

TO ALL BIDDERS OF RECORD:

This Addendum forms a part of the Contract Documents and modifies the Drawings and Project Manual as hereinafter indicated.

1) DEADLINE EXTENSIONS

**** DEADLINE IS EXTENDED TO THE FOLLOWING DATE****

Extended Deadline for **General Construction** is Wednesday, October 2, 2024, at 10:00 AM EST

2) BIDDER QUESTIONS

1. *Is this project tax exempt?*

Response: Yes.

2. *Will the building permit fee be waived?*

Response: No.

3. *Please refer to Addendum 2 question #10. Who owns the furnish and install to the Drain Guards and leader?*

Response: The pre-engineered metal building (PEMB) manufacturer and/or supplier is to furnish and install the drain guards and leaders.

4. *Can you please confirm that the sealed concrete and epoxy paint mentioned in the finish material schedule will be carried in the painting filed sub-bid?*

Response: Yes.

5. *Please refer to Section 11 12 00 Parking Control Equipment. Page 1 of 10 is missing. Please advise.*

Response: Page 1 of 10 for section 11 12 00 PARKING CONTROL EQUIPMENT is provided in this addendum.

6. *Please advise, for estimating will the drawings take precedence over specs?*

Response: Specifications are to take precedence over drawings.

7. *Refer to Spec Section 09 21 16 which calls out a hard drywall ceiling but the drawings call for an Acoustical ceiling. Please clarify.*

Response: Refer to section 09 51 00 ACOUSTICAL TILE CEILINGS.

8. *Spec Section 09 21 16 calls out exterior gypsum soffit board, but the drawings do not show this. Please advise.*

Response: Refer to reissued section 09 21 016 GYPSUM BOARD ASSEMBLIES as part of this addendum.

9. *Spec Section 09 21 16 calls out multiple gypsum types. Please advise.*

Response: Refer to reissued section 09 21 016 GYPSUM BOARD ASSEMBLIES as part of this addendum.

10. *I am very confused on alternate #1 per addendum #2 response. It says to disregard the note on M100 as alternate#1. So do we assume it is part of the base project bid now? In addition, is alternate #1 still a separate single ADA bath with exhaust fan scope for HVAC in case they add another bathroom?*

Response: Addendum #2 states that “...all work scope with items labeled with/as **ALTERNATE #1 to be included as part of the base bid.**” Regarding sheet M100 (Item G in Drawings – Alternate #1 section of Addendum #2), it states to omit the Alternate #1 **LABEL**.

3.) PROJECT MANUAL

1. ADD Page 1 of 10 for 11 12 00 PARKING CONTROL EQUIPMENT included in this addendum.
2. REPLACE 09 21 016 GYPSUM BOARD ASSEMBLIES with the reissued section included in this addendum.
3. In section 00 00 10 TABLE OF CONTENTS, CHANGE the following page number for Section 09 21 16 GYPSUM BOARD ASSEMBLIES:
09 21 16GYPSUM BOARD ASSEMBLIES **7**

4.) ATTACHMENTS

1. Filed Sub Bid Tabulation Sheet
2. Updated Plan Holder List
3. 11 12 00 PARKING CONTROL EQUIPMENT (Page 1 of 10)
4. 09 21 16 GYPSUM BOARD ASSEMBLIES

(THIS COMPLETES ADDENDUM NO. 3)

DWWD Storage Building and Site Improvements

Filed Sub-Bids Tabulations

September 10, 2024

Indicates Apparent Lowest Bidder

TRADE	04 20 00 - MASONRY			
Company	Ace Restoration Co. Inc.	B&B Commercial Masonry, Inc.	Cendella Masonry, Inc.	Costa Brothers Masonry, Inc.
Address	155 Mill Street Natick, MA 01760	54 Oakville Street Lynn, MA 01905	177 Central Street 2nd Floor Milford, MA 01757	2 Lambeth Park Drive Fairhaven, MA 02719
Bid Amount	\$417,800.00	\$123,100.00	\$100,500.00	\$121,000.00
Spec. Section	04 00 01	04 20 00	04 20 00	04 20 00
Addenda	1,2	1,2	1,2	1,2
General Bidders				
No Exceptions	X	X		X
All except for			IFCC	
Only used by				
Bid Bond Form	Yes	Yes	Yes	Yes
DCAMM				
Certificate of Eligibility	Yes (valid till 8/18/25)	Yes (valid till 1/4/25)	Yes (valid till 5/29/25)	Yes (valid till 9/15/24)
Sub-bidder Statement	Yes	Yes	Yes	Yes
Unit Prices	Yes but N/A	N/A	N/A	N/A
Certificate of Insurance	No	Yes	No	No
Supplier Diversity Office (SDO) Statement	--	--	--	Yes (WBE)
Comments			Included Sub-bidder Cert. of Corporate Authority	Included WBENC Certificate
				Included Authorized Signatory Listing

DWWD Storage Building and Site Improvements

Filed Sub-Bids Tabulations

September 10, 2024

Indicates Apparent Lowest Bidder

TRADE	04 20 00 - MASONRY (CONTINUED)			
Company	Ferandes Masonry, Inc.	Folan Waterproofing & Construction, Inc.	G.V.W. Incorporated	Marmelo Bros Construction Co., Inc.
Address	1031 Philips Road New Bedford, MA 02745	795 Washington St. Easton, MA 02375	38 Bennett Street Lynn, MA 01905	13 Ventura Drive N. Dartmouth, MA 02747
Bid Amount	\$162,000.00	\$138,900.00	\$45,600.00	\$84,000.00
Spec. Section	04 20 00	04 20 00	Masonry	04 20 00
Addenda	1,2	1,2	1,2	1,2
General Bidders				
No Exceptions	X	X		X
All except for				
Only used by			G.V.W. Incorporated	
Bid Bond Form	Yes	Yes	Yes	Yes
DCAMM				
Certificate of Eligibility	Yes (valid till 8/22/25)	Yes (valid till 8/26/25)	Yes (valid till 10/19/24)	Yes (valid till 8/23/25)
Sub-bidder Statement	Yes	Yes	Yes	Yes
Unit Prices	N/A	N/A	N/A	Yes but N/A
Certificate of Insurance	Yes	No	No	Yes
Supplier Diversity Office (SDO) Statement	Yes (PBE- Portuguese-Owned)	--	--	Yes (SDO)
Comments				Included Certificate of Vote of Authorization Included Authorized Signatory Listing

DWWD Storage Building and Site Improvements

Filed Sub-Bids Tabulations

September 10, 2024

Indicates Apparent Lowest Bidder

TRADE	05 50 00 MISCELLANEOUS AND ORNAMENTAL IRON			
Company	EDM Construction	Houle Welding and Fabrication, Inc.	Quinn Brothers of Essex, Inc.	V&G Ironworks
Address	125 East Main Street Merrimac, MA 01860	56 Sesame Drive Chicopee, MA 01020	239 Western Avenue Essex, MA 01929	1500 Shawsheen St Tewksbury, MA 01876
Bid Amount	\$256,800.00	\$150,125.00	\$189,700.00	\$224,024.00
Spec. Section	05 50 00/ 05 51 30/ 05 52 00	05 Misc. Metal	05 50 00	05 50 00
Addenda	1,2	1,2	1,2	1,2
General Bidders				
No Exceptions		X		
All except for	GVW, Northern, Boston Building Bridge, Castagna		Seaver Construction Inc, GTC Construction Mgmt	X - None listed
Only used by				
Bid Bond Form	Yes	Yes	Yes	Yes
DCAMM				
Certificate of Eligibility	Yes (valid till 6/11/25)	Yes (valid till 8/30/25)	Yes (valid till 11/19/24)	Yes (valid till 6/8/25)
Sub-bidder Statement	Yes	Yes	Yes	Yes
Unit Prices	N/A	N/A	N/A	N/A
Certificate of Insurance	Yes	Yes	Yes	No
Supplier Diversity Office (SDO) Statement	Yes (WBE)	--	--	--
Comments				Inconsistent bid amounts in numbers and words. Bid amount in words is carried

DWWD Storage Building and Site Improvements

Filed Sub-Bids Tabulations

September 10, 2024

Indicates Apparent Lowest Bidder

TRADE	09 91 00 PAINTING			
Company	G.V.W. Incorporated	JM's Painting Corporation	Keltic Painting LLC	--
Address	38 Bennett Street Lynn, MA 01905	22 Washington St Dedham, MA 02026	189 Hill Road Thompson, CT 06277	
Bid Amount	\$40,100.00	\$42,700.00	\$47,270.00	
Spec. Section	Painting	09 91 00	09 91 00	
Addenda	1,2	1,2	1,2	
General Bidders				
No Exceptions		X	X	
All except for				
Only used by	G.V.W. Incorporated			
Bid Bond Form	Yes	Yes	Yes	
DCAMM				
Certificate of Eligibility	Yes (valid till 10/19/24)	Yes (valid till 6/21/25)	Yes (valid till 9/5/25)	
Sub-bidder Statement	Yes	Yes	Yes	
Unit Prices	N/A	Yes but N/A	N/A	
Certificate of Insurance	No	No	Yes	
Supplier Diversity Office (SDO) Statement	--	--	--	
Comments			Included Dept Labor letter of good standing	

DWWD Storage Building and Site Improvements
Filed Sub-Bids Tabulations
September 10, 2024

Indicates Apparent Lowest Bidder

TRADE	22 00 00 PLUMBING			
Company	Araujo Brothers Plumbing and Heating	Gilonna Plumbing and Heating Services, Incorporated	LaPan Mechanical Contractors, Inc.	Thomas Snowden Inc.
Address	P.O. Box 50225 New Bedford, MA 02745	26 Bixby Avenue Middleton, MA 01949	3 Bethany Street Worcester, MA 01604	177 North Main Street Bldg. 700, Unit 703 Middleton, MA 01949
Bid Amount	\$150,400.00	\$119,474.00	\$141,200.00	\$270,000.00
Spec. Section	22	(not listed)	22 00 00	22 00 00
Addenda	1,2	(not listed)	1,2	1,2
General Bidders				
No Exceptions	X	X	X	X
All except for				
Only used by				
Bid Bond Form	Yes	Yes	Yes	Yes
DCAMM				
Certificate of Eligibility	Yes (valid till 3/11/25)	Yes (valid till 7/25/25)	Yes (valid till 8/15/25)	Yes (valid till 11/6/24)
Sub-bidder Statement	Yes	Yes	Yes	Yes
Unit Prices	Yes but N/A	N/A	N/A	Yes but N/A
Certificate of Insurance	Yes	Yes	No	No
Supplier Diversity Office (SDO) Statement	--	Yes (WBE)	--	--
Comments	FSB Section E - Pipe Insulation = \$0 Additional Insurance Info	FSB Section E - Pipe Insulation = \$0		Included DCAMM Authorized Signatory Listing

DWWD Storage Building and Site Improvements
Filed Sub-Bids Tabulations
September 10, 2024

Indicates Apparent Lowest Bidder

TRADE	23 00 00 HVAC			
Company	Apex Corporation	Araujo Brothers Plumbing and Heating	CAM HVAC & Construction, Inc.	G&H Heating and Cooling, LLC
Address	56 Charles Street North Abington, MA 02351	P.O. Box 50225 New Bedford, MA 02745	116 Lydia Ann Road Smithfield, RI 02917	133 County Road East Freetown, MA 02717
Bid Amount	\$121,500.00	\$184,600.00	\$197,000.00	\$199,000.00
Spec. Section	23 00 00	23	23 00 00	23 (HVAC)
Addenda	1,2	1,2	1,2	1,2
General Bidders				
No Exceptions	X	X		
All except for			BC Construction & NE Builders	Several (See below)*
Only used by				
Bid Bond Form	Yes	Yes	Yes	Yes
DCAMM				
Certificate of Eligibility	Yes (valid till 5/3/25)	Yes (valid till 3/11/25)	Yes (valid till 11/26/24)	Yes (valid till 5/6/25)
Sub-bidder Statement	Yes	Yes	Yes	Yes
Unit Prices	N/A	Yes but N/A	N/A	N/A
Certificate of Insurance	No	Yes	Yes	Yes
Supplier Diversity Office (SDO) Statement	--	--	--	--
Comments		FSB Section E - Testing & Balancing = \$975 and Auto Temp Controls = \$37,950	Additional Insurance Info	*R. Zoppo Corp, Builder Systems Inc, Northern Contracting Corp, & Waterline Inc
		Additional Insurance Info		

DWWD Storage Building and Site Improvements
Filed Sub-Bids Tabulations
September 10, 2024

Indicates Apparent Lowest Bidder

TRADE	23 00 00 HVAC (CONTINUED)		
Company	Performance Plumbing and Heating, Inc.	Thomas Snowden Inc.	--
Address	9 Bramble Road Medway, MA 02053	177 North Main Street Bldg. 700, Unit 703 Middleton, MA 01949	--
Bid Amount	\$172,884.00	\$159,000.00	
Spec. Section	23 00 00	23 00 00	
Addenda	1,2	1,2	
General Bidders			
No Exceptions	X	X	
All except for			
Only used by			
Bid Bond Form	Yes	Yes	
DCAMM			
Certificate of Eligibility	Yes (valid till 9/24/24)	Yes (valid till 11/06/24)	
Sub-bidder Statement	Yes		
Unit Prices	N/A	Yes but N/A	
Certificate of Insurance	Yes	No	
Supplier Diversity Office (SDO) Statement	Yes (WBE)	--	
Comments		Included Authorized Signatory Listing	

DWWD Storage Building and Site Improvements
Filed Sub-Bids Tabulations
September 10, 2024

Indicates Apparent Lowest Bidder

TRADE	26 00 00 ELECTRICAL			
Company	CDS Contracting Services, LLC	Hub Electric, Inc.	Icon West Corporation	Richard T Losordo Electrical Services, Inc.
Address	275 Centre Street Unit 1 Holbrook, MA 02343	10 Draper Street Unit 19 Woburn, MA 01801	251 Taylor St. Springfield, MA 01105	P.O. Box 518 N. Easton, MA 02356
Bid Amount	\$278,778.00	\$166,000.00	\$204,700.00	\$338,000.00
Spec. Section	26 00 00	26 00 00	26 00 00	26 00 00
Addenda	1,2	1,2	1,2	1,2
General Bidders				
No Exceptions	X		X	X
All except for		Encore Contracting Services Inc.		
Only used by				
Bid Bond Form	Yes	Yes	Yes	Yes
DCAMM				
Certificate of Eligibility	Yes (valid till 5/3/25)	Yes (valid till 7/19/25)	Yes (valid till 5/2/25)	Yes (valid till 1/12/25)
Sub-bidder Statement	Yes	Yes	Yes	Yes
Unit Prices	N/A	Yes but N/A	N/A	N/A
Certificate of Insurance	Yes	Yes	No	No
Supplier Diversity Office (SDO) Statement	Yes (MBE)	--	--	--
Comments		Included DCAMM Authorized Signatory Listing		

Dedham-Westwood Water District
Storage Facility and Site Improvements

#6790 Dedham Westwood Water District Storage Facility and Site Improvements	
Plan Holder List	
#	Company Name
1	Ace Restoration Co. Inc.
2	American Electrical Construction, Inc.
3	Araujo Bros Plumbing and Heating, Inc.
4	Asphalt engineering
5	Beacon Building Supply
6	Brite-Lite Electrical Co., Inc.
7	CAM HVAC & CONSTRUCTION INC.
8	CDS Contracting Services, LLC
9	Cenedella Masonry Inc.
10	Collins Construction
11	Commercial Masonry Corporation
12	Construction Dynamics, Inc.
13	Costa Brothers Masonry
14	Cranshaw Construction
15	Custom Iron Works
16	Dagle Electrical Construction Corp
17	D&C Construction Co., Inc.
18	EDM Construction, Inc.
19	EJ Prescott
20	Empire Masonry Corp
21	Enterprise Equipment Co. Inc.
22	Fall River Electrical Associates
23	Fernandes Masonry
24	Folan Waterproofing
25	Geldart Associates
26	GenCon
27	G&H Heating and Cooling, llc.
28	Glionna Plumbing & Heating Services, Inc
29	H.J. Russell
30	Houle Welding & Fabrication Inc.
31	Icon West Corporation Electrical
32	Integrated Electrical Systems Inc.
33	Jasco Electric Inc.
34	JF White Contracting
35	JJ Cardosi, Inc.
36	John W. Egan Co.,inc.
37	JM's Painting Corp
38	K5
39	King Painting, Inc.
40	Kneeland Plumbing & Heating, Inc.
41	laPan mechanical
42	Losorodo Electric
43	Macura Excavating
44	Marmelo Bros Construction
45	M-V Electrical Contractors, Inc.
46	Nadeau Corporation
47	N.B. KENNEY COMPANY, INC.
48	Needham Certified Welding Corp.
49	NEL Corporation
50	New England Builders & Contractors Inc.
51	New England Specialty Services Inc
52	Northern Contracting Corp

Dedham-Westwood Water District
Storage Facility and Site Improvements

53	Northstar Refrigeration Inc.
54	Page Building Construction Co.
55	Performance Plumbing and Heating
56	Phillips Electric, Inc
57	PJ Dionne Company, Inc.
58	Poulin Construction Inc.
59	Quinn Bros.of Essex
60	Richard T Losordo Electrical Services Inc
61	Robert W. Irvine & Sons, Inc.
62	Seaver Construction
63	Site Improvements Inc
64	South Coast Improvement
65	Systems Contracting Inc.
66	TCD Construction, Inc.
67	The Waterproofing Company LLC
68	Tim's Fabricators Inc
69	Top Quality Painting Company
70	Tower Construction
71	United Steel, Inc
72	Vantage Builders, Inc.
73	V&G Ironworks
74	Veterans Development Corporation, Inc.
75	Wayne J. Griffin Electric, Inc.
76	WES Construction Corp.

SECTION 11 12 00 - PARKING CONTROL EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Automatic barrier gates.

B. Related Sections:

1. Division 05 Section "Metal Fabrications" for pipe bollards to protect parking control equipment.
2. Division 32 Section "Asphalt Paving" for asphalt driveway and approach paving.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for parking control equipment. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

B. Shop Drawings: For parking control equipment. Include plans, elevations, sections, details, and attachments to other work.

1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
2. Wiring Diagrams: For power, signal, and control wiring.

C. Qualification Data: For qualified Installer.

D. Operation and Maintenance Data: For parking control equipment to include in emergency, operation, and maintenance manuals.

E. Software and Firmware Operational Documentation:

1. Software operating and upgrade manuals.
2. Printout of software application and graphic screens.

F. The manufacturer shall submit drawings on the vehicle barrier system.

1. Detail drawings shall show the top assembly layout and overall dimensions of each major element of the barrier system equipment, including EAU and operator control panels.

SECTION 092116 - GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:

1. Interior gypsum wallboard.
2. Acoustic insulation in gypsum wallboard assemblies.

B. Alternates: Not Applicable.

C. Items To Be Installed Only: Install the following items as furnished by the designated Sections:

1. Section 230001 - HEATING, VENTILATING, AND AIR CONDITIONING:
 - a. Pipe and duct sleeves for placement into gypsum board openings.

D. Items To Be Furnished Only: Not Applicable.

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide fire stop tracks capable of withstanding deflection within limits and under conditions indicated.

1. Design framing system to maintain clearances at openings, to allow for construction tolerances, and to accommodate live load deflection of primary building structure.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: Full-size Sample in 12-inch-long length for each trim accessory indicated.

C. Shop Drawings: If materials and systems other than those specified and those indicated on the Drawings are proposed for use, submit shop drawings signed and sealed by a structural engineer licensed in the Commonwealth of Massachusetts certifying proposed systems meet code requirements, project requirements and the following deflection criteria:

1. For gypsum board assemblies without applied rigid finishes L/240; for gypsum board assemblies with applied rigid finishes such as tile, stone, wood paneling L/360. Lateral load 5 ps.f. except greater at shafts. Lateral load at shafts shall be required based on analysis of equipment and systems using shaft.

1.5 QUALITY ASSURANCE

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.
- B. Marking and Identification for Fire- and Smoke-Partitions: Fire walls, fire barriers, fire partitions, smoke barriers, smoke partitions and other walls required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:
 - 1. Be located in accessible concealed floor, floor-ceiling or attic spaces; and
 - 2. Be repeated at intervals not exceeding 30 feet measured horizontally along the wall or partition; and
 - 3. Include lettering not less than 0.5 inch in height, incorporating the suggested wording: "FIRE AND/OR SMOKE BARRIER – PROTECT ALL OPENINGS," or other wording.
- C. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.
- D. Mockups: Before beginning gypsum board installation, install mockups of at least 100 sq. ft. in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Install mockups for the following:
 - a. Each level of gypsum board finish indicated for use in exposed locations.
 - b. Each texture finish indicated.
 - 2. Apply or install final decoration indicated, including painting and wallcoverings, on exposed surfaces for review of mockups.
 - 3. Simulate finished lighting conditions for review of mockups.
 - 4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original packages, containers, and bundles bearing brand name and identification of manufacturer or supplier.
 - 1. Deliver and store materials in accordance with Gypsum Association Publications GA-216, GA-238 and GA-801.
- B. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack panels flat to prevent sagging.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

- B. Do not install interior products until installation areas are enclosed and conditioned.
- C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 NON-LOAD-BEARING STEEL FRAMING, GENERAL

- A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
 - 1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal, unless otherwise indicated.
 - 2. Protective Coating: G90 corrosion-resistant zinc coating, unless otherwise indicated.

2.2 INTERIOR GYPSUM BOARD

- A. General: Complying with ASTM C 1396/C 1396M, as applicable to type of gypsum board indicated and whichever is more stringent.
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. USG Corporation.
 - b. Georgia Pacific Gypsum.
 - c. Lafarge North America.
 - d. National Gypsum Company.
 - e. Or equal.
- B. Fire-Resistant Type X, ASTM C 1396:
 - 1. Thickness: 5/8 inch.
 - 2. Long Edges: Tapered.
- C. Impact-Resistant Type: ASTM C 1629, manufactured to produce greater resistance to through-penetration than typical abuse-resistant gypsum wallboard through the use of fiberglass mesh embedded into the core. Must provide Level 2 or Level 3 resistance to soft and hard body impacts per ASTM C1629..
 - 1. Core: 5/8 inch, Type X.
 - 2. Long Edges: Tapered.

2.3 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
2. Shapes:
 - a. Cornerbead.
 - b. Bullnose bead.
 - c. LC-Bead: J-shaped; exposed long flange receives joint compound.
 - d. Expansion (control) joint.
 - e. Curved-Edge Cornerbead: With notched or flexible flanges.

2.4 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
 1. Interior Gypsum Wallboard: Paper.
- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
 1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
 3. Fill Coat: For second coat, use setting-type, sandable topping compound.
 4. Finish Coat: For third coat, use setting-type, sandable topping compound.
 5. Skim Coat: For final coat of Level 5 finish, use setting-type, sandable topping compound.

2.5 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
- C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
 1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
 2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.
- D. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
 1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.
- E. Acoustical Sealant: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:

1. Use sealants that have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
2. Acoustical Sealant for Exposed and Concealed Joints:
 - a. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
 - b. Specified Technologies, Inc.; Smoke N Sound Acoustical Sealant.
 - c. United States Gypsum Co.; SHEETROCK Acoustical Sealant.
 - d. Or equal.
3. Acoustical Sealant for Concealed Joints:
 - a. Ohio Sealants, Inc.; Pro-Series SC-170 Rubber Base Sound Sealant.
 - b. Pecora Corp.; BA-98.
 - c. Tremco, Inc.; Tremco Acoustical Sealant.
 - d. Or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Installation Standard: ASTM C 754. Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Install bracing at terminations in assemblies.
- D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.3 APPLYING AND FINISHING PANELS, GENERAL

- A. Comply with ASTM C 840.
- B. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.
- C. Locate edge and end joints over supports. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

- D. Form control and expansion joints with space between edges of adjoining gypsum panels.
- E. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- wide joints to install sealant.
- F. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- G. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

3.4 APPLYING INTERIOR GYPSUM BOARD

- A. Single-Layer Application:
 - 1. On partitions/walls, apply gypsum panels to minimize end joints.
 - 2. Fastening Methods: Apply gypsum panels to supports with steel drill screws.
- B. Multilayer Application:
 - 1. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
 - 2. Fastening Methods: Fasten base layers and face layers separately to supports with screws.
- C. Laminating to Substrate: Where gypsum panels are indicated as directly adhered to a substrate (other than studs, joists, furring members, or base layer of gypsum board), comply with gypsum board manufacturer's written recommendations and temporarily brace or fasten gypsum panels until fastening adhesive has set.

3.5 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Designer for visual effect.
- C. Interior Trim: Install in the following locations:
 - 1. Cornerbead: Use at outside corners, unless otherwise indicated.
 - 2. LC-Bead: Use at exposed panel edges.

3. Curved-Edge Cornerbead: Use at curved openings.

3.6 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below:
 1. GA Level 1: Ceiling plenum areas and concealed areas not exposed to view.
 2. GA Level 2: Panels that are substrate for tile.
 3. GA Level 3: Not used.
 4. GA Level 4: Panel surfaces that will be exposed to view (typical panels).
 5. GA Level 5: Where indicated on Drawings.

3.7 PROTECTION

- A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- B. Remove and replace panels that are wet, moisture damaged, or exhibit mold growth. Repair of damaged panels in place is not acceptable.
 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 09 21 16