

**CITY OF YONKERS** 

Purchasing

#### To: **PROSPECTIVE BIDDERS** FROM: ALEX SCHENCK, PRINCIPAL BUYER

#### Re: Addendum No. 3 IFB-6748: Multiple Building Envelope Restorations - School 29 and PEARLS Hawthorne

The contents of this addendum alter and amend the original bid requirements and take precedence over the related items therein. This addendum forms a part of the contract documents. Proposers must acknowledge receipt of all addenda when submitting their bids. Failure to acknowledge receipt may render your bid as non-responsive and ineligible for award. Vendors are responsible for ensuring that they receive all addenda.

# This addendum consists of One (1) page and revised specification section 08 4500 Translucent Wall Panels, and sketches SKPHS-A1.0, SK-PHS-A1.1, SK-PHS-A1.2 and SK-PHS-A1.3.

# The Bid due date remains 2:00 pm on April 1, 2022.

**IFB-6748 ADDENDUM No. 3 ACKNOWLEDGEMENT** 

Please submit acknowledgements with your proposal

Bidding Firm:	
Address:	
Bidder's Representative: Title:	
Signature:	Date:

One Larkin Center, 3rd Floor Yonkers, New York 10701 (914) 377-6037 alex.schenck@YonkersNY.gov

Mike Spano, Mayor

Thomas E. Collich, Director

#### MARCH 23, 2022 **1 PAGE**

## YONKERS PUBLIC SCHOOLS GROUP B BUILDING ENVELOPE RESTORATIONS P.S. 29 YPS #10867 PEARLS HAWTHORNE YPS #10869 ADDENDUM NO. 3

ADDENDUM NO. 3

OWNER:	YONKERS PUBLIC SCHOOLS ONE LARKIN CENTER YONKERS, NEW YORK 10701
PROJECT NAME:	YONKERS PUBLIC SCHOOLS GROUP B BUILDING ENVELOPE RESTORATIONS AND RELATED WORK SCHOOL #29 SED NO: 66-23-00-01-0-029-011 YPS #10869 PEARLS HAWTHORNE SED NO: 66-23-00-01-0-101-008 YPS #10869

This Addendum is hereby included in and made a part of the Contract Documents, dated February 16, 2022, whether or not attached thereto.

All requirements of the original project specifications and drawings shall remain in force except as amended by this addendum.

DATE: March 18, 2022

This addendum consists of One (1) page and revised specification section 08 4500 Translucent Wall Panels, sketch SK-PHS-A1.0, SK-PHS-A1.1, SK-PHS-A1.2 and SK-PHS-A1.3.

# THE FOLLOWING ARE MODIFICATIONS, CLARIFICATIONS, DELETIONS OR ADDITIONS TO THE SPECIFICATIONS:

SECTION 08 4500 – TRANSLUCENT WALL ASSEMBLIES DELETE in its entirety and ADD revised section attached to this addendum.

# THE FOLLOWING ARE MODIFICATIONS, CLARIFICATIONS, DELETIONS OR ADDITIONS TO THE DRAWINGS:

**DRAWING PS29 A630 – EXTERIOR ELEVATIONS, WALL SECTIONS, WINDOW TYPES & DETAILS** Details 3, 4, 5, 6, &7 **REVISE** 4" panel thickness to 2 <sup>3</sup>/<sub>4</sub>".

## DRAWING PS29 A631 - WINDOW DETAILS

Details 8, 9, 10, 11, 12 & 14 **REVISE** 4" panel thickness to 2 <sup>3</sup>/<sub>4</sub>".

## DRAWING PHS A100 - BASEMENT FLOOR PLAN

**REVISE** workscope notes CWS18 through CWS21 as indicated on Sketch SK-PHS-A1.0 attached to this addendum. Lower Gymnasium 21L and Storage 19L, **ADD** workscope notes CWS18 through CWS21 as indicated on Sketch SK-PHS-A1.1 attached to this addendum.

## **DRAWING PHS A110 – ROOF PLAN**

**ADD** work at roof drains and skylight as indicated on Sketch SK-PHS-A1.2 attached to this addendum. **ADD** equipment support rails as indicated on Sketch SK-PHS-A1.3 attached to this addendum.

END OF ADDENDUM NO. 3

# SECTION 08 4500 TRANSLUCENT WALL ASSEMBLIES

# PART 1 GENERAL

# 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including School Facilities Management Contract Manual and Specifications and Division 1 Specification Sections, apply to this Section.
- B. In the event of discrepancies between the specifications and School Facilities Management Contract Manual and Specifications the School Facilities Management Contract Manual and Specifications shall prevail.

## **1.2 SECTION INCLUDES**

- A. Structural sndwich panels of translucent skins separated with an aluminum grid.
- B. Aluminum sill flashing.
- C. Aluminum thermal break windows.

# **1.3 RELATED REQUIREMENTS**

- A. Section 04 0110 General Maintenance of Masonry.
- B. Section 07 9200 Joint Sealants: Sealing joints between perimeter frame and adjacent construction.

# 1.4 REFERENCE STANDARDS

- A. AAMA CW-DG-1 Aluminum Curtain Wall Design Guide Manual; 1996, with Editorial Revision (2005).
- B. AAMA CW-10 Care and Handling of Architectural Aluminum From Shop to Site; 2015.
- C. AAMA 501.2 Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems; 2015.
- D. AAMA 1503 Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections; 2009.
- E. AAMA 2604 Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2017a.
- F. ASTM C 297 after aging by ASTM D 1037 Bond Tensile Strength.
- G. ASTM D 635 Burn Extent.
- H. ASTM D 1002 Bond Shear Strength
- I. ASTM D 2244 Color Difference.
- J. ASTME-E72 Beam Bending Strength.
- K. ASTM E283 Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2004 (Reapproved 2012).
- L. ASTM E330/E330M Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014.
- M. ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2016).
- N. NFRC 100 U Factor.
- O. NFRC 700 U-Factor Certification.
- P. NFRC Solar Heat Gain Coefficient .
- Q. SWRI 1200°F Fire Resistance
- R. UL 723 Flame Spread and Smoke Developed.

## S. UL 972 Impact Strength.

## **1.5 PERFORMANCE REQUIREMENTS**

- A. System Design: Design and size components to withstand dead loads and live loads caused by snow, hail, and positive and negative wind loads acting on plane of panel without damage or permanent set.
  1. Design Wind Load: 40 lb/sq ft positive and negative.
- B. Air leakage less than 0.01 cfm/ft<sup>2</sup> when tested by ASTM E 283 at 6.24 PSF.
- C. No water penetration by ASTM E 331 at 15 PSF and structural testing by ASTM E 330.

## **1.6 ADMINISTRATIVE REQUIREMENTS**

A. Coordinate with installation of aluminum curtain wall.

## 1.7 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide component dimensions, describe components within assembly, panel configuration.
- C. Samples: Submit two, 12 x 12 inch in size, illustrating prefinished aluminum surface, specified panel with skins, glazing materials illustrating edge and corner.
- D. Installation Data: Special installation requirements.
- E. Manufacturer's Qualification Statement.

## 1.8 QUALITY ASSURANCE

- A. Perform work in accordance with AAMA CW-DG-1.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than ten (10) years of experience.
  - 1. Show evidence of those materials being satisfactorily used on at least six (6) projects of similar size, scope and location. At least three (3)of the projects shall have been in successful use for ten (10) years or longer.
  - 2. Panel system must be listed by an ANSI accredited Evaluation Service, which requires quality control inspections and fire, structural and water infiltration testing of sandwich panel systems by an accredited agency.
  - 3. Quality control inspections shall be conducted at least once each year and shall include manufacturing facilities, sandwich panel components and production sandwich panels for conformance with AC177 "Translucent Fiberglass Reinforced Plastic (FRP) Faced Panel Wall, Roof and Skylight Systems" as issued by the ICC-ES.
- C. Installer Qualifications: Company specializing in performing the work of this section with at least five (5) years of documented experience.

## **1.9 REGULATORY REQUIREMENTS**

A. Conform to applicable code for fire resistance ratings.

### 1.10 DELIVERY, STORAGE, AND HANDLING

- A. Handle work of this section in accordance with AAMA CW-10.
- B. Store panels on the long edge; several inches above the ground, blocked and under cover in accordance with manufacturer's storage and handling instructions.
- C. Protect prefinished aluminum surfaces with wrapping; do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.
  - 1. Puncture wrappings at ends for ventilation.

## 1.11 FIELD CONDITIONS

A. Do not install sealants when ambient temperature is less than 40 degrees F.

# 1.12 WARRANTY

- A. See Section 01 7800 Closeout Submittals for additional warranty requirements.
- B. Correct defective work within a one year period after Date of Substantial Completion.
- C. Provide five year manufacturer warranty against failure of insulated translucent sandwich panels, including excessive deflection, defects in accessories, and other components of this work after Date of Substantial Completion.
- D. Provide ten year manufacturer warranty against excessive degradation of exterior finish; includes provision for replacement of units with excessive cracking, peeling, and adhesion failure after Date of Substantial Completion.

# PART 2 PRODUCTS

# 2.1 MANUFACTURERS

- A. Kalwall; 2 3/4" Panel: www.kalwall.com..
  - 1. Kalwall Corporation, Tel: (800) 258-9777 Fax: (603) 627-7905 Email: info@kalwall.com.
  - 2. Substitutions: See Section 01 6000 Product Requirements.

# 2.2 PANEL COMPONENTS

- A. Face Sheets
  - 1. Translucent faces: Manufactured from glass fiber reinforced thermoset resins, formulated specifically for architectural use.
    - a. Thermoplastic (e.g. polycarbonate, acrylic) faces are not acceptable.
    - b. Face sheets shall not deform, deflect or drip when subjected to fire or flame.
  - 2. Interior face sheets:
    - a. Flame spread: Underwriters Laboratories (UL) listed, which requires periodic unannounced retesting, with flame spread rating no greater than 25 high impact and smoke developed no greater than 250 when tested in accordance with UL 723.
    - b. Burn extent by ASTM D 635 shall be no greater than 1".
  - 3. Exterior face sheets:
    - a. Color stability: Full thickness of the exterior face sheet shall not change color more than 3 CIE Units DELTA E by ASTM D 2244 after 5 years outdoor South Florida weathering at 5° facing south, determined by the average of at least three white samples with and without a protective film or coating to ensure long-term color stability. Color stability shall be unaffected by abrasion or scratching.
    - Strength: Exterior and Interior face sheet shall be uniform in strength, impenetrable by hand held pencil and repel an impact minimum of 0.052 (Hi-Impact) ft. lbs. without fracture or tear when impacted by a 3-1/4" diameter, 5 lb. free-falling ball per UL 972.0.052 (Hi-Impact)
  - 4. Appearance:
    - a. Exterior face sheets: Smooth 0.052 (Hi-Impact) thick and White in color.
    - b. Interior face sheets: Smooth 0.052 (Hi-Impact) thick and White in color.
    - c. Face sheets shall not vary more than  $\pm 10\%$  in thickness and be uniform in color.
- B. Grid Core
  - 1. Thermally broken composite I-beam grid core shall be of 6005-T5 alloy and temper with provisions for mechanical interlocking of muntin-mullion and perimeter. Width of I-beam shall be no less than 7/16".
  - 2. I-beam Thermal break: Minimum 2", thermoset fiberglass composite.
- C. Laminate Adhesive
  - 1. Heat and pressure resin type adhesive engineered for structural sandwich panel use, with minimum 25-years field use. Adhesive shall pass testing requirements specified by the International Code Council "Acceptance Criteria for Sandwich Panel Adhesives".

- 2. Minimum tensile strength of 750 PSI when the panel assembly is tested by ASTM C 297 after two exposures to six cycles each of the aging conditions prescribed by ASTM D 1037.
- 3. Minimum shear strength of the panel adhesive by ASTM D 1002 after exposure to four separate conditions:
  - a. 50% Relative Humidity at 68° F: 540 PSI
  - b. 182° F: 100 PSI
  - c. Accelerated Aging by ASTM D 1037 at room temperature: 800 PSI
  - d. Accelerated Aging by ASTM D 1037 at 182° F: 250 PSI

# 2.3 PANEL CONSTRUCTION

- A. Provide sandwich panels of flat fiberglass reinforced translucent face sheets laminated to a grid core of mechanically interlocking I-beams. The adhesive bonding line shall be straight, cover the entire width of the I-beam and have a neat, sharp edge.
  - 1. Thickness: 2 3/4"
  - 2. Light transmission: 16%
  - 3. Grid pattern: Nominal size 12 x 24; Pattern:Shoji.
  - 4. Panel U Factor .23
- B. Standard panels shall deflect no more than 1.0" at 30 PSF in 10' 0" span without a supporting frame by ASTM E 72.
- C. Standard panels shall withstand 1200° F fire for minimum one hour without collapse or exterior flaming.
- D. Thermally broken panels: Minimum Condensation Resistance Factor of 80 by AAMA 1503 measured on the bond line.

# 2.4 BATTENS AND PERIMETER CLOSURE SYSTEM

- A. Closure system: Thermally broken extruded aluminum 6063-T6 and 6063-T5 alloy and temper clamp-tite screw type closure system.
- B. Sealing tape: Manufacturer's standard, pre-applied to closure system at the factory under controlled conditions.
- C. Fasteners: 300 series stainless steel screws for aluminum closures, excluding final fasteners to the building.
- D. Finish:
  - 1. High Performance Organic Coating: Primer and silicone-modified polyester (SMP) enamel topcoat with minimum dry film thickness (DFT) of 1.2 mils, 0.0012 inch over aluminum extrusions and panels; AAMA 2604.
  - 2. Finish Color: Aluminum #791

# 2.5 WINDOWS ( 2 <sup>3</sup>/<sub>4</sub>" DEEP)

- A. Windows shall be designed specifically for inclusion in the translucent panel unit wall system and factory unitized to panels.
  - 1. Units shall be of the following type(s):
    - a. Project-out bottom.
- B. Performance: Windows shall pass or exceed requirements of AAMA/WDMA/CSA-101/I.S.2/A440-05.
  - 1. HC-2000 projected windows: PI-AW50, PO-HC55; shall pass requirements at 75 psf uniform structural load with air infiltration <.01 CFM/FT2 at 6.24 psf and no water penetration at 10 psf (PI) and 8 psf (PO)
- C. Construction: All window frame members shall be of heavy gauge 6063-T5 extruded aluminum with a thermal break. Frame sections shall be coped and joined by stainless steel screws at each corner. All joints exposed to the weather shall be sealed with an elastic compound. All openings shall be double weather stripped using T-slot bulb gaskets to insure minimum air infiltration.

- 1. Operating sash shall be hollow extruded design, mitered and joined with heavy reinforcing corners.
- 2. Both operable and fixed lites shall be inside glazed with an expanded EPDM closed cell sponge gasket to exterior, with aluminum glazing bead and a driven EPDM wedge gasket to the interior for rapid removal and replacement.
- D. Hardware:
  - 1. Hinges on operating windows shall be four bar stainless steel with adjustable friction blocks.
  - 2. Locking hardware shall be of cam lever design and shall be made of cast white bronze.
- E. Glazing:
  - 1. Heavy commercial (HC2000) windows shall be glazed with 1" double insulated glass.
  - 2. Glazing Specification:
    - a. Outboard Lite: Laminated Safety Glass, float glass.
      - a) Low-E Coating: Vitro Architectural Glass (formerly PPG Glass) Solarban 60 on #2 surface.
      - b) Tint: Clear.
      - c) Thickness: 1/4 inch minimum
    - b. Inboard Lite: Laminated Safety Glass,.
      - a) Tint: Clear.
      - b) Thickness: 1/4 inch minimum
    - c. Total Thickness: 1 inch.
    - d. Use for windows as indicated on drawings.
    - e. Substitutions: 01 6000 Product Requirements.
- F. Finish is to be coordinated with closure system.

## 2.6 FABRICATION

- A. Fabricate system components with minimum clearances and shim spacing around perimeter of assembly, and ensure proper installation and dynamic movement of perimeter seals.
- B. Accurately fit and secure joints and corners. Make joints flush and hairline.

## 2.7 FINISHES

- A. High Performance Organic Coatings: AAMA 2604; multiple coats, thermally cured fluoropolymer system.
- B. Color: Aluminum #79.

## PART 3 EXECUTION

## 3.1 EXAMINATION

A. Verify dimensions, tolerances, and method of attachment with other work.

## 3.2 PREPARATION

- A. Metal Protection:
  - 1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose.
  - 2. Where aluminum will contact concrete, masonry or pressure treated wood, protect against corrosion by painting contact surfaces with bituminous paint or method recommended

## 3.3 INSTALLATION

- A. Install the panel system in accordance with the manufacturer's suggested installation recommendations and approved shop drawings.
  - 1. Anchor component parts securely in place by permament mechanical attachment system.
  - 2. Accommodate thermal and mechanical movements.

- 3. Set perimeter framing in a full bed of sealant compound, or with joint fillers or gaskets to provide weather-tight construction.
- B. Install joint sealants at perimeter joints and within the panel system in accordance with manufacturer's installation instructions.
- C. Install translucent panel system with cells vertical in accordance with manufacturer instructions.
- D. Provide alignment attachments and shims to permanently fasten system to building structure.
- E. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances and align with adjacent work.
- F. Install sill flashings.

# 3.4 FIELD QUALITY CONTROL

- A. Contractor shall provide the services of the manufacturer's field representative to observe installation and provide a written report.
  - 1. Perform tests on three individual windows and panel sections in designated locations by the YPS Office of Facilities Management
- B. Independent inspection will be provided under provisions of Section 01 4000 Quality Requirements.
- C. Replace components that have failed field testing and retest until performance is satisfactory.

# 3.5 ADJUSTING

# 3.6 CLEANING

- A. Remove protective material from prefinished aluminum surfaces.
- B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.

## 3.7 **PROTECTION**

A. Protect finished work from damage until Date of Substantial Completion.

# END OF SECTION

FULLE D'ANG P.C.	21 R E L O	.030" PVC JACKET.	JOB NAME: YONKERS SCHOOL DISTRICT MULTIPLE BUILDING ENVELOPE RENOVATIONS AND RELATED WORK GROUP 'B' AT	29-011 / PEARLS HAWTHORNE S 03-18-2022 DATE			
	CWS 20 CWS	<ul> <li>PIPE FITTINGS. INSTALL NEW HEAVY DUTY NO-HUB FITTINGS W/ S.S. JACKETS AND MIN. 4 CLAMPS. INSULATE DRAIN WITH 2" FIBERGLASS PIPE INSULATION WITH VAPOR BARRIER AND .030" PVC JACKET.</li> <li>REMOVE EXISTING VCT FLOORING AND GYPSUM FILL DOWN TO BASE SLAB. INSTALL NEW FILL TO MATCH EXISTING FILL LEVEL. ARDEX K-15 OR APPROVED EQUAL. INSTALL NEW VCT FLOORING TO MATCH EXISTING.</li> <li>SCRAPE AND PAINT EXISTING WALL AND CEILING SURFACES 5'-0"± OUT FROM EXISTING ROOF DRAIN (3 LOCATION).</li> </ul>					
	CWS 18 CWS 19						
C	CWS 16 CWS 17	INSTALLATION OF NEW TROUG P-CONTRACTOR CLEAN ALL E REMOVE PORTION OF EXISTIN	IOVE PORTION OF EXISTING CONCRETE SLAB ON GRADE FOR GH DRAIN PIPING. SEE DETAIL 3/A432. DEBRIS FROM EXISTING HOUSE TRAP PIT. SAW-CUT AND NG SANITARY PIPING FOR INSTALLATION OF BACKWATER VALVE. WATER VALVE FLAPPER TYPE OR APPROVED EQUAL. INLET SIZE IZE V.I.F				
	CWS 15 P-CONTRACTOR PROVIDE BOILER BLOW-DOWN THROUGH DRAINS AT EACH BOILER. SEE PLUMBING DRAWINGS.						
CWS 14		E-CONTRACTOR PROVIDE (3) #10 WIRE IN 3/4"Ø RIGID GALVANIZED STEEL CONDUIT WITH THREADED COUPLINGS FROM MOTOR STARTER TO PUMP CONTROLS.					
	CWS 13 P-CONTRACTOR TO PROVIDE A DUPLEX VSP-2A75-4 VERTICAL SUBMERGED SUM UNIT AS MANUFACTURED BY FEDERAL PUMP CORP. OR APPROVED EQUAL. EACH PU SHALL BE RATED 50 G.P.M. AT 10' TOTAL DYNAMIC HEAD, SHALL HAVE A 2" DISCH AND BE BUILT FOR A BASIN OF 4'-0"± DEEP (V.I.F.). MOTORS SHALL BE .75 H, . 208-230/460 (V.I.F.) AND 1750 RPM. PROVIDE PEDESTAL MOUNTED AUXILIARY FLC SWITCH: TYPE FS-4. PROVIDE HIGH WATER ALARM: TYPE FS-5. PROVIDE MAGNETIC VOLTAGE STARTER: TYPE D1200. PROVIDE METAL SQUARE DUPLEX BASIN COVER. PA BOLT TO EXISTING STEEL BASIN COVER. PROVIDE CHECK VALVES (2) AND GATE VAL DISCHARGE PIPING.						
Cws 11 Cws 12	CWS	COVER. P-CONTRACTOR CLEAN OUT I	JT EXISTING STEEL SUMP COVER TO ACCOM EXISTING FLOOR DRAINS AND POWER JET CL PROVIDE NEW METAL FLOOR DRAIN COVERS.	EAN DRAIN LINES			
	Cws 10		ING STEEL SUMP TO REMAIN. DNTRACTOR DRAIN EXISTING SUMP. SCRAPE, WIRE BRUSH, PRIME AND PAINT INTERIOR EXTERIOR OF SUMP BODY.				
	(CWS8) (CWS9)	TO NEAREST JUNCTION BOX. P-CONTRACTOR REMOVE ALL	AND REMOVE PUMP POWER AND CONTROL REMOVE EXISTING PUMP CONTROLS & DISC COMPONENTS OF THE EXISTING SUMP PUM	ONNECT' SWITCH.			
	CWS7	SUMP.	PIPING FROM EXISTING 2" PUMP DISCHARGE				





