SECTION 9 29 00

GYPSUM BOARD

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\*\* NOTE TO SPECIFIER \*\* PABCO® Gypsum; gypsum wallboard.  
This section is based on the products of PABCO® Gypsum, which is located at:  
10600 White Rock Rd. Bldg B, Suite 100  
Rancho Cordova, CA 95670  
Tel: 510-792-9555  
 Tech Services 866-282-9298  
 QuietRock Support 800-797-8159  
Fax: 510-459-4913  
Email: [request info (info@quietrock.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=PABCO)  
Web: [http://www.pabcogypsum.com](http://http://www.pabcogypsum.com) | [http://www.QuietRock.com](http://http://www.QuietRock.com)   
 [ [Click Here](http://www.arcat.com/arcatcos/cos34/arc34639.html) ] for additional information.  
PABCO Gypsum, a division of PABCO Building Products, has provided quality gypsum board products and service for over 35 years, and is a part of Pacific Coast Building Products, one of the nation's leading, privately held suppliers of building products and services to the construction industry. The company employs individuals in 11 states in the western U.S. and Canada and has over 75 locations.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Standard Gypsum Board. (PABCO Regular Gypsum Board)
    2. Fire-Resistant Gypsum Board. (PABCO FLAME CURB Super C Gypsum Board, PABCO FLAME CURB Type X Gypsum Board, and PABCO FLAME CURB Type C Gypsum Board)
    3. Lightweight Gypsum Board. (PABCO LITECORE Gypsum Board)
    4. Abuse Resistant Gypsum Board. (PABCO ABUSE CURB Type X Gypsum Board)
    5. High Impact Resistant Gypsum Board. (PABCO High Impact Type X Gypsum Board)
    6. Mold and Water Resistant Gypsum Board. (MOLD CURB PLUS Regular Mold and Water Resistant Gypsum Board and MOLD CURB PLUS Type X Mold and Water Resistant Gypsum Board)
    7. Flexible Gypsum Board. (PABCO FLEX Regular Gypsum Board)
    8. Interior Ceiling Gypsum Board. (PABCO Interior Ceiling Regular Gypsum Board)
    9. Exterior Ceiling Gypsum Board. (PABCO Exterior Soffit Regular Gypsum Board, PABCO Exterior Soffit, PABCO Exterior Soffit Super C, PABCO Exterior Soffit Type X Gypsum Board, and PABCO Exterior Soffit Type C Gypsum Board)
    10. Shaftliner Panel. (PABCORE SHAFTLINER Type X Gypsum Board, PABCO GLASS Type X Shaftliner, and PABCORE MOLD CURB PLUS Shaftliner Mold and Water Resistant Gypsum Board.
    11. Exterior Sheathing. (PABCO GLASS Regular Sheathing, PABCO GLASS Type X Sheathing, PABCO Gypsum Regular Sheathing, and PABCO Gypsum Type X Sheathing)
    12. Sound Damped Gypsum Board. (QUIETROCK ES Type X Standard Sound Damped Gypsum Board, QUIETROCK ES MR Type X Mold Resistant Sound Damped Gypsum Board, QUIETROCK 510 Regular Sound Damped Gypsum Board, QUIETROCK 530 Regular Sound Damped Gypsum Board, QUIETROCK 530 RF Regular Sound Damped Gypsum Board, and QUIETROCK 545 Regular Sound Damped Gypsum Board) (Sound Curb Type X)
    13. Acoustic Accessories - Acoustical Sealant: As specified in Division 07 Section "Joint Sealants." (QuietSeal Pro Acoustic Sealant and QuietPutty Acoustic Putty)

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* 1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 05 40 00 - Cold-Formed Metal Framing.
    2. Section 07 91 23 - Backer Rods.
    3. Section 13 48 13 - Manufactured Sound and Vibration Control Components.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM International (ASTM):
       1. ASTM C 473 - Standard Test Methods for Physical Testing of Gypsum Panel Products.
       2. ASTM C 475 - Standard Specification for Joint Compound and Joint Tape for Finishing.
       3. ASTM C 514 - Standard Specifications for Nails for the Application of Gypsum Board.
       4. ASTM C 639 - Standard Test Method for Rheological (Flow) Properties of Elastomeric Sealants.
       5. ASTM C 681 - Standard Test Method for Volatility of Oil- and Resin-Based, Knife-Grade, Channel Glazing Compounds.
       6. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board.
       7. ASTM C 919 - Standard Practice for Use of Sealants in Acoustical Applications.
       8. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants.
       9. ASTM C 1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
       10. ASTM C 1177 - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
       11. ASTM C 1178 - Standard Specification for Coated Glass Mat Water Resistant Gypsum Backing Panel.
       12. ASTM C 1280 - Standard Specification for Application of Gypsum Sheathing.
       13. ASTM C 1325 - Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cementitious Backer Units.
       14. ASTM C 1396 - Standard Specification for Gypsum Board.
       15. ASTM C 1629 - Standard Classification for Abuse Resistant Nondecorated Interior Gypsum Panel Products and Fiber reinforced Cement Panels.
       16. ASTM C 1658 - Standard Specification for Glass Mat Gypsum Panels.
       17. ASTM D 750 - Standard Test Method for Rubber Deterioration in Carbon-Arc Weathering Apparatus.
       18. ASTM D 925 - Standard Test Methods for Rubber Property-Staining of Surfaces (Contact, Migration, and Diffusion).
       19. ASTM D 2202 - Standard Test Method for Slump of Sealants.
       20. ASTM D 3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
       21. ASTM E 72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction.
       22. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
       23. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
       24. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials.
       25. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
       26. ASTM E 136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 176; C.
       27. ASTM E 695-03 - Standard Test Method of Measuring Relative Resistance of Wall, Floor, and Roof Construction to Impact Loading.
       28. ASTM E 2126-02a - Standard Test Methods for Cyclic (Reversed) Load Test for Shear Resistance of Walls for Buildings.
       29. ASTM G 21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.
    2. Gypsum Association (GA):
       1. GA-214 - Recommended Levels of Gypsum Board Finish.
       2. GA-216 - Application and Finishing of Gypsum Panel Products.
       3. GA-231 - Assessing Water Damage to Gypsum Board.
       4. GA-238 - Guidelines for the Prevention of Mold Growth on Gypsum Board
       5. GA-253 - Application of Gypsum Sheathing.
       6. GA-801 - Handling and Storage of Gypsum Panel Products: A Guide For Distributors, Retailers, and Contractors.
  1. SUBMITTALS
     1. Refer to Section 01 30 00 - Administrative Requirements Submittal Procedures
     2. Product Data: Submit manufacturer current technical literature for each component.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. LEED Submittals:
       1. Product Data for Credit MR 4 Recycled Content: For products having recycled content, documentation indicating percentages by weight of post-consumer and pre-consumer recycled content. Include statement indicating contractor costs for each product having recycled content.
       2. Product Data for Credit EQ 4.1 Low Emitting Materials: For adhesives used to laminate gypsum board panels to substrates, including printed statement of VOC content.
       3. Product Data for Credit MR 5 Regional Materials: Identify each regional material along with the location of its extraction, or manufacture. Include distance to Project, contractor material cost for each regional item, and percentage by weight that is considered regional.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if not required.

* + 1. Samples:
       1. Board: Submit sample of each panel product specified, 4 inches x 6 inches (102 mm x 152 mm)
       2. Trim: Submit sample of each type of trim specified, 12 inches (305 mm) long.
       3. Texture: Submit sample 12 inch square of textured coated gypsum board.
    2. Quality Assurance Submittals:

\*\* NOTE TO SPECIFIER \*\* Delete Design Data, Test Report submittal requirements when propriety specification is used and can be held. Maintain Design Data, Test Report submittal requirement when other products may be submitted as substitution.

* + - 1. Provide products manufactured in North America only.
      2. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.
      3. Manufacturer Instructions: Provide manufacturer's written installation instructions
    1. Closeout Submittals:
       1. Refer to Section 01 70 00 - Execution and Closeout Requirements Closeout Submittals.
  1. QUALITY ASSURANCE
     1. Installer shall have experience with installation of gypsum board under similar conditions.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Fire-Resistance-Rated Assemblies: For fire-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. 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.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Mock-ups:
       1. Install mock-up using approved gypsum products, including fasteners and related accessories per manufacturer's current printed instructions and recommendations.
          1. Mock-up size: 10 feet by 10 feet
          2. Mockup for designated level of exposed gypsum board finish and each designated texture finish indicated.
          3. Mock-up Substrate: Match wall assembly construction.
          4. Mock-up may remain as part of the work.
  1. DELIVERY, STORAGE AND HANDLING
     1. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic and other causes in accordance with GA-238 and manufacturer recommendations. Stack product flat to prevent sagging. In addition, follow guidelines found in GA-801.
  2. PROJECT CONDITIONS
     1. Environmental Limitations: Comply with ASTM C 840 or GA-216 requirements, whichever are more stringent.
     2. Do not install interior products until installation areas are enclosed and conditioned.
     3. 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.
  3. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1. PRODUCTS
   1. MANUFACTURER

\*\* NOTE TO SPECIFIER \*\* Throughout PART 2 maintain brand names when proprietary specification is acceptable. Use generic term when project must be competitively bid. CONFIRM product requirements and characteristics prior to listing products of other manufacturers.

* + 1. Acceptable Manufacturer: PABCO® Gypsum, which is located at: 10600 White Rock Rd. Bldg B, Suite 100; Rancho Cordova, CA 95670; Tel: 510-792-9555; Tech Services 866-282-9298; QuietRock Support 800-797-8159; Fax: 510-459-4913; Email: [request info (info@quietrock.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=PABCO); Web: [http://www.pabcogypsum.com](http://http://www.pabcogypsum.com) | [http://www.QuietRock.com](http://http://www.QuietRock.com)

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. STANDARD GYPSUM BOARD
     1. Basis of Design: PABCO Regular Gypsum Board.
        1. Panel Physical Characteristics:
           1. Core: Regular Gypsum Core.
           2. Surface Paper: 100 percent recycled content paper on front, back and long edges.
           3. Long Edges: Tapered.

\*\* NOTE TO SPECIFIER \*\* Delete thickness not required.

* + - * 1. Overall Thickness/ Weight: 1/4 inch (6.4 mm) 1.1lbs/ft2..
        2. Overall Thickness/ Weight: 3/8 inch (9.5 mm) 1.3lbs/ft2..
        3. Overall Thickness/ Weight: 1/2 inch (12.7 mm) 1.5lbs/ft2.
        4. Panel complies with requirements of ASTM C 1396.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. FIRE-RESISTANT GYPSUM BOARD

\*\* NOTE TO SPECIFIER \*\* PABCO FLAME CURB Super C Gypsum Board has extended fire-resistance performance that exceeds the Type X "classified" core formulation in fire-restive performance. In non-proprietary rated designs, Super C may be used to replace Type XXX. Type XXX cannot be used to replace Super C fire-resistance gypsum board. Assembly design should be used to determine use of Super C fire-resistance rated gypsum board.

* + 1. Basis of Design: PABCO FLAME CURB Super C Gypsum Board.
       1. Panel Physical Characteristics:
          1. Core: Super C Gypsum Core.
          2. Surface Paper: 100 percent recycled content paper on front, back and long edges.
          3. Long Edges: Tapered.
          4. Overall Thickness: 1/2 inch (12.7mm).
          5. Weight: 2.0lbs/ft2.
          6. Panel complies with requirements of ASTM C 1396.
    2. Basis of Design: PABCO FLAME CURB Type X Gypsum Board.
       1. Panel Physical Characteristics:
          1. Core: Type X Gypsum Core.
          2. Surface Paper: 100 percent recycled content paper on front, back and long edges.

\*\* NOTE TO SPECIFIER \*\* Delete edge not required.

* + - * 1. Long Edges: Tapered.
        2. Long Edges: Rounded.
        3. Overall Thickness: 5/8 inch (15.8mm).
        4. Weight: 2.2lbs/ft2.
        5. Panel complies with Type X requirements of ASTM C 1396.

\*\* NOTE TO SPECIFIER \*\* PABCO FLAME CURB Type C Gypsum Board has extended fire-resistance performance that exceeds the Type X "classified" core formulation in fire-restive performance. In non-proprietary rated designs, Type C may be used to replace Type X. Type X cannot be used to replace Type C fire-resistance gypsum board. Assembly design should be used to determine use of Type C fire-resistance rated gypsum board.

* + 1. Basis of Design: PABCO FLAME CURB Type C Gypsum Board.
       1. Panel Physical Characteristics:
          1. Core: Type C Gypsum Core.
          2. Surface Paper: 100 percent recycled content paper on front, back and long edges.
          3. Long Edges: Tapered.
          4. Overall Thickness: 5/8 inch (15.8mm).
          5. Weight: 2.4lbs/ft2.
          6. Panel complies with Type X requirements of ASTM C 1396.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. LIGHTWEIGHT GYPSUM BOARD
     1. Basis of Design: PABCO LITECORE Gypsum Board.
        1. Panel Physical Characteristics:
           1. Core: LiteCore Gypsum Core.
           2. Surface Paper: 100 percent recycled content paper on front, back and long edges.
           3. Long Edges: Tapered.
           4. Overall Thickness: 1/2 inch (12.7mm).
           5. Weight: 1.5lbs/ft2.
           6. Panel complies with requirements of ASTM C 1396.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. ABUSE RESISTANT GYPSUM BOARD

\*\* NOTE TO SPECIFIER \*\* Abuse Resistant gypsum board should be specified in applications where there is a need to provide additional surface protection from scuffs, scratches and dents. Impact resistant gypsum board should be specified for applications where impact damage is a concern. Both comply with the fire resistance requirements for Type X gypsum board.

* + 1. Basis of Design: PABCO ABUSE CURB Type X Gypsum Board.
       1. Panel Physical Characteristics:
          1. Core: Type X Gypsum Core.
          2. Surface Paper: 100 percent recycled content heavy mold/mildew/moisture/water and abrasion-resistant paper on front, and 100 percent recycled content heavy mold/mildew/water-resistant paper on back and long edges.
          3. Long Edges: Tapered.
          4. Overall Thickness: 5/8 inch (15.8mm).
          5. Weight: 2.9lbs/ft2.
          6. Panel complies with Type X requirements of ASTM C 1396.
          7. Surface Abrasion Resistance: Classification Level 2 in accordance with ASTM C 1629.
          8. Indentation Resistance: Classification Level 2 in accordance with ASTM C 1629.
          9. Soft Body Impact Resistance: Classification Level 2 in accordance with ASTM C 1629.

\*\* NOTE TO SPECIFIER \*\* PABCO Gypsum, PABCO ABUSE CURB Type X Gypsum Board has the following mold/mildew resistance characteristics. Verify conformance of this requirement when specification section must be provide products of equivalent design or Delete when characteristic is not required.

* + - * 1. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. HIGH IMPACT RESISTANT GYPSUM BOARD
     1. Basis of Design: PABCO High Impact Type X Gypsum Board.
        1. Panel Physical Characteristics:
           1. Core: Type X Gypsum Core.
           2. Surface Paper: 100 percent recycled content heavy mold/mildew/moisture/water and abrasion-resistant paper on front, and 100 percent recycled content heavy mold/mildew/water-resistant paper on back and long edges.
           3. Long Edges: Tapered.
           4. Overall Thickness: 5/8 inch (15.8mm).
           5. Weight: 2.9lbs/ft2.
           6. Panel complies with Type X requirements of ASTM C 1396.
           7. Surface Abrasion Resistance: Classification Level 2 in accordance with ASTM C 1629.
           8. Indentation Resistance: Classification Level 2 in accordance with ASTM C 1629.
           9. Soft Body Impact Resistance: Classification Level 2 in accordance with ASTM C 1629.

\*\* NOTE TO SPECIFIER \*\* PABCO Gypsum, PABCO High Impact Type X Gypsum Board has the following mold/mildew resistance characteristics. Verify conformance of this requirement when specification section must be provide products of equivalent design or Delete when characteristic is not required.

* + - * 1. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.
        2. Humidified Deflection: 5/8 inch (15.8mm) when tested in accordance with ASTM C 473.
        3. Water Absorption: < 5% by weight when tested in accordance with ASTM C 473.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. MOLD AND WATER RESISTANT GYPSUM BOARD

\*\* NOTE TO SPECIFIER \*\* Refer to Water Resistant Gypsum Board Article for PABCO WATER CURB PLUS Water Resistant Gypsum Board (Regular or Type X) when water resistance is required and mold resistance characteristics are NOT required.

* + 1. Basis of Design: MOLD CURB PLUS Regular Mold and Water Resistant Gypsum Board.
       1. Panel Physical Characteristics:
          1. Core: Regular Gypsum Core.
          2. Surface Paper: 100 percent recycled content heavy mold/mildew/moisture/water-resistant paper on front, back and long edges.
          3. Long Edges: Tapered.
          4. Overall Thickness: 1/2 inch (12.7mm).
          5. Weight: 1.7lbs/ft2.
          6. Panel complies with requirements of ASTM C 1396.

\*\* NOTE TO SPECIFIER \*\* PABCO Gypsum, MOLD CURB PLUS Regular Mold and Water Resistant Gypsum Board has the following mold/mildew resistance characteristics. VERIFY conformance of this requirement when specification section must be provide products of equivalent design or DELETE when characteristic is not required.

* + - * 1. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.
        2. Humidified Deflection: 10/8 inch (31.6mm) when tested in accordance with ASTM C 473.
        3. Water Absorption: < 5% by weight when tested in accordance with ASTM C 473.
    1. Basis of Design: MOLD CURB PLUS Type X Mold and Water Resistant Gypsum Board.
       1. Panel Physical Characteristics:
          1. Core: Type X Gypsum Core.
          2. Surface Paper: 100 percent recycled content heavy mold/mildew/moisture/water-resistant paper on front, back and long edges.
          3. Long Edges: Tapered.
          4. Overall Thickness: 5/8 inch (15.8mm).
          5. Weight: 2.3 lbs/ft2.
          6. Panel complies with Type X requirements of ASTM C 1396.

\*\* NOTE TO SPECIFIER \*\* PABCO Gypsum, MOLD CURB PLUS Type X Mold and Water Resistant Gypsum Board has the following mold/mildew resistance characteristics. VERIFY conformance of this requirement when specification section must be provide products of equivalent design or DELETE when characteristic is not required.

* + - * 1. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.
        2. Humidified Deflection: 5/8 inch (15.8mm) when tested in accordance with ASTM C 473.
        3. Water Absorption: < 5% by weight when tested in accordance with ASTM C 473.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. FLEXIBLE GYPSUM BOARD
     1. Basis of Design: PABCO FLEX Regular Gypsum Board.
        1. Panel Physical Characteristics:
           1. Core: Regular Gypsum Core.
           2. Surface Paper: 100 percent recycled content paper on front, back and long edges.
           3. Long Edges: Tapered.
           4. Overall Thickness: 3/8 inch (9.5mm).
           5. Weight: 1.3lbs/ft2.
           6. Panel complies with requirements of ASTM C 1396

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. INTERIOR CEILING GYPSUM BOARD
     1. Basis of Design: PABCO Interior Ceiling Regular Gypsum Board.
        1. Panel Physical Characteristics:
           1. Core: Regular Gypsum Core.
           2. Surface Paper: 100 percent recycled content paper on front, back and long edges.

\*\* NOTE TO SPECIFIER \*\* Delete edge not required.

* + - * 1. Long Edges: Tapered.
        2. Long Edges: Rounded.
        3. Overall Thickness: 1/2 inch (12.7mm).
        4. Weight: 1.8lbs/ft2.
        5. Panel complies with requirements of ASTM C 1396.
        6. Humidified Deflection: <=5/16 inch (8mm) when tested in accordance with ASTM C 473.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. EXTERIOR CEILING GYPSUM BOARD
     1. PABCO Exterior Soffit Regular Gypsum Board.
        1. Panel Physical Characteristics:
           1. Core: Regular Gypsum Core.
           2. Surface Paper: 100 percent recycled content moisture/water-resistant paper on front, back and long edges.
           3. Long Edges: Tapered.
           4. Overall Thickness: 1/2 inch (12.7mm).
           5. Weight: 1.7 lbs/ft2.
           6. Panel complies with requirements of ASTM C 1396.
     2. PABCO Exterior Soffit Super C Gypsum Board.
        1. Panel Physical Characteristics:
           1. Core: Super C Gypsum Core.
           2. Surface Paper: 100 percent recycled content moisture/water-resistant paper on front, back and long edges.
           3. Long Edges: Tapered.
           4. Overall Thickness: 1/2 inch (12.7mm).
           5. Weight: 2.0 lbs/ft2.
           6. Panel complies with requirements of ASTM C 1396.
     3. PABCO Exterior Soffit Type X Gypsum Board.
        1. Panel Physical Characteristics:
           1. Core: Type X Gypsum Core.
           2. Surface Paper: 100 percent recycled content moisture/water-resistant paper on front, back and long edges.
           3. Long Edges: Tapered.
           4. Overall Thickness: 5/8 inch (15.8mm).
           5. Weight: 2.3 lbs/ft2.
           6. Panel complies with Type X requirements of ASTM C 1396.

\*\* NOTE TO SPECIFIER \*\* PABCO Exterior Soffit Type C Gypsum Board has extended fire-resistance performance that exceeds the Type X "classified" core formulation in fire-restive performance. In non-proprietary rated designs, Type C may be used to replace Type X. Type X cannot be used to replace Type C fire-resistance gypsum board. Assembly design should be used to determine use of Type C fire-resistance rated gypsum board.

* + 1. PABCO Exterior Soffit Type C Gypsum Board.
       1. Panel Physical Characteristics:
          1. Core: Type C Gypsum Core.
          2. Surface Paper: 100 percent recycled content moisture/water-resistant paper on front, back and long edges.
          3. Long Edges: Tapered.
          4. Overall Thickness: 5/8 inch (15.8mm).
          5. Weight: 2.4 lbs/ft2.
          6. Panel complies with Type X requirements of ASTM C 1396.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. SHAFTLINER PANEL
     1. Basis of Design: PABCORE SHAFTLINER Type X Gypsum Board.
        1. Panel Physical Characteristics:
           1. Core: Type X Gypsum Core.
           2. Surface Paper: 100 percent recycled content heavy moisture/water-resistant paper on front, back and long edges.
           3. Long Edges: Double Beveled.
           4. Overall Thickness: 1 inch (25.4mm).
           5. Weight: 4.4 lbs/ft2.
           6. Panel complies with Type X requirements of ASTM C 1396.
           7. Water Absorption: < 10% by weight when tested in accordance with ASTM C 473.
     2. Basis of Design: PABCO GLASS Type X Shaftliner.
        1. Panel Physical Characteristics:
           1. Core: Type X Fire-Resistant Gypsum Core with additives to enhance moisture/water and mold/mildew-resistance.
           2. Facing: moisture/water-resistant coated fiberglass mat on front, back and long edges.
           3. Long Edges: Double Beveled.
           4. Overall Thickness: 1 inch (25.4mm).
           5. Weight: 4.0 lbs/ft2.
           6. Panel complies with Type X requirements of ASTM C 1396 and ASTM C 1658.

\*\* NOTE TO SPECIFIER \*\* PABCO Gypsum, PABCO GLASS Type X Shaftliner has the following mold/mildew resistance characteristics. VERIFY conformance of this requirement when specification section must be provide products of equivalent design or DELETE when characteristic is not required.

* + - * 1. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.
        2. Water Absorption: < 10% by weight when tested in accordance with ASTM C 473.
    1. Basis of Design: PABCORE MOLD CURB PLUS Shaftliner.
       1. Panel Physical Characteristics:
          1. Core: Type X Fire-Resistant Gypsum Core with additives to enhance moisture/water and mold/mildew-resistance.
          2. Surface Paper: 100 percent recycled content heavy mold/mildew/moisture/water -resistant paper on front, back and long edges.
          3. Long Edges: Double Beveled.
          4. Overall Thickness: 1 inch (25.4mm).
          5. Weight: 4.0 lbs/ft2.
          6. Panel complies with Type X requirements of ASTM C 1396.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. EXTERIOR SHEATHING
     1. Basis of Design: PABCO GLASS Regular Sheathing.
        1. Panel Physical Characteristics:
           1. Core: Regular Gypsum Core with additives to enhance moisture/water and mold/mildew-resistance and reinforced with glass fibers to increase resilience.
           2. Facing: moisture/water-resistant coated fiberglass mat on front, back and long edges.
           3. Long Edges: Square.
           4. Overall Thickness: 1/2 inch (12.7mm).
           5. Weight: 2.0 lbs/ft2.
           6. Panel complies with requirements of ASTM C 1396 and ASTM C 1177.
           7. Flexural Strength - Parallel: 80lbf when tested in accordance with ASTM C 473.
           8. Flexural Strength - Perpendicular: 100lbf when tested in accordance with ASTM C 473.
           9. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.
           10. Humidified Deflection: 2/8 inch (6mm) when tested in accordance with ASTM C 473.
           11. Water Absorption: < 10% by weight when tested in accordance with ASTM C 473.
     2. Basis of Design: PABCO GLASS Type X Sheathing.
        1. Panel Physical Characteristics:
           1. Core: Type X Fire-Resistant Gypsum Core with additives to enhance moisture/water and mold/mildew-resistance and reinforced with glass fibers to increase resilience.
           2. Facing: moisture/water-resistant coated fiberglass mat on front, back and long edges.
           3. Long Edges: Square.
           4. Overall Thickness: 5/8 inch (15.8mm).
           5. Weight: 2.8 lbs/ft2.
           6. Panel complies with Type X requirements of ASTM C 1396 and ASTM C 1177.
           7. Flexural Strength - Parallel: 100lbf when tested in accordance with ASTM C 473.
           8. Flexural Strength - Perpendicular: 140lbf when tested in accordance with ASTM C 473.
           9. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.
           10. Humidified Deflection: 1/8 inch (3mm) when tested in accordance with ASTM C 473.
           11. Water Absorption: < 10% by weight when tested in accordance with ASTM C 473.
     3. Basis of Design: PABCO Gypsum Regular Sheathing.
        1. Panel Physical Characteristics:
           1. Core: Regular Gypsum Core.
           2. Surface Paper: 100 percent recycled content heavy moisture/water-resistant paper on front, back and long edges.
           3. Long Edges: Square.
           4. Overall Thickness: 1/2 inch (12.7mm).
           5. Weight: 1.7 lbs/ft2.
           6. Panel complies with requirements of ASTM C 1396
           7. Flexural Strength - Parallel: 36lbf when tested in accordance with ASTM C 473.
           8. Flexural Strength - Perpendicular: 107lbf when tested in accordance with ASTM C 473.
           9. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.
           10. Humidified Deflection: 10/8 inch (31.6mm) when tested in accordance with ASTM C 473.
           11. Water Absorption: <=10% by weight when tested in accordance with ASTM C 473.
     4. Basis of Design: PABCO Gypsum Type X Sheathing.
        1. Panel Physical Characteristics:
           1. Core: Regular Gypsum Core.
           2. Surface Paper: 100 percent recycled content heavy moisture/water-resistant paper on front, back and long edges.
           3. Long Edges: Square.
           4. Overall Thickness: 5/8 inch (15.8mm).
           5. Weight: 2.3 lbs/ft2.
           6. Panel complies with Type X requirements of ASTM C 1396 and ASTM C 1177.
           7. Flexural Strength - Parallel: 46lbf when tested in accordance with ASTM C 473.
           8. Flexural Strength - Perpendicular: 147lbf when tested in accordance with ASTM C 473.
           9. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.
           10. Humidified Deflection: 5/8 inch (15.8mm) when tested in accordance with ASTM C 473.
           11. Water Absorption: <=10% by weight when tested in accordance with ASTM C 473.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. SOUND DAMPED GYPSUM BOARD
     1. Basis of Design: QUIETROCK ES Type X Standard Sound Damped Gypsum Board.
        1. Performance Criteria:

\*\* NOTE TO SPECIFIER \*\* QUIETROCK ES Type X Standard Sound Damped Gypsum Board is listed on the following UL-Rated wall assemblies and tested on specific STC-rated wall assemblies. In situations where both STC and UL-rates are required, VERIFY the wall assembly conformance of both requirements. See manufacturer Acoustic and Fire Assembly Product Selection Guide.  
\*\* NOTE TO SPECIFIER \*\* STC performance specification requirement must be identified by wall assembly type including stud type, dimensions, gauge and stud spacing. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required.

* + - * 1. Wall Assembly STC: (wood stud construction) 51 tested in accordance with ASTM E 90.
        2. Wall Assembly STC: (wood stud construction) 54 tested in accordance with ASTM E 90.
        3. Wall Assembly STC: (wood stud construction) 55 tested in accordance with ASTM E 90.
        4. Wall Assembly STC: (wood stud construction) 60 tested in accordance with ASTM E 90.
        5. Wall Assembly STC: (wood stud construction) 69 tested in accordance with ASTM E 90.
        6. Wall Assembly STC: (steel stud construction) 48 tested in accordance with ASTM E 90.
        7. Wall Assembly STC: (steel stud construction) 49 tested in accordance with ASTM E 90.
        8. Wall Assembly STC: (steel stud construction) 53 tested in accordance with ASTM E 90.
        9. Wall Assembly STC: (steel stud construction) 55 tested in accordance with ASTM E 90.
        10. Wall Assembly STC: (steel stud construction) 57 tested in accordance with ASTM E 90.
        11. Wall Assembly STC: (steel stud construction) 60] tested in accordance with ASTM E 90.

\*\* NOTE TO SPECIFIER \*\* QUIETROCK ES Type X Standard Sound Damped Gypsum Board is listed on the following UL-Rated wall assemblies. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required. U017, U026, U032, U040, U204, U207, U301, U302, U305, U309, U314, U326, U329, U330, U332, U337, U338, U339, U340, U341, U342, U344, U351, U354, U355, U356, U357, U358, U360, U364, U369, U376, U379, U386, U411, U418, U420, U421, U425, U434, U439, U442, U449, U450, U460, U463, U465, U466, U467, U473, U475, U485, U487, U494, U502, U504, U505, U510, U512, U531, U609, U615, U617, U622, U623, U626, U633, U646, U647, U648, U651, U652, U926, V310, V417, V419, V420, V430, V432, V434, V463, V464, V498, W429, X508, X516, X517, X525, X526, X528.

* + - * 1. Wall Assembly UL-rated Assemblies: \_\_\_\_\_\_.
      1. Panel Physical Characteristics:
         1. Core:

Inner Layer: Sound damping viscoelastic polymer.

Outer Layers: Enhanced, high density gypsum panel manufactured to the Type X requirements of ASTM C 1396 that has been bisected to eliminate inner layer of paper in final laminated product.

* + - * 1. Surface Paper: 100 percent recycled content heavy paper on front, back and long edges.
        2. Long Edges: Tapered.
        3. Overall Thickness: 5/8 inch (15.8mm) tolerance &#177;0.050 inch (1.27mm).
        4. Weight: 2.6 lbs/ft2.
        5. Panel complies with Type X requirements of ASTM C 1396.
    1. Basis of Design: QUIETROCK ES MR Type X Mold Resistant Sound Damped Gypsum Board.
       1. Performance Criteria:

\*\* NOTE TO SPECIFIER \*\* QUIETROCK ES MR Type X Mold Resistant Sound Damped Gypsum Board is listed on the following UL-Rated wall assemblies and tested on specific STC-rated wall assemblies. In situations where both STC and UL-rates are required, VERIFY the wall assembly conformance of both requirements. See manufacturer Acoustic and Fire Assembly Product Selection Guide.  
\*\* NOTE TO SPECIFIER \*\* STC performance specification requirement must be identified by wall assembly type including stud type, dimensions, gauge and stud spacing. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required.

* + - * 1. Wall Assembly STC: (wood stud construction) 51 tested in accordance with ASTM E 90.
        2. Wall Assembly STC: (wood stud construction) 54 tested in accordance with ASTM E 90.
        3. Wall Assembly STC: (wood stud construction) 55 tested in accordance with ASTM E 90.
        4. Wall Assembly STC: (wood stud construction) 60 tested in accordance with ASTM E 90.
        5. Wall Assembly STC: (wood stud construction) 69 tested in accordance with ASTM E 90.
        6. Wall Assembly STC: (steel stud construction) 48 tested in accordance with ASTM E 90.
        7. Wall Assembly STC: (steel stud construction) 49 tested in accordance with ASTM E 90.
        8. Wall Assembly STC: (steel stud construction) 53 tested in accordance with ASTM E 90.
        9. Wall Assembly STC: (steel stud construction) 55 tested in accordance with ASTM E 90.
        10. Wall Assembly STC: (steel stud construction) 57 tested in accordance with ASTM E 90.
        11. Wall Assembly STC: (steel stud construction) 60 tested in accordance with ASTM E 90.

\*\* NOTE TO SPECIFIER \*\* QUIETROCK ES MR Type X Mold Resistant Sound Damped Gypsum Board is listed on the following UL-Rated wall assemblies. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required. U017, U026, U032, U040, U204, U207, U301, U302, U305, U309, U314, U326, U329, U330, U332, U337, U338, U339, U340, U341, U342, U344, U351, U354, U355, U356, U357, U358, U360, U364, U369, U376, U379, U386, U411, U418, U420, U421, U425, U434, U439, U442, U449, U450, U460, U463, U465, U466, U467, U473, U475, U485, U487, U494, U502, U504, U505, U510, U512, U531, U609, U615, U617, U622, U623, U626, U633, U646, U647, U648, U651, U652, U926, V310, V417, V419, V420, V430, V432, V434, V463, V464, V498, W429, X508, X516, X517, X525, X526, X528.

* + - * 1. Wall Assembly UL-rated Assemblies: \_\_\_\_\_.
      1. Panel Physical Characteristics:
         1. Core:

Inner Layer: Sound damping viscoelastic polymer.

Outer Layers: Enhanced, high density gypsum panel manufactured to the Type X requirements of ASTM C 1396 that has been bisected to eliminate inner layer of paper in final laminated product.

* + - * 1. Surface Paper: 100 percent recycled content heavy mold/mildew -resistant paper on front, back and long edges.
        2. Long Edges: Tapered.
        3. Overall Thickness: 5/8 inch (15.8mm) tolerance &#177;0.050 inch (1.27mm).
        4. Weight: 2.6 lbs/ft2.
        5. Panel complies with Type X requirements of ASTM C 1396.
        6. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.
    1. Basis of Design: QUIETROCK 510 Regular Sound Damped Gypsum Board
       1. Performance Criteria:

\*\* NOTE TO SPECIFIER \*\* QUIETROCK 510 Regular Sound Damped Gypsum Board is listed on the following UL-Rated wall assemblies and tested on specific STC-rated wall assemblies. In situations where both STC and UL-rates are required, VERIFY the wall assembly conformance of both requirements. See manufacturer Acoustic and Fire Assembly Product Selection Guide.  
\*\* NOTE TO SPECIFIER \*\* STC performance specification requirement must be identified by wall assembly type including stud type, dimensions, gauge and stud spacing. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required.

* + - * 1. Wall Assembly STC: (wood stud construction) 47 tested in accordance with ASTM E 90.
        2. Wall Assembly STC: (wood stud construction) 49 tested in accordance with ASTM E 90.
        3. Wall Assembly STC: (wood stud construction) 52 tested in accordance with ASTM E 90.
        4. Wall Assembly STC: (wood stud construction) 69 tested in accordance with ASTM E 90.
        5. Wall Assembly STC: (steel stud construction) 50 tested in accordance with ASTM E 90.

\*\* NOTE TO SPECIFIER \*\* QUIETROCK 510 Regular Sound Damped Gypsum Board is listed on the following UL-Rated wall assemblies. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required.  
\*\* NOTE TO SPECIFIER \*\* QuietRock 510 for optional use as an additional layer on one or both sides of wall designs of the U300, U400, V400, and W400 series. Also for optional use as an additional layer in floor-ceiling constructions of the L500 and M500 series. Not evaluated nor intended as a substitute for the required layer(s) of UL Classified Gypsum Board (CKNX) in the individual U300, U400, V400, W400, L500 or M500 series designs.

* + - * 1. Wall Assembly UL-rated Assemblies: U347.

\*\* NOTE TO SPECIFIER \*\* QuietRock 510 panel not evaluated nor intended as a substitute for the required layer(s) of UL Classified Gypsum Board in the following listed Designs.) U301, U305, U309, U311, U320, U331, U334, U340, U341, U342, U440, U451, U453, U455, U465, U473, U493, V310, V469, W425.

* + - * 1. Wall Assembly UL-listed Assemblies: \_\_\_\_\_\_.
      1. Panel Physical Characteristics:
         1. Core:

Inner Layer: Sound damping viscoelastic polymer.

Outer Layers: Enhanced, high density gypsum panel manufactured to the requirements of ASTM C 1396.

* + - * 1. Surface Paper: 100 percent recycled content paper on front, back and long edges.
        2. Long Edges: Tapered.
        3. Overall Thickness: 1/2 inch (12.7mm) tolerance &#177;0.050 inch (1.27mm).
        4. Weight: 2.25 lbs/ft2.
        5. Panel complies with Type X requirements of ASTM C 1396.
    1. Basis of Design: QUIETROCK 530 Type X Sound Damped Gypsum Board.
       1. Performance Criteria:

\*\* NOTE TO SPECIFIER \*\* QUIETROCK 530 Type X Sound Damped Gypsum Board is listed on the following UL-Rated wall assemblies and tested on specific STC-rated wall assemblies. In situations where both STC and UL-rates are required, VERIFY the wall assembly conformance of both requirements. See manufacturer Acoustic and Fire Assembly Product Selection Guide.  
\*\* NOTE TO SPECIFIER \*\* STC performance specification requirement must be identified by wall assembly type including stud type, dimensions, gauge and stud spacing. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required.

* + - * 1. Wall Assembly STC: (wood stud construction) 52 tested in accordance with ASTM E 90.
        2. Wall Assembly STC: (wood stud construction) 53 tested in accordance with ASTM E 90.
        3. Wall Assembly STC: (wood stud construction) 54 tested in accordance with ASTM E 90.
        4. Wall Assembly STC: (wood stud construction) 66 tested in accordance with ASTM E 90.
        5. Wall Assembly STC: (wood stud construction) 74 tested in accordance with ASTM E 90.
        6. Wall Assembly STC: (steel stud construction) 55 tested in accordance with ASTM E 90.

\*\* NOTE TO SPECIFIER \*\* QUIETROCK 530 Type X Sound Damped Gypsum Board is listed on the following UL-Rated wall assemblies. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required. U309, U340, U341, U376, U386, V310, V463, V464.

* + - * 1. Wall Assembly UL-rated Assemblies: \_\_\_\_\_.
      1. Panel Physical Characteristics:
         1. Core:

Inner Layers: Sound damping viscoelastic polymer on both sides of a 32 gauge galvanized steel plate.

Outer Layers: Enhanced, high density gypsum panel manufactured to the requirements of ASTM C 1396.

* + - * 1. Surface Paper: 100 percent recycled content paper on front, back and long edges.
        2. Long Edges: Tapered.
        3. Overall Thickness: 5/8 inch (15.8mm) tolerance &#177;0.050 inch (1.27mm).
        4. Weight: 3.3 lbs/ft2.
        5. Shear Rating: Average 487 lbs/ft when measured in accordance with ASTM E 2126.
        6. Panel complies with Type X requirements of ASTM C 1396.
    1. Basis of Design: QUIETROCK 530 RF Type X Sound Damped Gypsum Board.
       1. Performance Criteria:

\*\* NOTE TO SPECIFIER \*\* QUIETROCK 530 RF Type X Sound Damped Gypsum Board is listed on the following UL-Rated wall assemblies and tested on specific STC-rated wall assemblies. In situations where both STC and UL-rates are required, VERIFY the wall assembly conformance of both requirements. See manufacturer Acoustic and Fire Assembly Product Selection Guide.)  
(Specifier Note: STC performance specification requirement must be identified by wall assembly type including stud type, dimensions, gauge and stud spacing. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required.

* + - * 1. Wall Assembly STC: (wood stud construction) 52 tested in accordance with ASTM E 90.
        2. Wall Assembly STC: (wood stud construction) 53 tested in accordance with ASTM E 90.
        3. Wall Assembly STC: (wood stud construction) 54 tested in accordance with ASTM E 90.
        4. Wall Assembly STC: (wood stud construction) 66 tested in accordance with ASTM E 90.
        5. Wall Assembly STC: (wood stud construction) 74 tested in accordance with ASTM E 90.
        6. Wall Assembly STC: (steel stud construction) 55 tested in accordance with ASTM E 90.

\*\* NOTE TO SPECIFIER \*\* QUIETROCK 530 RF Type X Sound Damped Gypsum Board is listed on the following UL-Rated wall assemblies. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required. U309, U340, U341, U376, U386, V310, V463, V464.

* + - * 1. Wall Assembly UL-rated Assemblies: \_\_\_\_\_.
      1. Panel Physical Characteristics:
         1. Core:

Inner Layers: Sound damping viscoelastic polymer on both sides of a 32 gauge galvanized steel plate.

Outer Layers: Enhanced, high density gypsum panel manufactured to the requirements of ASTM C 1396.

* + - * 1. Surface Paper: 100 percent recycled content paper on front, back and long edges with conductive metal tape along all edges.
        2. Long Edges: Tapered.
        3. Overall Thickness: 5/8 inch (15.8mm) tolerance &#177;0.050 inch (1.27mm)
        4. Weight: 3.3 lbs/ft2.
        5. Shear Rating: Average 487 lbs/ft when measured in accordance with ASTM E 2126.
        6. Electromagnetic Shielding Effectiveness: Testing in accordance to IEEE 299-1997.
        7. Panel complies with Type X requirements of ASTM C 1396.
    1. Basis of Design: QUIETROCK 545 Regular Sound Damped Gypsum Board.
       1. Performance Criteria:

\*\* NOTE TO SPECIFIER \*\* STC performance specification requirement must be identified by wall assembly type including stud type, dimensions, gauge and stud spacing. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required.

* + - * 1. Wall Assembly STC: (wood stud construction) 60 tested in accordance with ASTM E 90.
        2. Wall Assembly STC: (wood stud construction) 75 tested in accordance with ASTM E 90.
        3. Wall Assembly STC: (wood stud construction) 80 tested in accordance with ASTM E 90.
      1. Panel Physical Characteristics:
         1. Core:

Inner Layers: Sound damping viscoelastic polymer between each layer of a 32 gauge galvanized steel plate, magnesium oxide panel, and gypsum panel manufactured to the requirements of ASTM C 1396.

Outer Layers: Enhanced, gypsum panel manufactured to the requirements of ASTM C 1396.

* + - * 1. Surface Paper: 100 percent recycled content paper on front, back and long edges.
        2. Long Edges: Tapered.
        3. Overall Thickness: 1-3/8 inch (34.925mm) tolerance &#177;0.150 inch (3.81mm).
        4. Weight: 6.7 lbs/ft2.
        5. Panel complies with requirements of ASTM C 1396.
    1. Basis of Design: SOUND CURB Type X Sound Damped Gypsum Board.
       1. Performance Criteria:

\*\* NOTE TO SPECIFIER \*\* STC performance specification requirement must be identified by wall assembly type including stud type, dimensions, gauge and stud spacing. VERIFY conformance of this requirement when specification section must provide products of equivalent design or DELETE when characteristic is not required.

* + - * 1. Surface Burning Characteristics (ASTM E 84): Flame Spread 15; Smoke Developed 0.
        2. Thermal resistance R value (ASTM C 518): 0.64.
        3. Foil Application: Foil may be applied to the back of ASTM C 1396 gypsum wallboard for the purpose of complying with ASTM C 1396 paragraph 5.1.
      1. Panel Physical Characteristics:
         1. Core: High-density, gypsum core is reinforced with glass fibers for added strength and fire-resistance., and gypsum panel manufactured to the requirements of ASTM C 1396 Type X.
         2. Surface Paper: 100 percent recycled content paper on front, back and long edges.
         3. Long Edges: Tapered.
         4. Overall Thickness: 3/4 inch (19.05mm) tolerance &#177;0.150 inch (3.81mm).
         5. Weight: 3.1 lbs/ft2.
         6. Panel complies with requirements of ASTM C 1396 Type X.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. ACOUSTIC ACCESSORIES - ACOUSTICAL SEALANT
     1. QuietSeal Pro Acoustical Sealant:
        1. Physical Characteristics:
           1. Standard Specification for Latex Sealants: Grade -18 degrees C in accordance with ASTM C 834.
           2. Extrusion Rate: >=2.1 g/s when tested in accordance with ASTM C1183 Method B.
           3. Artificial Weathering: No wash-out, slump, or cracking. Also <=25% total bond area loss tested in accordance with ASTM C 732 for 500 Hours.
           4. Volume Shrinkage: <=30% when tested in accordance with ASTM C1241 Type OP.
           5. Low Temperature Flexibility: No adhesion loss or cracking through to substrate after 500 hours when tested in accordance with ASTM C 734.
           6. Recovery and Adhesion Loss: >=75% recovery and <=25% total bond area loss when tested in accordance with ASTM C 736.
           7. Slump: No slump observed when tested in accordance with ASTM D 2202.
           8. Stain Index: 1 when tested in accordance with ASTM D 2203.
           9. Surface Burning: NFPA Class A Fire-Rating when tested in accordance with ASTM E 84.
           10. VOC content < 0.1 g/L.
     2. QuietPutty Acoustic Putty:
        1. Physical Characteristics:
           1. Color: Blue/Green.
           2. Thickness: 1/8 inch (3.2 mm).
           3. Weight: 6 oz/pad.
           4. Size: 7 x 7 inches (178 mm x 178 mm)/pad.
           5. Density: 1oz/cu. inch.
           6. Unit size: 10 pads/box.
           7. Tensile Strength: 135 PSI when tested in accordance with ASTM D 412.
           8. Compression set B: 13% max.
           9. TCA Robinson Test: Light Commercial when tested in accordance with ASTM C 627.

1. EXECUTION
   1. EXAMINATION
      1. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.
      2. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
      3. Proceed with installation only after unsatisfactory conditions have been corrected.
   2. APPLYING AND FINISHING PANELS, GENERAL
      1. Comply with ASTM C 840, GA-216 or GA-214.
      2. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panel not less than one framing member.
      3. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.
      4. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. 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.
      5. Form control and expansion joints with space between edges of adjoining gypsum panels.
      6. 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. (0.7 sq. m) 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 (6 to 9 mm) wide joints to install sealant.
      7. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4 to 1/2 inch (6 to 12 mm) 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.
      8. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
      9. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members, or provide control joints to counteract wood shrinkage.
      10. STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of QuietSeal Pro or equivalent acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings. Install sound attenuation blankets before installing gypsum panels, unless blankets are readily installed after panels have been installed on one side.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. APPLYING INTERIOR GYPSUM BOARD
     1. Install interior gypsum board in the following locations:
        1. Regular Type: Vertical or horizontal surfaces, unless otherwise indicated.
        2. Type X: Where required for fire-resistance-rated assembly.
        3. Type C: Where required for specific fire-resistance-rated assembly indicated.
        4. Super C: Where required for specific fire-resistance-rated assembly indicated on Drawings.
        5. Ceiling Type: Ceiling surfaces.
        6. Moisture and Mold-Resistant Type: As indicated on Drawings.
        7. Sound Damped Gypsum Board: As indicated on Drawings.
     2. Single-Layer Application:
        1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing, unless otherwise indicated.
        2. On partitions/walls, apply gypsum panels vertically (parallel to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
           1. Stagger abutting end joints not less than one framing member in alternate courses of panels.
           2. At stairwells and other high walls, install panels horizontally, unless otherwise indicated or required by fire-resistance-rated assembly.
        3. On furring members, apply gypsum panels vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
        4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.
     3. Multilayer Application:
        1. On ceilings, apply gypsum board indicated for base layers before applying base layers on walls/partitions; apply face layers in same sequence. Apply base layers at right angles to framing members and offset face-layer joints 1 framing member, 16 inches (400 mm) minimum, from parallel base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly.
        2. 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.
        3. On furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
        4. Fastening Methods: Fasten base layers and face layers separately to supports with screws.
     4. 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.
     5. Curved Surfaces:
        1. Install panels horizontally (perpendicular to supports) and unbroken, to extent possible, across curved surface plus 12-inches (304.8 mm-) long straight sections at ends of curves and tangent to them.
        2. For double-layer construction, fasten base layer to studs with screws 16 inches (406.4 mm) o.c. Center gypsum board face layer over joints in base layer, and fasten to studs with screws spaced 12 inches (304.8 mm) o.c.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. APPLYING EXTERIOR GYPSUM PANELS FOR CEILINGS AND SOFFITS
     1. Apply panels perpendicular to supports, with end joints staggered and located over supports.
        1. Install with 1/4-inch (6.4 mm) open space where panels abut other construction or structural penetrations.
        2. Fasten with corrosion-resistant screws.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. APPLYING TILE BACKING PANELS
     1. Water-Resistant Gypsum Backing Board: Install at showers, tubs, and where indicated. Install with 1/4 inch (6.4 mm) gap where panels abut other construction or penetrations.
     2. Areas Not Subject to Wetting: Install regular-type (or type X where required by code) gypsum wallboard panels to produce a flat surface except at showers, tubs, and other locations indicated to receive water-resistant panels.
     3. Where tile backing panels abut other types of panels in same plane, shim surfaces to produce a uniform plane across panel surfaces.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. INSTALLING TRIM ACCESSORIES
     1. 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.
     2. Control Joints: Install control joints at locations indicated on Drawings and if not shown, according to ASTM C 840 or GA-216 and in specific locations approved by Architect for visual effect.
     3. Interior Trim: Install in the following locations:
        1. Cornerbead: Use at outside corners, unless otherwise indicated.
        2. LC-Bead: Use at exposed panel edges.
     4. Exterior Trim: Install in the following locations:
        1. Cornerbead: Use at outside corners.
        2. LC-Bead: Use at exposed panel edges.
     5. Aluminum Trim: Install in locations indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. FINISHING GYPSUM BOARD
     1. 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.
     2. Prefill open joints, rounded or beveled edges, and damaged surface areas.
     3. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
     4. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840, GA-216 or GA-214:
        1. Locations to receive Level 0 finish (no taping, finishing, or accessories required): Non-fire-rated , non-sound-rated, and non-smoke-rated assemblies in ceiling plenums and concealed areas, and in temporary construction
        2. Locations to receive Level 1 finish (all joints and interior angles shall have tape set in joint compound. Surface shall be free of excess joint compound. Tool marks and ridges are acceptable): Fire rated, sound rated, and smoke rated assemblies in plenum areas above ceilings, in attics, and in areas where the assembly would generally be concealed.
        3. Locations to receive Level 2 finish (all joints and interior angles shall have tape embedded in joint compound and wiped with a joint knife leaving a thin coating of joint compound over all joints and interior angles. Fastener heads and accessories shall be covered with a coat of joint compound): Surfaces to receive moisture resistant gypsum board as a surfacing.
        4. Locations to receive Level 3 finish (all joints and interior angles shall have tape embedded in joint compound and one additional coat of joint compound applied over all joints and interior angles. Fastener heads and accessories shall be covered with two separate coats of joint compound): Areas which are to receive heavy or medium-texture (spray or hand applied) before final painting, or where heavy-grade wall coverings are to be applied as the final decoration. This level of finish is not recommended where smooth painted surfaces or light to medium wall coverings are specified.
        5. Locations to receive Level 4 finish (all joints and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over all flat joints): All flat and eggshell paints, light textures, or wall coverings.
        6. Locations to receive Level 5 finish (all joints and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over all flat joints. A thin skim coat of joint compound trowel applied, or a material manufactured especially for this purpose and applied in accordance with manufacturer's recommendations, shall be applied to the entire surface. The surface shall be smooth and free of tool marks and ridges): Gloss or semi-gloss paints, and areas where severe lighting conditions occur.
  2. PROTECTION
     1. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
     2. Remove and replace panels that are wet, moisture damaged, and 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.

END OF SECTION