SECTION 09 2900

GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Furnish and install gypsum board as described in Contract Documents, except behind ceramic tile.
   2. Furnish and install acoustical sealants as described in Contract Documents.

B. Related Sections:
   1. Section 07 9219: Quality of acoustical sealants.
   2. Section 09 3013: Backerboard behind ceramic tile.
   3. Section 09 8114: Sound Deadening Board.
   4. Section 09 9413: Textured finishing

1.2 REFERENCES

A. Gypsum Association:
   1. GA-214-90: 'Recommended Specification: Levels of Gypsum Board Finish.'

B. American Society For Testing And Materials:
   1. ASTM C 36-03, 'Standard Specification for Gypsum Wallboard.'
   2. ASTM C 475-02, 'Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.'
   3. ASTM C 840-01, 'Standard Specification for Application and Finishing of Gypsum Board.'
   5. ASTM C 1002-01, 'Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panels or Metal Plaster Bases to Wood Studs or Steel Studs.'
   6. ASTM C 1396-04, 'Standard Specification for Gypsum Board.'

1.3 QUALITY ASSURANCE

A. Pre-Installation Conference:
   1. Schedule pre-installation conference immediately before installation of gypsum wallboard.
   2. In addition to agenda items specified in Section 01 3000, review finish requirements necessary for installation of finish materials over gypsum wallboard.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages, containers, or bundles bearing brand name, applicable standard designation, and Manufacturer's name.

B. Store material under roof and keep dry. Stack gypsum board flat and protect from damage.

1.5 PROJECT CONDITIONS

A. Environmental Requirements:
   1. Temperature shall be 50 deg F 10 deg C and 95 deg F 35 deg C maximum day and night during entire joint operation and until execution of Certificate of Substantial Completion.
2. Provide ventilation to eliminate excessive moisture.
3. Avoid hot air drafts that will cause too rapid drying.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Interior Gypsum Board:
   1. Fire-Rated Construction:
      a. Class Two Quality Standard: Product meeting requirements of ASTM C 36 or C 1396, Type X, UL one-hour rated, tapered edge, face paper suitable for painting.
   2. Non-Fire-Rated Construction:
      a. Class Two Quality Standard: Product meeting requirements of ASTM C 36 or C 1396. Board installed in areas accessible to public shall have tapered edge to accommodate taping and face paper suitable for painting.

2.2 ACCESSORIES

A. Gypsum Board Mounting Accessories:
   1. Class Two Quality Standards:
      a. Furring Channels:
         1) Walls: Galvanized DWC-25 by USG.
         2) Ceilings: Galvanized DWC-20 by USG.
      b. Resilient Channels: RC-1 by USG.
      c. Other accessories as required.

B. Corner And Edge Trim:
   1. Metal: 24 ga 0.635 mm minimum steel, electrolytic galvanized zinc-coated, treated for maximum cement and paint adhesion. Surfaces to receive bedding cement knurled for maximum bonding.
   2. Paper-Faced Metal:
      a. Type Two Acceptable Products:
         1) Beadex Drywall Accessories.
         2) Chicago Metallic.
         3) Goldline Drywall Trim by Unimast.
         4) USG.
         5) Equal as approved by Architect before installation. See Section 01 6000.
   3. Paper-Faced Plastic:
      a. Type One Acceptable Products:
         1) No-Coat by Drywall Systems International.
         2) Equal as approved by Architect before bidding. See Section 01 6000.
   4. Solid Vinyl: May be used on curved portions of arches and similar decorative features.

C. Joint Compound:
   1. Best grade or type recommended by Board Manufacturer and meeting requirements of ASTM C 475.
      a. Use Taping Compound for first coat to embed tape and accessories.
      b. Use Taping Compound or All-Purpose Compound for subsequent coats except final coat.
      c. Use Finishing Compound for final coat and for skim coat.
      d. Joint Reinforcing: Paper reinforcing tape acceptable to Board Manufacturer.

D. Primer / Surfacer Under Surfaces To Receive Texturing:
   1. Type Two Acceptable Products:
      a. Sheetrock First Coat by USG.
      c. ProForm Surfacer / Primer by National Gypsum.
      d. Level Coat by Magnum Products.
e. Equal as approved by Architect before bidding. See Section 01 6000.

E. Primer Under Surfaces To Receive Wallcovering:
   1. White, self-sizing, water based, all purpose wallcovering primer.
   2. Type Two Acceptable Products:
      a. Shieldz Universal Pre-Wallcovering Primer by Wm. Zinsser and Company
      b. Equal as approved by Architect before application. See Section 01 6000.

F. Fasteners:
   1. Bugle head screws meeting requirements of ASTM C 1002.
      a. Types:
         1) Type W: For fastening gypsum board to wood members.
         2) Type S: For fastening gypsum board to steel framing and ceiling suspension members.
      b. Lengths:
         1) Of length to penetrate wood framing 5/8 inch 16 mm minimum.
         2) Of length to penetrate steel framing 3/8 inch 10 mm minimum.

2.3 MANUFACTURERS

A. Contact Information:

PART 3 - EXECUTION

3.1 INSTALLATION

A. Interface With Other Work: Coordinate with Division 06 for location of backblocking for edges and ends of gypsum board and for blocking required for installation of equipment and building specialties. Do not install gypsum board until required blocking is in place.

B. General: Install and finish as recommended in ASTM C 840 unless specified otherwise in this Section.

C. Interior Gypsum Board:
   1. General:
      a. Install so trim and reinforcing tape are fully backed by gypsum board. No hollow spaces between pieces of gypsum board over 1/8 inch 3 mm wide before taping are acceptable.
      b. Rout out backside of gypsum board to accommodate items that extend beyond face of framing, but do not penetrate face of gypsum board, such as metal door frame mounting brackets, etc.
   2. Single Layer Application:
      a. Apply ceilings first using minimum of two men.
      b. Use board of length to give minimum number of joints.
      c. On walls over 108 inches 2700 mm high and on ceilings, apply board perpendicular to support.
      d. Stagger end joints. End and edge joints of board applied on ceilings shall occur over framing members or be back blocked with 2x4 38 mm by 89 mm blocking. End joints of board horizontally applied on walls shall occur over framing members. Edge joints of board vertically applied on walls shall occur over framing members.
e. Butt edges in moderate contact. Do not force in place. Shim to level.

f. Leave facings true with joint, finishing flush. Vertical work shall be plumb and ceiling surfaces level.

g. Scribe work closely. Keep joints as far from openings as possible. If joints occur near an opening, apply board so vertical joints are centered over openings. No vertical joints shall occur within 8 inches 200 mm of external corners or openings.

h. Install board tight against support with joints even and true. Tighten loose screws.

i. Calk perimeter joints in sound insulated rooms with specified acoustical sealant.

3. Double Layer Application:
   a. Apply base layer as specified for single layer application, except edge joints need not occur over framing members or be back blocked.
   b. Apply face layer with joints staggered in relationship to base and occurring over supports. Use combination of adhesive and screws if required to meet Manufacturer's specifications for fire-rated assembly. Apply screws attaching face layer through base layer into support for specified penetration.

4. Fastening:
   a. Apply from center of board towards ends and edges.
   b. Apply screws 3/8 inch 10 mm minimum from ends and edges, one inch 25 mm maximum from edges, and 1/2 inch 13 mm maximum from ends.
   c. Spacing:
      1) Ends: Screws not over 7 inches 175 mm on center at edges where blocking or framing occurs.
      2) Wood Framed Walls And Ceilings: Screws 7 inches 175 mm on center in panel field.
      3) Metal Framed Walls: Screws 12 inches 300 mm on center in panel field.
   d. Set screw heads 1/32 inch 0.8 mm below plane of board, but do not break face paper. If face is accidentally broken, apply additional screw 2 inches 50 mm away.
   e. Screws on adjacent ends or edges shall be opposite each other.
   f. Drive screws with shank perpendicular to face of board.

5. Trim:
   a. Corner Beads:
      1) Attach corner beads to outside corners.
         a) Attach metal corner bead with staples spaced 4 inches 100 mm on center maximum and flat taped over edges of corner bead. Also, apply screw through edge of corner bead where wood trim will overlay corner bead.
         b) Set paper-faced trim in solid bed of taping compound.
   b. Edge Trim: Apply where gypsum board abuts dissimilar material in accordance with Manufacturer's instructions. Hold channel and 'L' trim back from exterior metal window and metal door frames 1/8 inch 3 mm to allow for calking.

6. Finishing:
   a. General:
      1) Tape and finish joints and corners throughout building as specified below to correspond with final finish material to be applied to gypsum board. When sanding, do not raise nap of gypsum board face paper or paper-faced trim.
      2) First Coat:
         a) Apply tape over center of joint in complete, uniform bed of specified taping compound and wipe with a joint knife leaving a thin coating of joint compound. If metal corner bead is used, apply reinforcing tape over flange of metal corner bead and trim so half of tape width is on flange and half is on gypsum board.
         b) Completely fill gouges, dents, and fastener dimples.
         c) Allow to dry and sand lightly if necessary to eliminate high spots or excessive compound.
      3) Second Coat:
         a) Apply coat of specified joint compound over embedded tape extending 3-1/2 inches 88 mm on both sides of joint center. Use finishing compound only if applied coat is intended as final coat.
         b) Re-coat gouges, dents, and fastener dimples.
         c) Allow to dry and sand lightly to eliminate high spots or excessive compound.
      4) Third Coat: Apply same as second coat except extend application 6 inches 150 mm on both sides of joint center. Allow to dry and sand with fine sandpaper or wipe with damp sponge.
5) Fourth Coat: Apply same as second coat except extend application 9 inches 425 mm on both sides of joint center. Allow to dry and sand with fine sandpaper or wipe with damp sponge.

b. Finishing Levels:
   1) Gypsum Board Ceilings attached to trusses or I-joists and not painted:
      a) GA-214-96 Level 0: No taping, finishing, or accessories required.
   2) Vertical Gypsum Board Surfaces not painted or finished:
      a) GA-214-96 Level One: 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.
   3) Gypsum Board Surfaces Under Acoustical Tile:
      a) GA-214-96 Level Two (Modified): 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 joints, interior angles, and fastener heads. Surface shall be free of excess joint compound. Tool marks and ridges are not acceptable. Joint compound applied over body of tape at time of tape embedment shall be considered a separate coat of joint compound and shall satisfy conditions of this level.
   4) Gypsum Board Surfaces to Receive Sisal Wall Covering:
      a) GA-214-96 Level Three: Joints and interior angles shall have tape embedded in joint compound and one separate coat of joint compound applied over joints and interior angles. Cover fastener heads and accessories with two separate coats of joint compound. Joint compound shall be smooth and free of tool marks and ridges. Coat prepared surface with specified wallcovering primer.
   5) Gypsum Board Surfaces to Receive Vinyl Wall Covering, Multi-Color Coating System, and Painted Texturing, and Smooth Gypsum Board Surfaces in Mechanical, Storage, and Utility Areas:
      a) GA-214-96 Level Four: Joints and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over flat joints and one separate coat of joint compound applied over interior angles. Cover fastener heads, and accessories with three separate coats of joint compound. Joint compound shall be smooth and free of tool marks and ridges. Coat prepared surface with specified primer / surfacer.

3.2 CLEANING

A. Remove from site debris resulting from work of this Section including taping compound spills.

END OF SECTION