

March 27, 2023

Project Name: PEARL JUNIOR HIGH MULTIPURPOSE
Project No: 22-056

ADDENDUM NO. 02

NOTICE TO ALL DOCUMENT HOLDERS:

The following additions, deletions, changes and clarifications to the drawings and specifications are to be included as part of the Contract Documents.

DRAWINGS

ITEM NO. 01

REPLACE the following sheets with attached revised sheets.

- | | | |
|------|----------------------------|---|
| A002 | ENLARGED SITE PLAN | <ul style="list-style-type: none">Added scope note for existing HVAC unit and Pad. |
| F001 | GENERAL FIRE SPRINKLER | <ul style="list-style-type: none">Updated Fire Sprinkler Flow Data |
| E2.0 | POWER PLAN FIRST FLOOR | <ul style="list-style-type: none">Relocated panel in the electrical room. |
| E4.0 | AUXILIARY PLAN FIRST FLOOR | <ul style="list-style-type: none">Added tamper and flow switches to the fire alarm. |

ITEM NO. 02

ADD general note to the following sheets with attached revised sheets.

- | | | |
|------|--|---|
| M103 | OVERALL FIRST FLOOR PLAN HAVE NEW WORK PLANS | <ul style="list-style-type: none">Add general note to sheet M103 that states "Disconnect and remove existing HVAC Unit on the Northwest corner of the gymnasium building prior to the construction of the new site stair and sidewalk. Install and reconnect existing HVAC Unit in similar location prior to the construction of new site stair and sidewalk. |
|------|--|---|

SPECIFICATIONS

ITEM NO. 03

REPLACE the following project manual sheets with the attached revised sheets.

- | | | |
|---------|---------------------|--|
| 07.4213 | METAL WALL PANELS | <ul style="list-style-type: none">Clarify metal panel thickness and metal gauge thickness. |
| 11.6623 | GYMANSIUM EQUIPMENT | <ul style="list-style-type: none">Clarify wall panel material. |
| 00.0110 | TABLE OF CONTENTS | <ul style="list-style-type: none">Added the Window Shade Section to the project Manual. |

- ITEM NO. 04** **ADD** the following specification sections to the project Manual.
12.2400 WINDOW SHADES
- Clarify the type of window treatment at new windows.

GENERAL CLARIFICATIONS

ITEM NO. 05: The following are miscellaneous clarification items:

QUESTION NO. 01 Is all sitework for the building considered to be alternate #3?

ANSWER NO. 01 No, refer to sheet A001 for the extents of the sitework included in alternates 1 and 3. Other sitework will fall under base bid.

QUESTION NO. 02 Is the Project Wage Rate Sheet (Form HUD-4720) the only supplemental document required to be included with the bid proposal? Please confirm.

ANSWER NO. 02 Bid security is also required. See section 00.2113 part 1, paragraph 6 "bid security".

QUESTION NO. 03 The documents indicate access to the site is available 24/7. If the project is limited to only 400 days, will the contractor be expected to develop a schedule that indicates after-hours or weekend work?

ANSWER NO. 03 Yes, the contractor is expected to develop a work plan that meets the required schedule.

Encl: Drawings (5 Sheets - 24x36):
 Project Manual Sheets: (3 sheets – 8.5 x 11):

cc: All Document Holders

FIRE SPRINKLER FLOW DATA:

78 P.S.I. - STATIC
 71 P.S.I. - RESIDUAL
 1,275 GPM FLOW

FLOW DATA PROVIDED BY CITY OF PEARL TEST PERFORMED MARCH 2023. FIRE HYDRANT (PRESSURE READINGS) IS LOCATED INSIDE THE GROUNDS. THE SECOND FIRE HYDRANT (FLOWING PITOT TUBE READING) IS LOCATED AT SITE ENTRANCE.

CONTRACTOR'S HYDRAULIC CALCULATIONS SHALL PROVIDE FOR A MINIMUM OF 10 PSI SAFETY MARGIN.

CONTRACTOR SHALL PERFORM HIS OWN FLOW TEST WITHIN SEVEN (7) DAYS OF NOTICE TO PROCEED FOR USE IN HYDRAULIC CALCULATIONS.

2

LEGEND - FIRE SPRINKLER

MARK	DESCRIPTION
-----SP-----	EXISTING FIRE SPRINKLER PIPING
-----F-----	NEW SITE FIRE PROTECTION WATER PIPING
-----SP-----	NEW FIRE SPRINKLER PIPING
[Box with diagonal lines]	AREA SERVED BY WET PIPE SPRINKLER SYSTEM (INDICATES LIGHT HAZARD AREAS)
[Box with cross-hatch]	AREA SERVED BY WET PIPE SPRINKLER SYSTEM (ORDINARY HAZARD GROUP 1)
[Circle with dot]	POINT OF CONNECTION TO EXISTING
[Arrow pointing to circle]	NEW FIRE DEPARTMENT CONNECTION
[D-shape]	NEW ELECTRIC ALARM BELL
[Circle with X]	UPRIGHT EXPOSED SPRINKLER HEAD W/HEAVY DUTY GUARD

CODE REVIEW	
DESIGN CODE	2018 INTERNATIONAL CODE COUNCIL (ICC)
FIRE SPRINKLER	NFPA 13 - 2016

DRAWING INDEX - FIRE SPRINKLER	
Sheet Number	Sheet Name
F001	GENERAL FIRE SPRINKLER
FD101	OVERALL BASEMENT FIRE SRPKINKLER DEMOLITION PLAN
FD102	OVERALL FIRST FLOOR FIRE SPRINKLER DEMOLITION PLAN
F101	OVERALL NEW ADDITION FIRE SPRINKLER NEW WORK PLAN - BASE BID
F102	OVERALL BASEMENT FIRE SPRINKLER NEW WORK PLAN - ALTERNATE 1
F103	OVERALL FIRST FLOOR FIRE SPRINKLER NEW WORK PLAN - ALTERNATE 2
F200	FIRE SPRINKLER SCHEDULES & DETAILS



PPSD JH
 MULTIPURPOSE

200 Mary Ann Drive
 Pearl, MS 39208



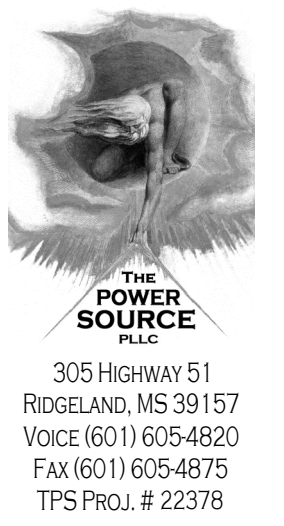
02/21/23

CONSTRUCTION
 DOCUMENTS
 WBA # 22-056

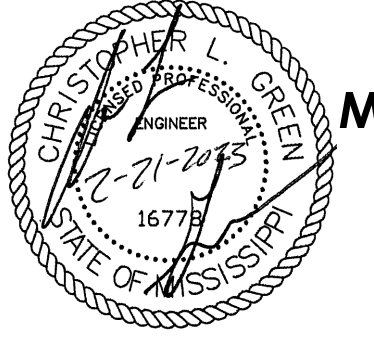
REVISIONS		
NO.	DESCRIPTION	DATE
2	Addendum #2	3/27/23

GSK
 MECHANICAL
 Consulting Engineering
 221 Park Court - Suite #111, Hattiesburg, MS 39401
 P: 601.605.2930 F: 844.493.3111
 www.gskmech.com
GSK#: 116-059

F001
 GENERAL FIRE SPRINKLER

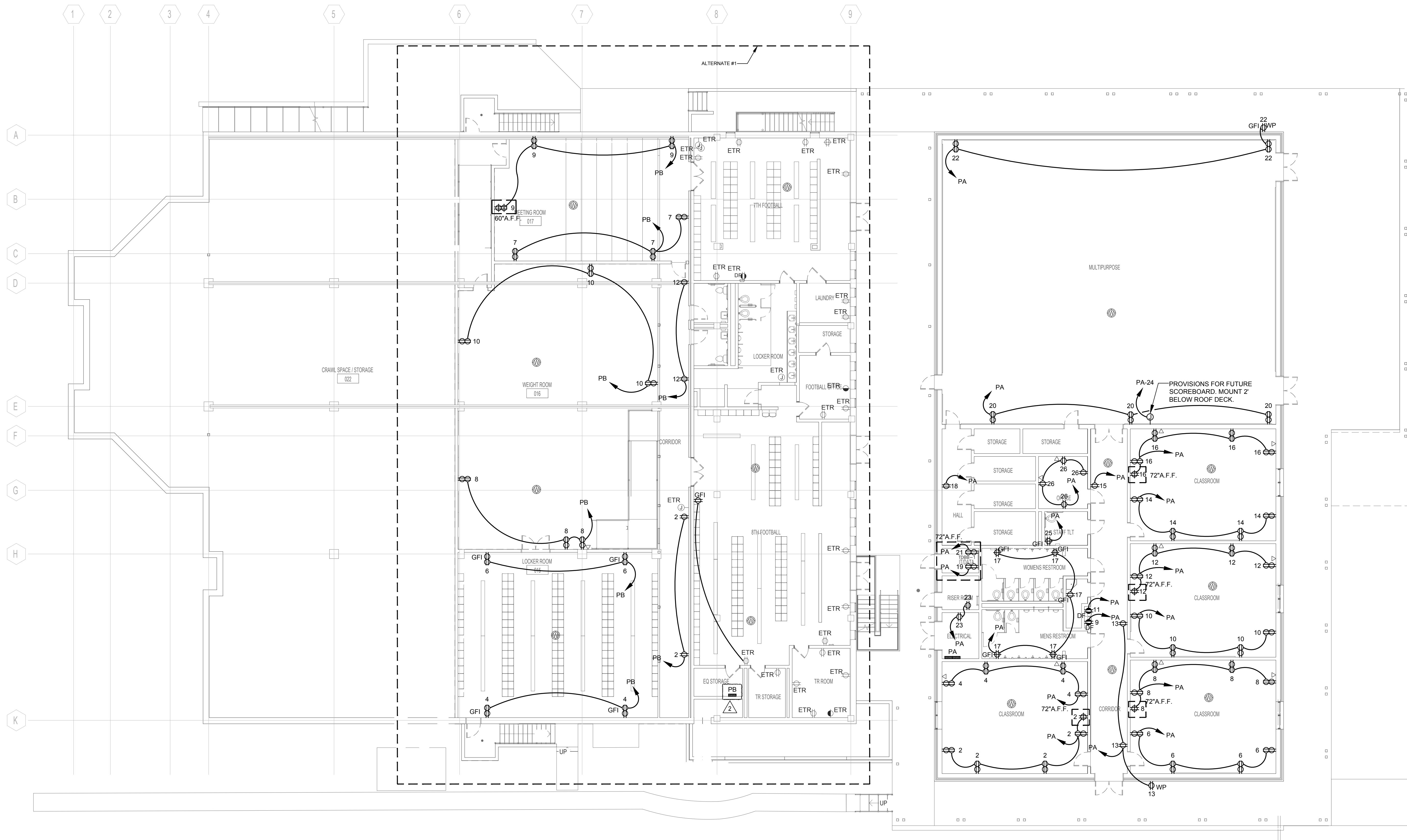


305 HIGHWAY 51
RIDGELAND, MS 39157
VOICE (601) 605-4820
FAX (601) 605-4875
TPS PROJ. # 22378



PPSD JH
MULTIPURPOSE

200 Mary Ann Drive
Pearl, MS 39208



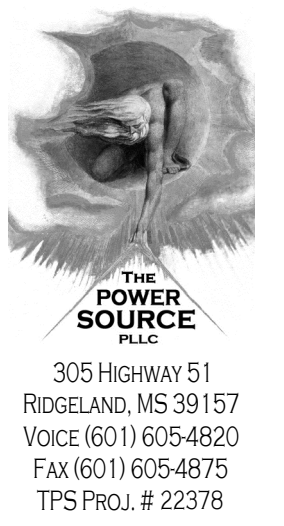
1 POWER PLAN - FIRST FLOOR
E2.0 Scale: 3/32" = 1'-0"

2/21/2023

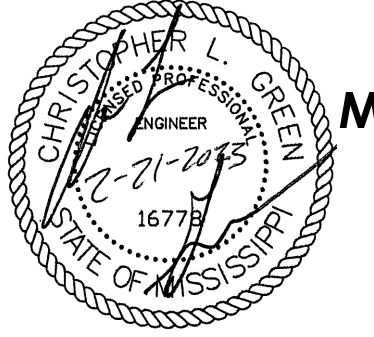
CONSTRUCTION
DEVELOPMENT
WBA # 22-056

NO.	DESCRIPTION	DATE
1	ADDENDUM #2	3/27/2023

E2.0
POWER PLAN
FIRST FLOOR

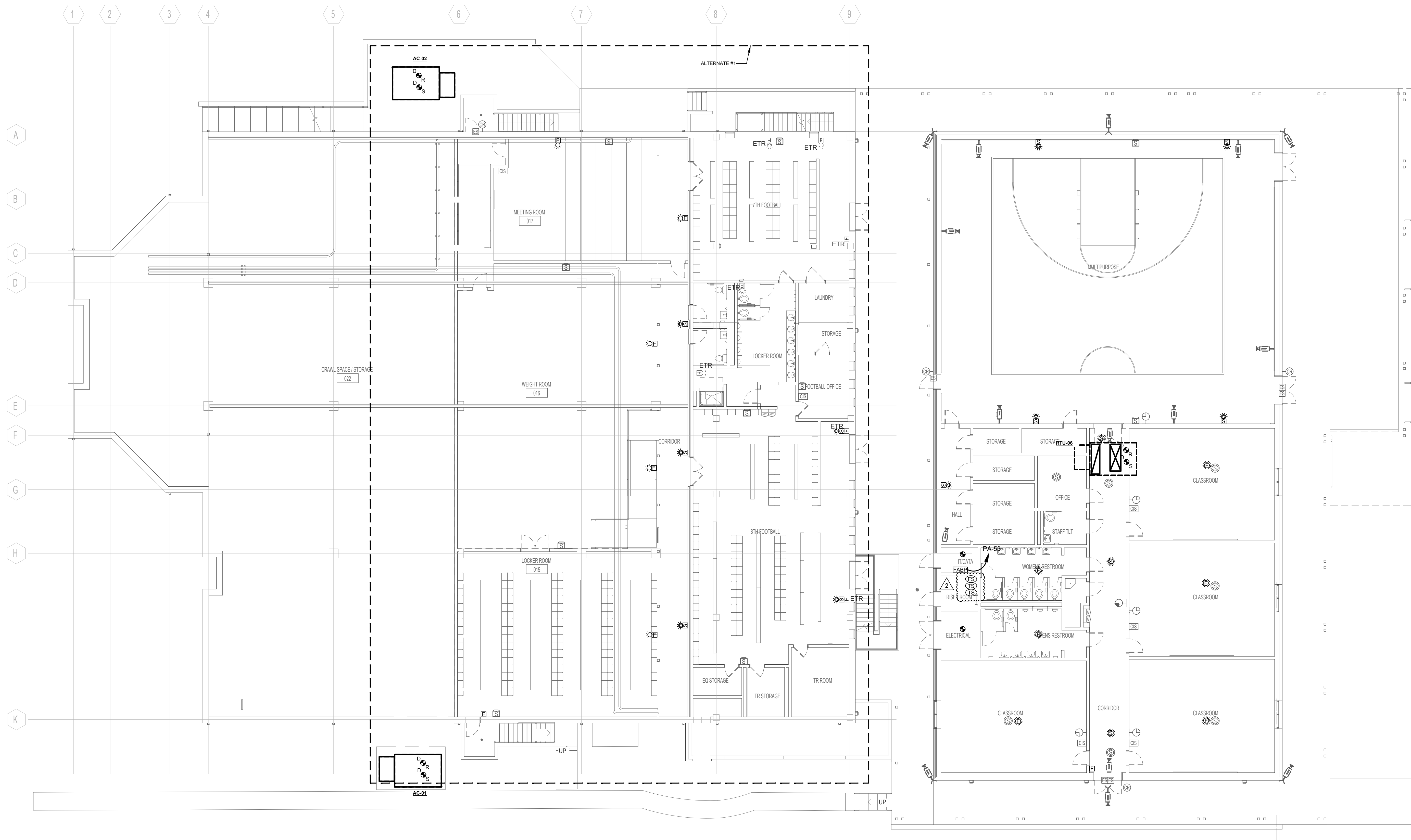


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2/21/2023

CONSTRUCTION
DEVELOPMENT
WBA # 22-056

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #2	3/27/2023

1 AUXILIARY PLAN - FIRST FLOOR
E4.0 Scale: 3/32" = 1'-0"

E4.0
AUXILIARY PLAN
FIRST FLOOR

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- 01.2200 – Unit Prices
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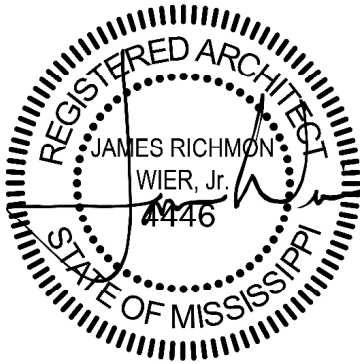
- 33.2710 – High Density Corrugated Polyethylene Pipe
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DRAWINGS

See Index on Sheet R101

END OF SECTION



Metal Wall Panels

PART 1 GENERAL

1. SECTION INCLUDES
 - A. Manufactured metal panels for exterior wall panels, interior liner panels, soffit panels, and subgirt framing assembly, with insulation, related flashings, and accessory components.
2. RELATED REQUIREMENTS
 - A. Section 05.4000 - Cold-Formed Metal Framing: Wall panel substrate.
 - B. Section 05.4000 - Cold-Formed Metal Framing: Water-resistive barrier under wall panels.
 - C. Section 06.1000 - Rough Carpentry: Water-resistive barrier under wall panels.
 - D. Section 07.2500 - Weather Barriers: Weather barrier under wall panels.
 - E. Section 07.9200 - Joint Sealants: Sealing joints between metal wall panel system and adjacent construction.
 - F. Section 09.2116 - Gypsum Board Assemblies: Wall panel substrate.
3. REFERENCE STANDARDS
 - A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels 2013.
 - B. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document) 2015.
 - C. ASCE 7 - Minimum Design Loads for Buildings and Other Structures 2010, with 2013 Supplements and Errata.
 - D. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate 2014.
 - E. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate [Metric] 2014.
4. SUBMITTALS
 - A. See Section 01.3000 - Administrative Requirements, for submittal procedures.
 - B. Shop Drawings: Indicate dimensions, layout, joints, construction details, _____, and methods of anchorage.
 - C. Samples: Submit two samples of wall panel and soffit panel, 12 inch by 12 inch (305 mm by 305 mm) in size illustrating finish color, sheen, and texture.
 - D. Manufacturer's Qualification Statement.
 - E. Installer's Qualification Statement.
5. QUALITY ASSURANCE
 - A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
 - B. Installer Qualifications: Company specializing in installing products of the type specified in this section with minimum three years of documented experience.
6. MOCK-UP
 - A. Construct mock-up, 9 feet (____ m) long by 9 feet (____ m) wide; include panel and soffit system, glazing, attachments to building frame, associated vapor retarder and air seal materials, weep drainage system, sealants and seals, related insulation, and _____ in mock-up.
7. DELIVERY, STORAGE, AND HANDLING
 - A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
 - B. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.
 - C. Prevent contact with materials that may cause discoloration or staining of products.
8. WARRANTY
 - A. See Section 01.7800 - Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

1. MANUFACTURERS

A. Metal Wall Panels - Concealed Fasteners:

1. Centria; Versawall Flat: www.centria.com/#sle.
2. Substitutions: See Section 01.6000 - Product Requirements.

2. MANUFACTURED METAL PANELS

A. Wall Panel System: Factory fabricated prefinished metal panel system, site assembled.

1. Provide exterior wall panels, interior liner panels, soffit panels, and subgirt framing assembly.
2. Design and size components to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of wall.
3. Maximum Allowable Deflection of Panel: $L/180$ for length(L) of span.
4. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
5. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
6. Fabrication: Formed true to shape, accurate in size, square, and free from distortion or defects; pieces of longest practical lengths.
7. Corners: Factory-fabricated in one continuous piece with minimum 2 inch (51 mm) returns.

B. Exterior Wall Panels:

1. Profile: Vertical; style as indicated.
2. Side Seams: Double-interlocked, tight-fitting, sealed with continuous gaskets.
3. Panel Width: 36 inches (___ mm).
4. Panel Thickness: 2"
5. Sheet Metal Gage/thickness: 22 min.
6. Color: As selected by Architect from manufacturer's standard line.
7. Texture: Embossed
8. Surface Pattern:

C. Internal and External Corners: Same material, thickness, and finish as exterior sheets; profile to suit system; shop cut and factory mitered to required angles.

D. Expansion Joints: Same material, thickness and finish as exterior sheets; ___ gage, ___ inch (___ mm) thick; manufacturer's standard brake formed type, of profile to suit system.

E. Trim: Same material, thickness and finish as exterior sheets; brake formed to required profiles.

F. Anchors: Galvanized steel.

3. MATERIALS

A. Precoated Aluminum Sheet: ASTM B209 (ASTM B209M), 3105 alloy, O temper, smooth surface texture; continuous-coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.

B. Select materials with surface flatness, smoothness, and lack of surface blemishes where exposed to view in finished system.

4. ACCESSORIES

A. Gaskets: Manufacturer's standard type suitable for use with system, permanently resilient; ultraviolet and ozone resistant.

B. Concealed Sealants: Non-curing butyl sealant or tape sealant.

- C. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
 - 1. Manufacturers:
 - a. Franklin International, Inc; Titebond WeatherMaster Metal Roof Sealant: www.titebond.com/#sle.
 - b. Substitutions: See Section 01.6000 - Product Requirements.
- D. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers, steel, hot dip galvanized. Fastener cap same color as exterior panel.
 - 1. Metal-to-Metal Fasteners: Self-drilling, self-tapping screws.
 - 2. Manufacturers:
 - a. ITW Commercial Construction North America; Teks Select Series, _____: www.ITWBuildex.com/#sle.
 - b. Substitutions: See Section 01.6000 - Product Requirements.
- E. Field Touch-up Paint: As recommended by panel manufacturer.

PART 3 EXECUTION

- 1. EXAMINATION
 - A. Verify that building framing members are ready to receive panels.
 - B. Verify that water-resistive barrier has been installed over substrate completely and correctly.
- 2. PREPARATION
 - A. Install subgirts perpendicular to panel length, securely fastened to substrates and shimmed and leveled to uniform plane. Space at intervals indicated.
- 3. INSTALLATION
 - A. Install panels on walls and soffits in accordance with manufacturer's instructions.
 - B. Protect surfaces in contact with cementitious materials and dissimilar metals with bituminous paint. Allow to dry prior to installation.
 - C. Fasten panels to structural supports; aligned, level, and plumb.
 - D. Locate joints over supports.
 - E. Lap panel ends minimum 2 inches (51 mm).
 - F. Provide expansion joints where indicated.
 - G. Use concealed fasteners unless otherwise approved by Architect.
 - H. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.
- 4. TOLERANCES
 - A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch (1.6 mm).
 - B. Maximum Variation from Plane or Location Indicated on Drawings: 1/4 inch (6.4 mm).
- 5. CLEANING
 - A. Remove site cuttings from finish surfaces.
 - B. Remove protective material from wall panel surfaces.
 - C. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.
 - D. Upon completion of installation, thoroughly clean prefinished aluminum surfaces in accordance with AAMA 609 & 610.

END OF SECTION

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Gymnasium Equipment

PART 1 GENERAL

1. SECTION INCLUDES
 - A. Basketball backboards, goals, and support framing.
 - B. Floor anchors for tensioned elements.
 - C. Floor sleeves for net and goal posts.
 - D. Wall mounted protection pads.
 - E. Volleyball nets and posts.
2. RELATED REQUIREMENTS
 - A. Section 03.3000 - Cast-in-Place Concrete: Concrete floor slab to receive floor sleeves and anchors.
 - B. Section 05.5000 - Metal Fabrications: Secondary structural members supporting gymnasium equipment.
 - C. Section 09.6466 - Wood Athletic Flooring: Gymnasium flooring.
 - D. Section 09.6566 - Resilient Athletic Flooring: Gymnasium flooring.
3. REFERENCE STANDARDS
 - A. AWS D1.1/D1.1M - Structural Welding Code - Steel 2015.
 - B. NFPA 101 - Life Safety Code 2015.
4. ADMINISTRATIVE REQUIREMENTS
 - A. Large Components: Ensure that large components can be moved into final position without damage to other construction.
5. SUBMITTALS
 - A. See Section 01.3000 - Administrative Requirements, for submittal procedures.
 - B. Product Data: Provide manufacturer's data showing configuration, sizes, materials, finishes, hardware, and accessories; include:
 1. Structural steel welder certifications.
 2. Manufacturer's installation instructions.
 - C. Shop Drawings: For custom fabricated equipment indicate, in large scale detail, construction methods; method of attachment or installation; type and gage of metal, hardware, and fittings; plan front elevation; elevations and dimensions; minimum one cross section; utility requirements as to types, sizes, and locations.
 - D. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
6. QUALITY ASSURANCE
 - A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
 - B. Installer Qualifications: Company specializing in performing work of the type specified with minimum three years of experience.
7. DELIVERY, STORAGE, AND HANDLING
 - A. Deliver products to project site in manufacturer's original packaging with factory original labels attached.
 - B. Store products indoors and elevated above floor; prevent warping, twisting, or sagging.
 - C. Store products in accordance with manufacturer's instructions; protect from extremes of weather, temperature, moisture, and other damage.
8. WARRANTY
 - A. See Section 01.7800 - Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

1. MANUFACTURERS
 - A. Gymnasium Equipment:
 1. Draper, Inc: www.draperinc.com/#.
 2. Substitutions: See Section 01.6000 - Product Requirements.
2. GENERAL REQUIREMENTS
 - A. See drawings for sizes and locations, unless noted otherwise.
 - B. Provide mounting plates, brackets, and anchors of sufficient size and strength to securely attach equipment to building structure; comply with requirements of Contract Documents.
 - C. Hardware: Heavy duty steel hardware, as recommended by manufacturer.
 - D. Structural Steel Fabrications: Welded in accordance with AWS D1.1/D1.1M, using certified welders.
3. BASKETBALL
 - A. Basketball System: Backstop assembly, backboard, and goal.
 1. Manufacturers:
 - a. Draper, Inc; Up-Folding Wall Mounted Basketball Backstop - DUW: www.draperinc.com/#sle.
 - b. Substitutions: See Section 01.6000 - Product Requirements.
 - B. Wall-Mounted Backstop Assemblies: Wall-mounted steel frame assembly capable of mounting both rectangular and fan-shaped backboards.
 1. Distance of Backboard From Wall: 9' 6 7/8" inches (____ mm), adjustable.
 2. Framing: Up-folding retractable framing.
 3. Folding Control System: Manual winch with safety catch and automatic reset.
 4. Framing Color: As selected from manufacturer's standard selection.
 - C. Backboards: Tempered glass, rectangular shaped.
 1. Frame: Brushed aluminum edge, steel mounting.
 2. Markings: Painted.
 3. Color: Manufacturer's standard.
 - D. Goals: Steel rim, mounted to backboard, with attached nylon net; complete with mounting hardware.
 1. Net Attachment Device: Tube-tie.
 2. Finish: Powder coat orange.
4. FLOOR-MOUNTED EQUIPMENT
 - A. Volley Ball Nets and Posts: One court system of adjustable posts, net, and tensioning winch meeting requirements for FIVB, USA Volleyball, NCAA and NFHS competition requirements.
 1. Posts: 3-1/2 inch (89 mm) O.D. schedule 80 aluminum tube with 1 inch (25 mm) height adjustments between 42 and 96 inches (1.07 and 2.4 m).
 2. Net: 4 inch (101 mm) square #36 nylon cord with vinyl coated polyester hem, double stitched around the perimeter.
 3. Tensioning Winch: Manual crank heavy duty, self-locking worm gear mechanism.
 4. Manufacturers:
 - a. Draper, Inc; Power Volleyball System (PVS): www.draperinc.com/#sle.
 - b. Substitutions: See Section 01.6000 - Product Requirements.
 - B. Floor Sleeves for Posts: Metal sleeve, with latch cover, cast into concrete subfloor to hold poles for nets and goals; installed flush with finish floor surface.
 1. Latch Cover: Brass, round; tamper resistant lock with key.
 2. Sleeve: Aluminum.

3. Depth of Sleeve: 9 inches (230 mm) from floor surface to bottom, including latch cover.
5. WALL PADDING
 - A. Wall Padding: Foam filling bonded to backing board, wrapped in covering; each panel fabricated in one piece.
 1. Covering: Vinyl-coated polyester fabric, mildew and rot resistant; stapled to back of board.
 - a. Color: As selected from manufacturer's standard range.
 - b. Texture: Embossed leather-look.
 - c. Fabric Weight: 14 oz/sq yd (0.52 kg/sq m).
 2. Foam: Urethane, soft, 3.5 pcf (55 kg/cu m) nominal density.
 3. Foam: Not Used
 4. Foam Thickness: 1-1/2 inches (38 mm).
 5. Backing Board: Plywood.
 6. Mounting: Removable; Z-clips fixed to wall and to padding.

PART 3 EXECUTION

1. EXAMINATION
 - A. Take field measurements to ensure proper fitting of work. If taking field measurements before fabrication will delay work, allow for adjustments within recommended tolerances.
 - B. Inspect areas and conditions before installation, and notify Architect in writing of unsatisfactory or detrimental conditions.
 - C. Do not proceed with this work until conditions have been corrected; commencing installation constitutes acceptance of work site conditions.
2. INSTALLATION
 - A. Install in accordance with Contract Documents and manufacturer's instructions.
 - B. Coordinate installation of inserts and anchors that must be built in to flooring or subflooring.
 - C. Install equipment rigid, straight, plumb, and level.
 - D. Secure equipment with manufacturer's recommended anchoring devices.
 - E. Install wall padding securely, with edges tight to wall and without wrinkles in fabric covering.
 - F. Separate dissimilar metals to prevent electrolytic corrosion.
3. ADJUSTING
 - A. Verify proper placement of equipment.
 - B. Verify proper placement of equipment anchors and sleeves, and use actual movable equipment to be anchored if available.
4. CLEANING
 - A. Remove masking or protective covering from finished surfaces.
 - B. Clean equipment in accordance with manufacturer's recommendations.
5. PROTECTION
 - A. Protect installed products until Date of Substantial Completion.
 - B. Replace damaged products before Date of Substantial Completion.

END OF SECTION

PART 1 GENERAL

1. SECTION INCLUDES
 - A. Interior manual roller shades.
2. RELATED REQUIREMENTS
 - A. Section 06.1000 - Rough Carpentry: Concealed wood blocking for attachment of headrail brackets.
3. REFERENCE STANDARDS
 - A. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi 2015, with Editorial Revision (2021).
 - B. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films 2023.
 - C. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems Current Edition, Including All Revisions.
 - D. WCMA A100.1 - Safety of Window Covering Products 2022.
4. ADMINISTRATIVE REQUIREMENTS
 - A. Sequencing:
 1. Do not fabricate shades until field dimensions for each opening have been taken with field conditions in place.
 2. Do not install shades until final surface finishes and painting are complete.
5. SUBMITTALS
 - A. See Section 01.3000 - Administrative Requirements, for submittal procedures.
 - B. Product Data: Provide manufacturer's standard catalog pages and data sheets, including materials, finishes, fabrication details, dimensions, profiles, mounting requirements, and accessories.
 - C. Shop Drawings: Include shade schedule indicating size, location and keys to details, head, jamb and sill details, mounting dimension requirements for each product and condition, and operation direction.
 - D. Selection Samples: Include fabric samples in full range of available colors and patterns.
 - E. Verification Samples: Minimum size 6 inches (150 mm) square, representing actual materials, color and pattern.
 - F. Warranty: Submit sample of manufacturer's warranty and documentation of final executed warranty completed in Owner's name and registered with manufacturer.
6. QUALITY ASSURANCE
 - A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years of documented experience.
7. DELIVERY, STORAGE, AND HANDLING
 - A. Deliver shades in manufacturer's unopened packaging, labeled to identify each shade for each opening.
 - B. Handle and store shades in accordance with manufacturer's recommendations.
8. FIELD CONDITIONS
 - A. Do not install products under environmental conditions outside manufacturer's absolute limits.
9. WARRANTY
 - A. See Section 01.7800 - Closeout Submittals, for additional warranty requirements.
 - B. Provide manufacturer's warranty from Date of Substantial Completion, covering the following:
 1. Shade Hardware: One year.
 2. Fabric: One year.

3. Aluminum and Steel Coatings: One year.

PART 2 PRODUCTS

1. MANUFACTURERS

A. Interior Manually Operated Roller Shades:

1. Draper, Inc; Clutch Operated FlexShade: www.draperinc.com.
2. MechoShade Systems LLC; Mecho/7 System: www.mechoshade.com/#.
3. Substitutions: See Section 01.6000 - Product Requirements.

2. ROLLER SHADES

A. General:

1. Provide shade system components that are easy to remove or adjust without removal of mounted shade brackets.
2. Provide shade system that operates smoothly when shades are raised or lowered.

B. Interior Roller Shades - Basis of Design: Draper, Inc; Clutch Operated FlexShade: www.draperinc.com/.

1. Description: Single roller, manually operated fabric window shade system complete with mounting brackets, roller tubes, hembars, hardware, and other components necessary for complete installation.
 - a. Mounting: Endcaps and Fascia.
 - b. Endcaps: 1018 stamped steel:
 - Mounted to wall: endcap covers to match fascia color.
 - c. Fascia: L shaped aluminum extrusion to conceal shade roller and hardware.
 - Attachment: Snaps onto endcaps without requiring exposed fasteners of any kind. Fascia can be mounted continuously across two or more shade bands.
 - Shape: Square Fascia Panel.
 - Finish: Selected from Manufacturers standard range.
2. Mounting Hardware: As recommended by manufacturer for mounting indicated and to accommodate shade fabric roll-up size and weight.
3. Roller Tubes: As required for type of shade operation; designed for removal without removing mounting hardware.
 - a. Material: Extruded aluminum or steel, with wall thickness and material selected by manufacturer.
 - b. Size: As recommended by manufacturer; selected for suitability for installation conditions, span, and weight of shades.
4. Hembars: Designed to maintain bottom of shade straight and flat, selected from manufacturer's standard options.
5. Manual Operation:
 - a. Clutch Operator: Manufacturer's standard material and design, permanently lubricated.
 - b. Drive Chain: Continuous loop stainless steel beaded ball chain, 95 lb (43 kg) minimum breaking strength. Provide upper and lower limit stops.
6. Accessories:
 - a. Fascia: Extruded aluminum, size as required to conceal shade mounting, attachable to mounting end caps, without exposed fasteners; clear anodized finish.
 - b. Ceiling Pockets: Premanufactured metal shade pocket for recess mounting shade hardware

into ceiling. Provide removable closure panel to conceal underside of brackets and roller tubes.

- c. End Cap Covers: Match fascia or headbox finish.
- d. Fasteners: Noncorrosive, and as recommended by shade manufacturer.

3. SHADE FABRIC

A. Fabric: Nonflammable, color-fast, impervious to heat and moisture, and able to retain its shape under normal operation.

- 1. Material: Vinyl coated polyester.
- 2. Performance Requirements:
 - a. Flammability: Pass NFPA 701 large and small tests.
 - b. Fungal Resistance: No growth when tested according to ASTM G21.

3. Color: As selected by Architect from manufacturer's full range of colors.

4. ROLLER SHADE FABRICATION

- A. Field measure finished openings prior to ordering or fabrication.
- B. Dimensional Tolerances: Fabricate shades to fit openings within specified tolerances.
 - 1. Vertical Dimensions: Fill openings from head to sill with 1/2 inch (13 mm) space between bottom bar and window stool.
 - 2. Horizontal Dimensions - Inside Mounting: Fill openings from jamb to jamb.
- C. Dimensional Tolerances: As recommended in writing by manufacturer.
- D. At openings requiring continuous multiple shade units with separate rollers, locate roller joints at window mullion centers; butt rollers end-to-end.

PART 3 EXECUTION

1. EXAMINATION

- A. Examine finished openings for deficiencies that may preclude satisfactory installation.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Start of installation shall be considered acceptance of substrates.

2. PREPARATION

- A. Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under the project conditions.
- B. Coordinate with window installation and placement of concealed blocking to support shades.

3. INSTALLATION

- A. Install in accordance with manufacturer's instructions and approved shop drawings, using mounting devices as indicated.
- B. Adjust level, projection, and shade centering from mounting bracket. Verify there is no telescoping of shade fabric. Ensure smooth shade operation.

4. CLEANING

- A. Clean soiled shades and exposed components as recommended by manufacturer.
- B. Replace shades that cannot be cleaned to "like new" condition.

5. CLOSEOUT ACTIVITIES

- A. See Section 01.7800 - Closeout Submittals, for closeout submittals.
- B. Demonstration: Demonstrate operation and maintenance of window shade system to Owner's personnel.

6. PROTECTION

- A. Protect installed products from subsequent construction operations.

END OF SECTION