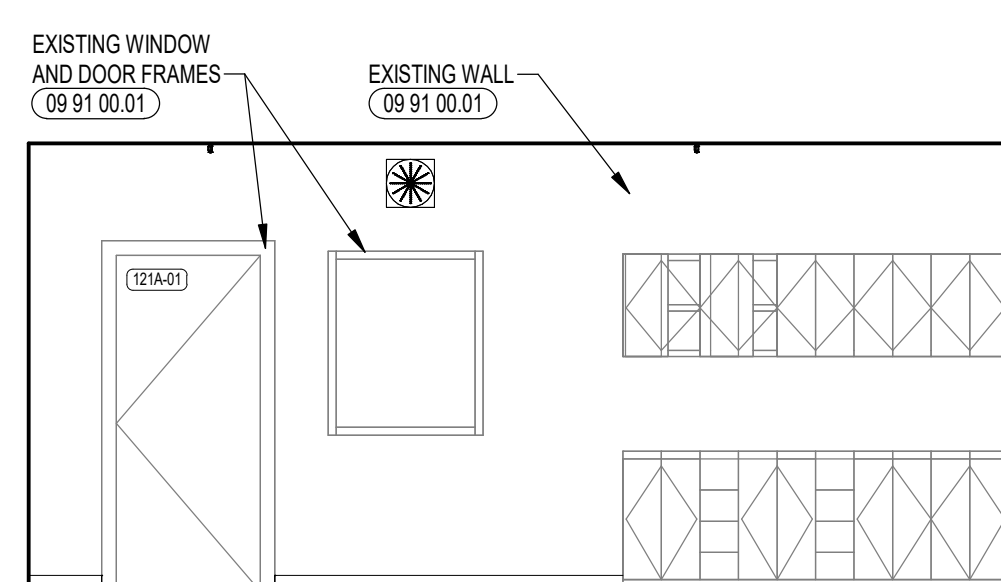
11 GREEN ROOM INTERIOR ELEVATION
1/4" = 1'-0"



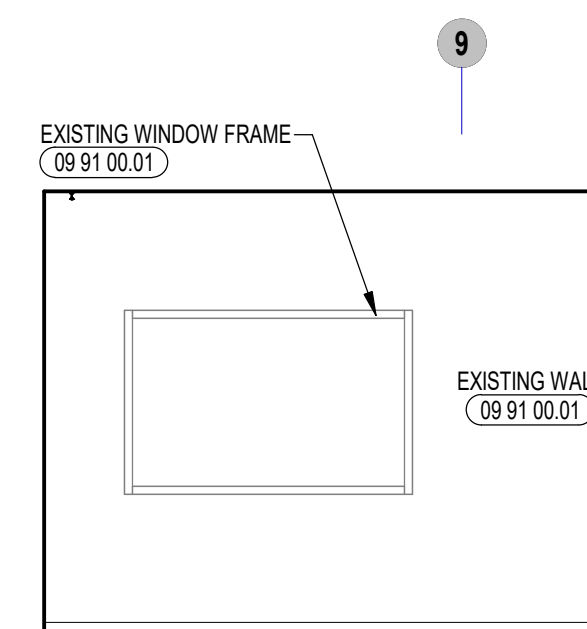
10 GREEN ROOM INTERIOR ELEVATION
1/4" = 1'-0"



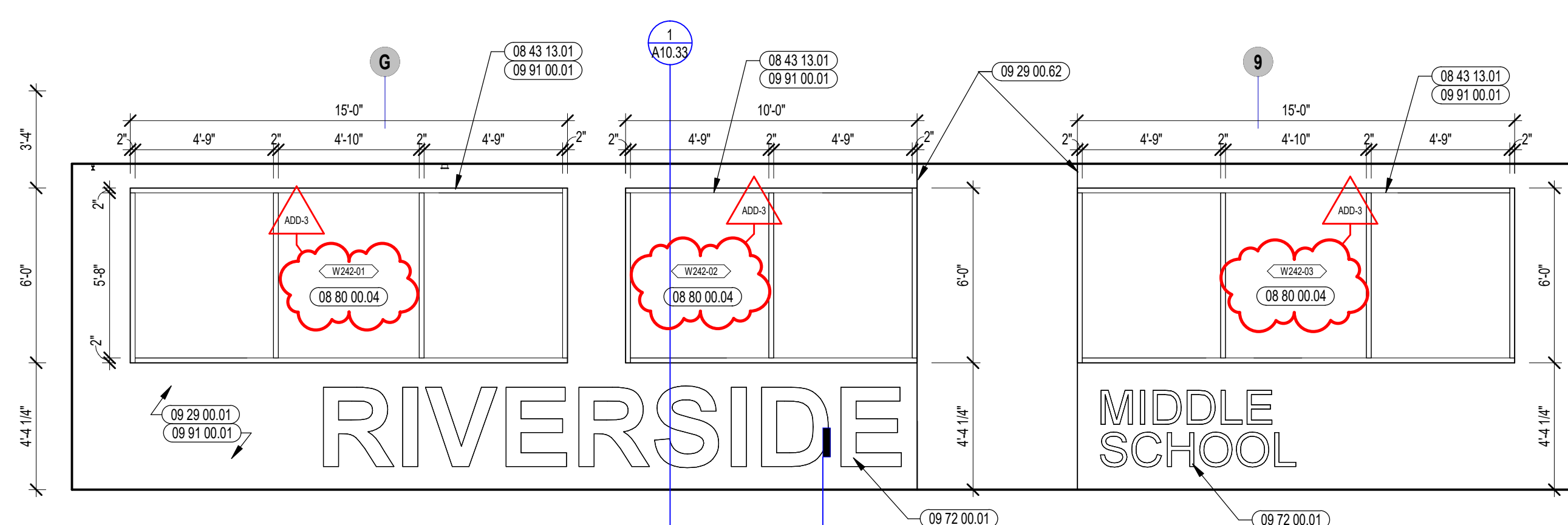
9 LIBRARY WORK ROOM ELEVATION
1/4" = 1'-0"



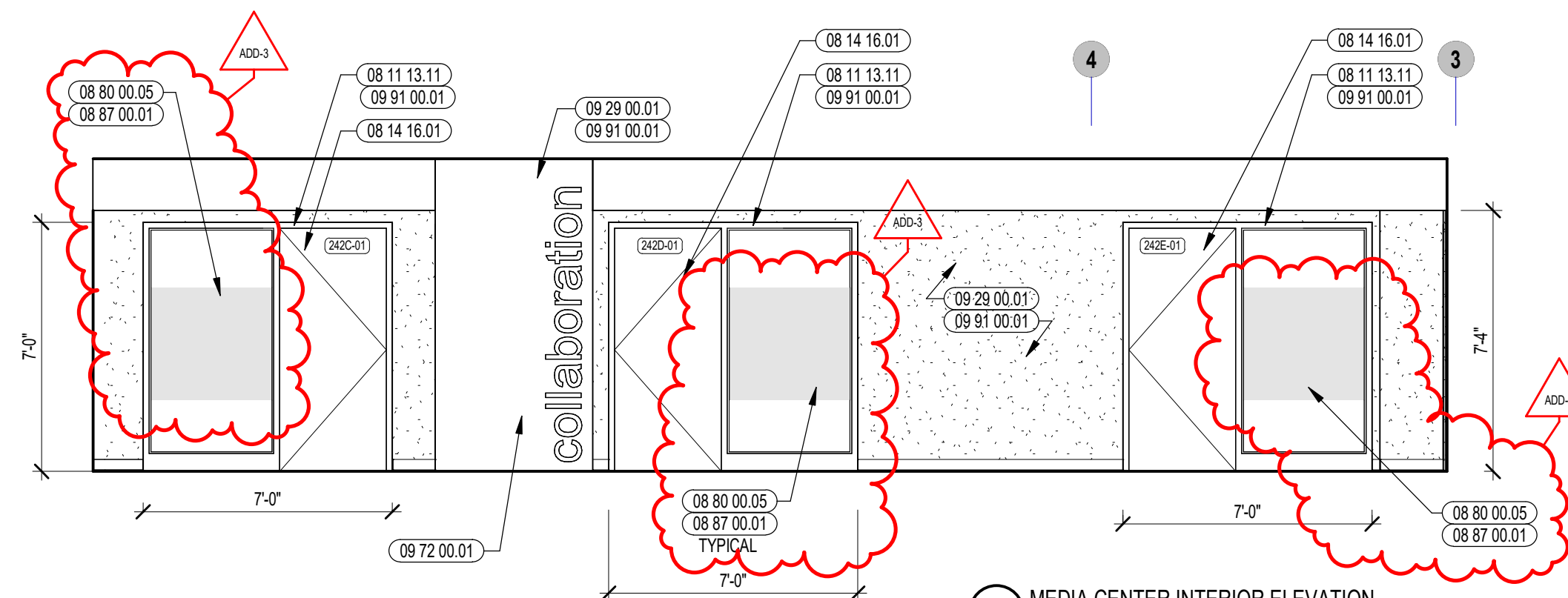
8 LIBRARY WORK ROOM ELEVATION
1/4" = 1'-0"



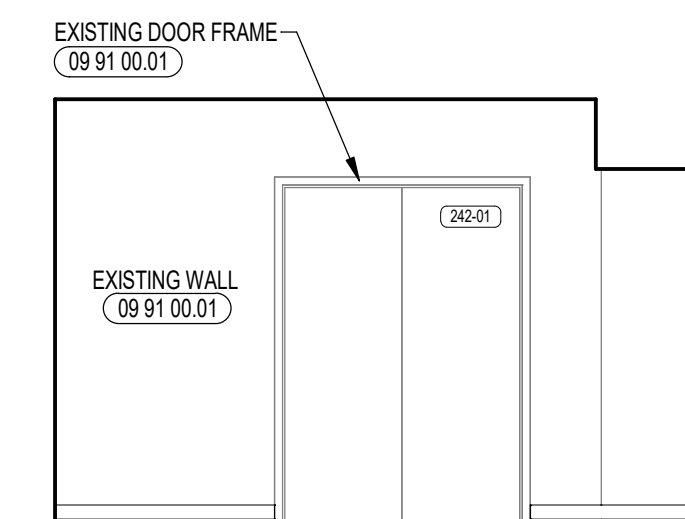
7 LIBRARY WORK ROOM ELEVATION
1/4" = 1'-0"



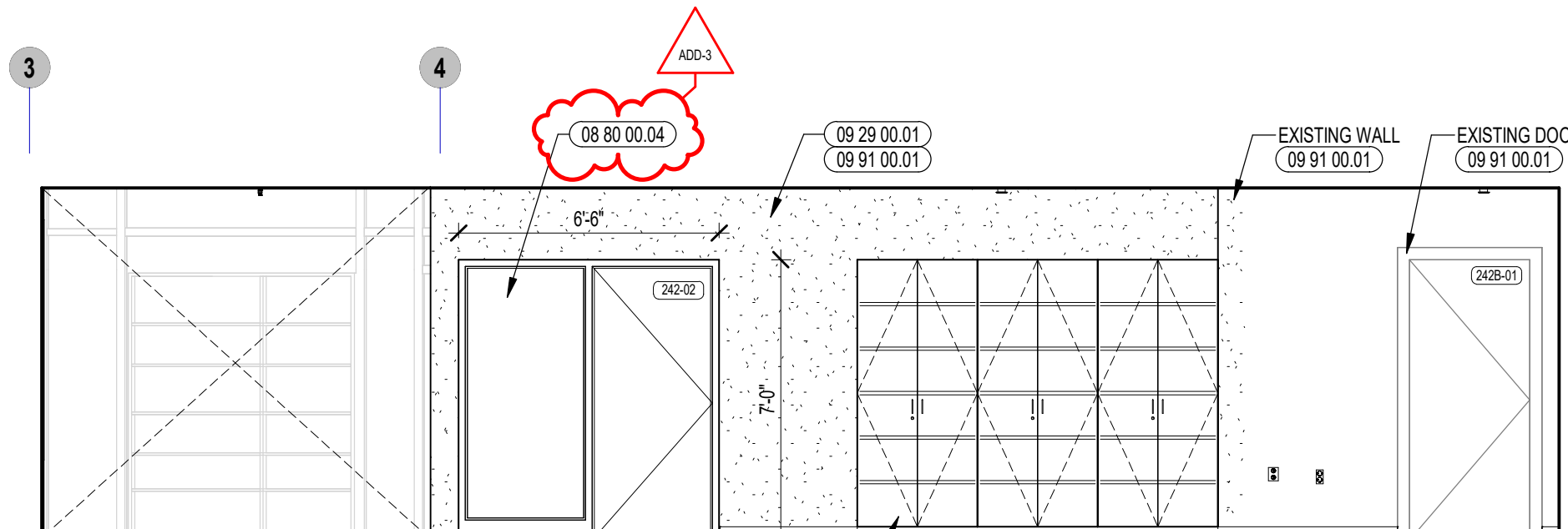
6 MEDIA CENTER INTERIOR ELEVATION
1/4" = 1'-0"



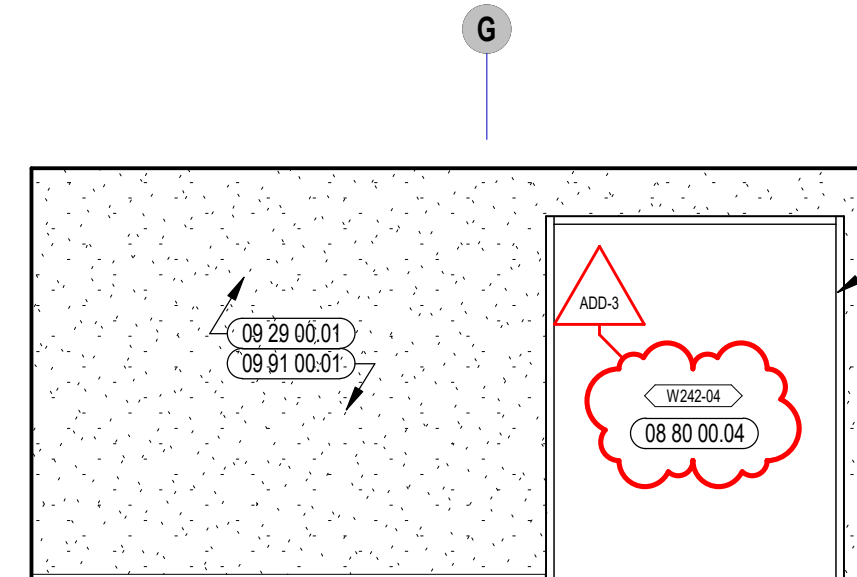
5 MEDIA CENTER INTERIOR ELEVATION
1/4" = 1'-0"



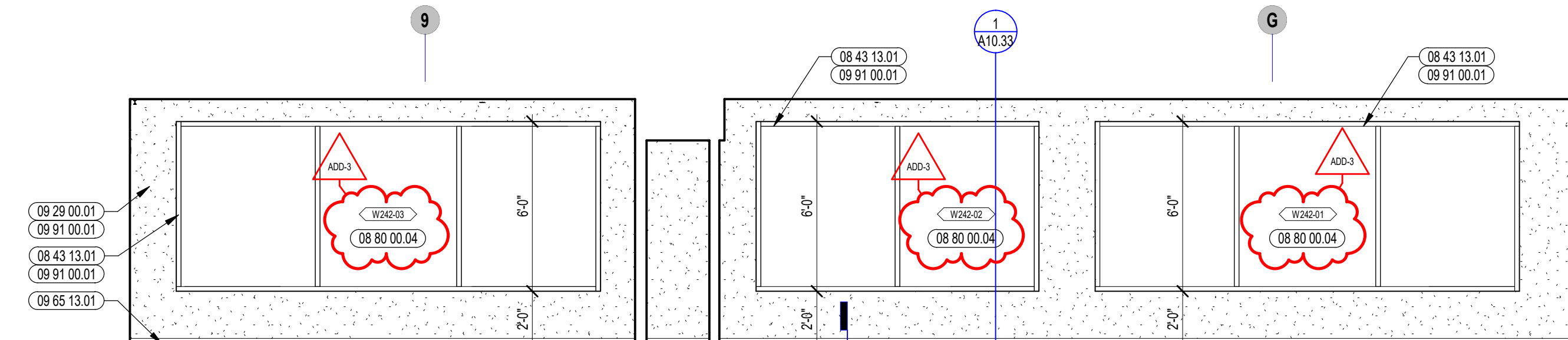
4 MEDIA CENTER INTERIOR ELEVATION
1/4" = 1'-0"



3 MEDIA CENTER INTERIOR ELEVATION
1/4" = 1'-0"



2 MEDIA CENTER INTERIOR ELEVATION
1/4" = 1'-0"



1 MEDIA CENTER INTERIOR ELEVATION
1/4" = 1'-0"