

**BID ADDENDUM**

MiraCosta Community College District
One Barnard Drive
Oceanside, California 92056
760.795.6691/FAX 760.757.8185

Distribution:

[X] Owner [X] Architect
[X] MiraCosta College Bid Opportunities Website

PROJECT: MiraCosta Community College District
Project: SAN 400 & 900 Building Renovations
Bid # MM-20-020 ("Projects")

ADDENDUM NUMBER: 4 – B400

OWNER: MiraCosta Community College District

DATE OF ISSUANCE: March 23, 2021

THIS ADDENDUM HAS BEEN PREPARED TO CLARIFY, MODIFY, DELETE, OR ADD TO THE DRAWINGS, SPECIFICATIONS, AND/OR OTHER ASPECTS REGARDING THE COMPETITIVE BID FOR THE ABOVE REFERENCED PROJECT. THE ITEMS LISTED HEREIN SUPERSEDE DESCRIPTIONS PREVIOUSLY PUBLISHED IN THE INITIAL CALL FOR BIDS. ALL CONDITIONS NOT SPECIFICALLY REFERENCED HERE SHALL REMAIN THE SAME. IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE SUBCONTRACTORS AWARE OF ANY ITEMS HEREIN THAT MAY AFFECT ALL BIDS AND SUB-BIDS.

GENERAL INFORMATION:

- None
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DRAWING MODIFICATIONS/CLARIFICATIONS:

- See Attachment 1 to Addendum 4-B400 – Architect's Addendum Two with Attachments

SPECIFICATION MODIFICATIONS/CLARIFICATIONS:

- See Attachment 1 to Addendum 4-B400 – Architect's Addendum Two with Attachments

ATTACHMENTS:

1. Architect's Bid Addendum Two with Attachments

End of Addendum No. 4 – B400

BID ADDENDUM NO. 02

March 21, 2021

MCC B400 SCIENCE LAB**MiraCosta Community College District**One Barnard Drive
Oceanside, California 92056**DSA App. No.
04-119580**

TO: PROSPECTIVE BIDDERS

This Addendum forms a part of the Contract Documents and modifies the original Bidding Drawings and Specifications. Acknowledge receipt of this Addendum in spaces provided on the Bid Form. Failure to acknowledge may subject Bidder to disqualification.

DRAWING MODIFICATIONS/CLARIFICATIONS:**MECHANICAL**

- M0.02
 - Revised keynote 3 on PUMP schedule to include classic bypass on variable frequency drives. This is a campus standard.

SPECIFICATIONS:

- 08 45 13 Structured-Polycarbonate-Panel Assemblies
 - Part 2, 2.01.A: add approval of Miami Dade NOA No. 20-0720.02
 - Part 2, 2.03.E.4; to read "Roof-Covering Classification: **Class B**

ATTACHMENTS:

1. Drawings
 - i. M0.02
2. Specifications
 - i. 08 45 13

End of Addendum No. 2

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	CLOSED CIRCUIT					SPRAY PUMP			FAN			ELECTRICAL		SHIPPING WEIGHT (LBS)	OPERATING WEIGHT (LBS)	REMARKS		
					FLOW (GPM)	EWI (°F)	LWT (°F)	PD (PSI)	AMBIENT (°F)	QTY.	SPRAY (GPM)	HP PER MOTOR	QTY.	AIRFLOW (CFM)	HP PER MOTOR	V / PH	FLA / MCA / MOC®					
FLC-1	BAC NXF-0403N	(E) MECHANICAL 407	FORCED DRAFT	CONDENSER WATER	55	95	85	0.58	74 WB	1	32	1	1	8,416	5	460 / 3	7.8 / 9.3 / 15	2,278	2,712	1	2	3

HOT WATER BOILER

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	CAPACITY		NATURAL GAS		BOILER WATER						CONNECTIONS		EFF (%)	ELECTRICAL				SHIPPING WEIGHT (LBS)	OPERATING WEIGHT (LBS)	REMARKS
					MAX INPUT (MBH)	OUTPUT (MBH)	CFH	PRESSURE (IN. WC)	DESIGN FLOW (GPM)	MINIMUM FLOW (GPM)	ΔP (FT)	EWT (°F)	LWT (°F)	MAX TEMP	GAS INLET (INCHES)	EXHAUST (INCHES)		VOLTS	PHASE	HERTZ	FLA / MCA / MOCB			
B-1	RAYPAK HI-DELTA H3-402C	(E) MECHANICAL 407	ATMOSPHERIC	CONDENSER WATER	399	335	399	7 - 10.5	55	20	3.9	140	180	220	3/4"	6"	84%	120	1	60	14 / - / 20	445	445	-

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	DESIGN POINT		MOTOR			OPERATING WEIGHT (LBS)	REMARKS		
					FLOW (GPM)	HEAD (FT HD)	HP	VPH	RPM				
P-1	ARMSTRONG 4280 1.5x1x8	(E) MECHANICAL 407	CLOSE-COUPLED HORIZONTAL	CONDENSER WATER	55	65	3	460/3	1707	170	1	2	3
P-2	ARMSTRONG 4280 1.5x1x8	(E) MECHANICAL 407	CLOSE-COUPLED HORIZONTAL	CONDENSER WATER	55	65	3	460/3	1707	170	1	2	3

EXHAUST FAN

GRAVITY VENT

1	PROVIDE WITH GREENHECK EM-10 BACKDRAFT DAMPER.	2	PROVIDE WITH GREENHECK WD-410 BACKDRAFT DAMPER.	3	DAMPER SHALL BE COUNTERBALANCED. PRESSURE DROP ACROSS GRAVITY VENT AND BACKDRAFT DAMPER ASSEMBLY NOT TO EXCEED 0.15" WC.
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MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	BLOWER		NAMEPLATE		COOLING					HEATING				CONDENSER		EER	COP	FILTERS		OA CFM	SEISMIC ANCHORAGE DETAIL	OPERATING WEIGHT LBS.		REMARKS
					AIRFLOW CFM	TOTAL ESP (IN WC)	FLA MCA MOCp	V/PH	SENS MBH	TOT MBH	EAT DB/WB °F	LAT DB/WB °F	EWT °F	TOT MBH	EAT DB °F	LAT DB °F	EWT °F	GPM	PD FT			TYPE	SIZE					
WSPH-1	TRANE EXHF0422	BIOLOGY PREP SPACE 403	HORIZONTAL	BIOLOGY PREP SPACE 403, LAB PREP OFFICE 401	1200	0.47	9.80 / 11.30 / 15	460 / 3	33.8	39.3	81.4 / 64.7	55.6 / 53.6	85	54.5	55.0	96.6	68	6.3	4.5	16.80	5.30	MERV 13	2"	600	6/M6 02, 6S/4.02	431	<input type="checkbox"/>	
WSPH-2A	TRANE EXHF0422	BIOLOGY LAB CLASSROOM 404	HORIZONTAL	BIOLOGY LAB CLASSROOM 404	1470	0.51	9.80 / 11.30 / 15	460 / 3	33.8	39.1	77.4 / 63.3	56.3 / 54.2	85	55.1	61.5	95.9	68	6.3	4.5	16.80	5.30	MERV 13	2"	300	6/M6 02, 6S/4.02	431	<input type="checkbox"/>	
WSPH-2B	TRANE EXHF0422	BIOLOGY LAB CLASSROOM 404	HORIZONTAL	BIOLOGY LAB CLASSROOM 404	1470	0.51	9.80 / 11.30 / 15	460 / 3	33.8	39.1	77.4 / 63.3	56.3 / 54.2	85	55.1	61.5	95.9	68	6.3	4.5	16.80	5.30	MERV 13	2"	300	6/M6 02, 6S/4.02	431	<input type="checkbox"/>	
WSPH-3A	TRANE EXHF0362	PHYSICAL SCIENCE LAB CLASSROOM 405	HORIZONTAL	PHYSICAL SCIENCE LAB CLASSROOM 405	1030	0.55	18.10 / 21.63 / 35	230 / 1	27.1	32.7	78.8 / 63.8	54.7 / 52.8	85	44.5	57.3	96.9	68	5.4	3.4	17.00	5.40	MERV 13	2"	315	6/M6 02, 6S/4.02	313	<input type="checkbox"/>	
WSPH-3B	TRANE EXHF0362	PHYSICAL SCIENCE LAB CLASSROOM 405	HORIZONTAL	PHYSICAL SCIENCE LAB CLASSROOM 405	1030	0.55	18.10 / 21.63 / 35	230 / 1	27.1	32.7	78.8 / 63.8	54.7 / 52.8	85	44.5	57.3	96.9	68	5.4	3.4	17.00	5.40	MERV 13	2"	315	6/M6 02, 6S/4.02	313	<input type="checkbox"/>	
WSPH-4A	TRANE EXHF0302	LECTURE/LAB CLASSROOM 409	HORIZONTAL	LECTURE/LAB CLASSROOM 409	860	0.46	17.30 / 20.83 / 30	230 / 1	23.4	28.2	78.5 / 63.8	53.6 / 52.4	85	36.3	59.1	97.9	68	4.5	4.4	16.41	5.38	MERV 13	2"	250	6/M6 02, 6S/4.02	299	<input type="checkbox"/>	
WSPH-4B	TRANE EXHF0302	LECTURE/LAB CLASSROOM 409	HORIZONTAL	LECTURE/LAB CLASSROOM 409	860	0.46	17.30 / 20.83 / 30	230 / 1	23.4	28.2	78.5 / 63.8	53.6 / 52.4	85	36.3	59.1	97.9	68	4.5	4.4	16.41	5.38	MERV 13	2"	250	6/M6 02, 6S/4.02	299	<input type="checkbox"/>	
WSPH-5	TRANE EXHF0361	STUDENT LOUNGE 410, OFFICE 411, OFFICE 412	HORIZONTAL	STUDENT LOUNGE 410, OFFICE 411, OFFICE 412	1260	0.60	18.10 / 21.63 / 35	230 / 1	28.0	32.7	75.3 / 61.9	54.9 / 52.7	85	44.9	63.2	95.9	68	5.4	3.4	17.00	5.40	MERV 13	2"	165	6/M6 02, 6S/4.02	173	<input type="checkbox"/>	

GRILLES, REGISTERS, DIFFUSERS

1	PROVIDE WITH FILLER PANEL
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2 COORDINATE FINISH WITH ARCHITECT

SEAL



Long Beach | Los Angeles
San Diego | San Jose

p2sinc.com

PROJECT TITLE

SAN ELIJO B400

3333 MANCHESTER AVENUE, CARDIFF, CA 92007



PROJECT IDENTIFICATION

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

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SHEET TITLE

SCHEDULES

SHEET NUMBER

M0.02

DSA SUBMITTAL

01/15/2021 NOT FOR CONSTRUCTION

March 22, 2021

Building B400 Renovation
MiraCosta College San Elijo Campus

SECTION 08 45 13

STRUCTURED-POLYCARBONATE-PANEL ASSEMBLIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. Section includes aluminum-framed assemblies glazed with structured-polycarbonate panels as follows: Canopy assemblies.

1.03 PREINSTALLATION MEETINGS

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

1.04 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for aluminum components of panel assemblies.
- B. Sustainable Design Submittals:
- C. Shop Drawings: For panel assemblies.
 - 1. Include plans, elevations, sections, details, and attachments to other work.
 - 2. Include details of provisions for assembly expansion and contraction and for draining moisture within the assembly to the exterior.
- D. Samples: In manufacturer's standard size.
 - 1. For each type of structured-polycarbonate panel.
 - 2. For each type of exposed finish for framing members.
- E. Fabrication Samples: Of each framing system intersection and adjacent panels, made from 12-inch lengths of full-size framing members and showing details of the following:
 - 1. Joinery.
 - 2. Anchorage.
 - 3. Expansion provisions.
 - 4. Structured-polycarbonate panels.
 - 5. Flashing and drainage.

March 22, 2021

1.05 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For each structured-polycarbonate-panel assembly, for tests performed by a qualified testing agency.
- B. Evaluation Reports: For structured-polycarbonate-panel assemblies from ICC-ES.
- C. Field quality-control reports.
- D. Sample Warranties: For special warranties.

1.06 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For panel assemblies to include in maintenance manuals.

1.07 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components of panel assemblies that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including, but not limited to, excessive deflection.
 - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - c. Water leakage.
 - 2. Warranty Period: Five years from date of Substantial Completion.
- B. Manufacturer's Special Warranty: Manufacturer agrees to repair or replace structured-polycarbonate panels that exhibit defects in materials or workmanship within specified warranty period.
 - 1. Defects include, but are not limited to, the following:
 - a. Delamination.
 - b. Color changes exceeding requirements.
 - c. Losses in light transmission beyond 6 percent from original when measured according to ASTM D1003.
 - 2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Structural Loads: As indicated on Drawings.
 - 1. **Miami Dade NOA No. 20-0720.02**
- B. Deflection Limits: Overhead Panel Assemblies: Limited to 1/180 of clear span for each assembly component.

March 22, 2021

- C. Structural-Test Performance: Panel assemblies tested according to ASTM E330, as follows:
 - 1. When tested at positive and negative wind-load design pressures, assemblies do not show evidence of deflection exceeding specified deflection limits.
 - 2. Test Durations: As required by design wind velocity, but not less than 10 seconds.
- D. Water Penetration under Static Pressure: Provide panel assemblies that do not evidence water penetration through fixed glazing and framing areas when tested according to ASTM E331 at a minimum static-air-pressure difference of 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft..
- E. Thermal Movements: Allow for thermal movements from ambient- and surface-temperature changes. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.
- F. Energy Performance: Provide panel assemblies with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:
 - 1. Thermal Transmittance (U-Factor): Fixed glazing and framing areas shall have U-factor of not more than 0.80 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
 - 2. Solar-Heat-Gain Coefficient (SHGC): Fixed glazing and framing areas shall have an SHGC of no greater than 0.7 as determined according to NFRC 200.

2.02 STRUCTURED-POLYCARBONATE-PANEL ASSEMBLIES

- A. Structured-Polycarbonate-Panel Assemblies: Translucent assemblies that are supported by aluminum framing and glazed with structured-polycarbonate panels.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Palram "Sunglaze" system (Basis of Design).
 - b. CPI Daylighting, Inc.
 - c. Duo-Gard Industries Inc.
 - d. Super Sky Products Inc.
 - e. Wasco - Part of VELUX Commercial.
 - f. Or equal.

2.03 STRUCTURED-POLYCARBONATE PANELS

- A. Structured-Polycarbonate Panels: Translucent, extruded-polycarbonate sheet with multiwall cellular cross section that provides isolated airspaces and that is coextruded with a UV-protective layer.
- B. Panel Thickness: As indicated on Drawings..
- C. UV Resistance: On outer surface.
- D. Color: As selected by Architect from manufacturer's full range.

March 22, 2021

E. Panel Performance: **Miami-Dade NOA No. 20-0720.02**

1. Plastic Self-Ignition Temperature: 650 deg F or more according to ASTM D1929.
2. Smoke-Developed Index: 450 or less according to ASTM E84, or 75 or less according to ASTM D2843.
3. Combustibility Classification: Class CC1 based on testing according to ASTM D635.
4. **Roof-Covering Classification: Class B, ASTM D-635**
5. Color Change: Not more than 3.0 units Delta E, when measured according to ASTM D2244, after outdoor weathering compliant with procedures in ASTM D1435. Outdoor Weathering Conditions: 60 months in Arizona or 120 months in a moderate North American climate.
6. Impact Resistance: No failure at impact of 200 ft. x lbf according to freefalling-ball impact test using a 3-1/2-inch-diameter, 6.3-lb ball.
7. Haze Factor: Greater than 90 percent when tested according to ASTM D1003.

2.04 ALUMINUM FRAMING SYSTEMS

- A. Components: Manufacturer's standard extruded-aluminum members of thickness required and reinforced as required to support imposed loads. Construction: One piece, extruded aluminum.
- B. Aluminum: Alloy and temper recommended in writing by manufacturer for type of use and finish indicated.
 1. Sheet and Plate: ASTM B209.
 2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B221.
 3. Extruded Structural Pipe and Tubes: ASTM B429.
 4. Structural Profiles: ASTM B308.
- C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning skylight components.
- D. Fasteners and Accessories: Manufacturer's standard, corrosion-resistant, nonstaining, and nonbleeding fasteners and accessories; compatible with adjacent materials.
 1. At closures, retaining caps, or battens, use ASTM A193, 300 series stainless-steel screws.
 2. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
 3. At movement joints, use slip-joint linings, spacers, and sleeves of material and type recommended in writing by manufacturer.
- E. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A123 or ASTM A153 requirements.
- F. Anchor Bolts: ASTM A307, Grade A, galvanized steel.
- G. Concealed Flashing: Corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.
- H. Exposed Flashing and Closures: Aluminum sheet not less than 0.040 inch thick, finished to match framing.

March 22, 2021

- I. Framing Gaskets: Manufacturer's standard gasket system with low-friction surface treatment designed specifically for retaining structured-polycarbonate panels.
- J. Frame-System Sealants: As specified in Section 07 92 00 "Joint Sealants."
- K. Corrosion-Resistant Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.05 FABRICATION

- A. Fabricate aluminum components that, when assembled, have the following characteristics:
 - 1. Profiles that are sharp, straight, and free of defects or deformations.
 - 2. Accurately fitted joints with ends coped or mitered.
 - 3. Internal guttering systems or other means to drain water passing through joints and moisture migrating within assembly to exterior.
- B. Fabricate aluminum sill closures with weep holes and for installation as continuous component.
- C. Reinforce aluminum components as required to receive fastener threads.

2.06 ALUMINUM FINISHES

- A. High-Performance Organic Finish: Three-coat fluoropolymer finish complying with AAMA 2605 and containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions. Color and Gloss: Match Architect's sample.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General: Comply with manufacturer's written instructions.
 - 1. Do not install damaged components.
 - 2. Fit joints between aluminum components to produce hairline joints free of burrs and distortion.
 - 3. Rigidly secure nonmovement joints.
 - 4. Install anchors with separators and isolators to prevent metal corrosion, electrolytic deterioration, and immobilization of moving joints.
 - 5. Seal joints watertight unless otherwise indicated.

March 22, 2021

- B. Metal Protection: Where aluminum components will contact dissimilar materials, protect against galvanic action by painting contact surfaces with corrosion-resistant coating or by installing nonconductive spacers as recommended in writing by manufacturer for this purpose.
- C. Install components plumb and true in alignment with established lines and elevations.
- D. Skylight Assemblies: Install continuous aluminum sill closures with weatherproof expansion joints and locked and sealed corners. Install components to drain water passing through joints and moisture migrating within assembly to exterior.
- E. Erection Tolerances: Install panel assemblies to comply with the following maximum tolerances:
 - 1. Alignment: Limit offset from true alignment to 1/32 inch where surfaces abut in line, edge to edge, at corners, or where a reveal or protruding element separates aligned surfaces by less than 3 inches; otherwise, limit offset to 1/8 inch.
 - 2. Location and Plane: Limit variation from true location and plane to 1/8 inch in 12 feet, but no greater than 1/2 inch over total length.

3.03 FIELD QUALITY CONTROL

- A. Repair or remove work where test results and inspections indicate that it does not comply with specified requirements.
- B. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- C. Prepare test and inspection reports.

END OF SECTION