SECTION 092900 - GYPSUM WALLBOARD

PART 1 GENERAL

1.01 SECTION INCLUDES:
The work of this section shall include all labor, materials, equipment, accessories and services required and necessary to furnish and install gypsum wallboard, complete with related metal components, accessories and finish surfaces as indicated or specified.

1.02 QUALITY ASSURANCE
A. All materials and services provided shall comply with the provisions of the following manufacturers, specifications and standards:
B. Manufacturers - Wallboard components shall be as manufactured by U.S. Gypsum Company, Domtar Gypsum, National Gypsum Company, Georgia-Pacific, or Flintkote Blue Diamond. It is intended that all materials furnished be a part of a single system, whether it be supplied by one or several manufacturers.
C. ANSI A-97.1 and GA-216 insofar as any portions are applicable, are hereby made a part of this Specification as though repeated herein. In case of conflicts, the more stringent requirements shall govern.

1.03 SUBMITTALS
A. Submit Product Data Sheets, shop drawings, and directions for proper installation of each component item of wallboard system.
B. Submit copies of fire test reports on fire rated wallboard assemblies. Submit copies of evidence of fire hazard classification for wallboard. Certified test reports of other acceptable testing agencies which perform testing in accordance with ASTM E-190, E-84 and E-90 are acceptable.
C. Furnish manufacturer's certification that materials meet or exceed Specification requirements.
D. Manufacturer's Instructions - Furnish manufacturer's printed instructions for installation of assemblies.
E. Provide sample of texture finishes for Designated Representatives approval.

1.04 DELIVERY, STORAGE AND HANDLING
A. Deliver wallboard materials in manufacturer's unopened containers, packages or bundles identified with manufacturer's name, brand, type and grade. Store inside dry areas and protect from dampness and deterioration. Protect ready-mixed products from freezing and protect metal accessories from rusting. Remove damaged or deteriorated materials from the premises.
B. Deliver fire-rated materials bearing testing agency label and required fire classification number.

1.05 PROTECTION AND PREPARATION
A. Temperature and Humidity Conditions - Do not install wallboard unless installation areas comply with the minimum temperature and ventilation requirements recommended by the manufacturer.
B. Protect work installed by other trades previous to work under this Section. Replace any work damaged without added cost to the Owner. Provide closures for exterior openings, where required. Room temperature during installation of wallboard shall not be less than 50° F., with adequate ventilation maintained to eliminate excessive moisture until joint compound is completely dry. Protect wallboard from wetting. Replace any damaged material.
C. Provide ventilation during and following adhesives and joint treatment applications. Use temporary air circulators in enclosed areas lacking natural ventilation. Under slow drying conditions, allow additional drying time between coats of joint treatment. Protect installed materials from drafts during hot, dry weather.

PART 2 PRODUCT

2.01 MATERIALS
A. Gypsum Wallboard
   1. Gypsum Wall Board, Fire Rated, ASTM C-36, Type X, 5/8 inch thick, tapered edge. Install at all areas, except as otherwise noted.
   2. Gypsum Wall Board, Fire Rated, Moisture Resistant, ASTM C-630, 5/8 inch thick, tapered edge. Install at toilet room walls behind and adjacent to plumbing fixtures.
   5. Multi Purpose Cement board, 5/8 inch thick, 3.75 psf, U.S. Gypsum company or equal. Install as backup surface for ceramic tile walls in bathroom and shower rooms, or where specified on drawings.

B. Wallboard Accessories
   1. Corner Bead Reinforcement - U.S. Gypsum Company or approved equal.
   2. Metal Edge Reinforcement - U.S. Gypsum Company or approved equal.
   3. Control Joint - U.S. Gypsum Company No. 093 or approved equal.
   4. Provide miscellaneous beads, casings, and trim as required for a complete project.

C. Screws
   Self-drilling, self-tapping bulge head for use with power driven tool. Type S for application to light gauge metal framing, minimum 1", type 9-12 for application to heavy gauge metal framing (ASTM C-646); 1-5/8" for double layer (ASTM C-894).

D. Suspended Ceiling Components
   1. Furring Channels - Type DWC-25 as manufactured by U.S. Gypsum Company or approved equal, or rigid furring channel conforming to ASTM C-645.
   2. Main Runner Channels - Cold rolled sections, 1-1/2", formed of No. 16 gauge steel, painted with rust-inhibiting paint.
   3. Hanger Wires - Sizes specified, double annealed and galvanized conforming to FS QQ-W-461, Type 1.
   5. (Alternate) Steel stud ceiling system. Refer to drawings for stud sizes and installation details.

E. Studs - ASTM C-645.
   1. Gauge - Provide 25 gauge for typical partition support. Provide no less than 20 gauge at partitions for support of applied fixtures, woodwork, handrails, all toilet room partition support and as otherwise recommended or indicated on the drawings.
   2. Depth of Section - As indicated or scheduled on drawings.
   3. Runners - Match studs; type recommended by Stud Manufacturer for floor and ceiling support of studs and for vertical abutment of drywall work at other work.
   4. Furring Members - ASTM C-645; 25-gauge, hat-shaped or prefabricated clips for attachment of gypsum drywall to support members, as shown on drawings.
   5. Fasteners for Furring Members - Type and size recommended by Furring Manufacturer for the substrate and application indicate.

F. Joint Treatment System
   1. Joint tape shall be perforated, conforming to ASTM C-475 or FF SS-J-570, Type II.
   2. Joint compound shall be powdered or ready-mixed conforming ASTM C-475 or FS SS-J-570, Type I. Taping and topping joint compound or all purpose joint compound may be used.

G. Texture Finish
   Wall texture material shall be V-1200 wall texture as manufactured by Lahabra Products, Inc., Anaheim, California.

H. Humidity Control
   Humidity control shall be provided by a six mil polyethylene vapor barrier where shown on drawings.
PART 3 EXECUTION

3.01 CEILING INSTALLATION
Install suspended ceilings in accordance with the grid manufacturer’s recommendations and the following procedures.

A. Except where otherwise indicated, provide 1-1/2” c.r. main runner channels spaced on four foot centers and metal furring channels spaced on four foot centers and metal furring channels spaced on not over 24” centers. Neither main runners nor cross furring shall be let into nor come in contact with abutting masonry partitions. Locate a main runner within 6” of the wall. Support the ends of the furring channels with 2”x2x20ga. continuous metal wall angles.

B. Where main runners or furring channels are spliced, overlap the ends not less than 8” and securely tie near each end of the splice with two loops or 16 gauge galvanized wire.

C. Suspend main runners from structure (at panel points where open web steel joists and/or girders are encountered) above with one No. 8 hanger wire at 3’-0” O.C. for each 12 square feet of ceiling area. All wire hangers shall be such length so that the lower ends may be saddle-tied around the main runners so as to prevent turning or twisting of the runners.

D. At steel beams, joists or other steel construction wrap hangers around, insert through, or clip or bolt to the supports, so as to develop the full strength of the hangers.

E. Securely clip metal furring channels to main runners using furring channel clips or saddletie with two strands of 18 gauge tie wire. Install furring channel clips on alternate sides of the main runner channel.

F. At lights or other openings that interrupt the main runner of furring channels, reinforce grillage with 3/4” cold-rolled channels, wire tied atop and parallel to the main runner channels.

G. Apply wallboard with long dimension at right angles to the furring channels, with all abutting ends and edges occurring over the web surface of the furring channel. Use wallboard of maximum possible length to minimize end joints. Neatly fit and stagger end joints. Install wallboard with 1 1/4” screws spaced 8” on center in the field of the board, at all bearings, and along abutting edges.

3.02 WALL INSTALLATION
Construct wall in accordance with the wall component manufacturer’s recommendations and the following procedures.

A. Apply wallboard with long dimension at right angles to framing with all abutting ends and edges occurring over stud flanges. Use wallboard of the maximum practical length to minimize end joints. Neatly fit and stagger end joints. Arrange joints on opposite sides of the partitions as to occur on different studs. Cut wallboard neatly to fit around all openings. Wallboard to extend to within 1/4” of the floor.

B. Wherever wallboard terminates against dissimilar materials or where edges of wallboard are exposed, install metal edge reinforcement as specified. At all outside corners install metal corner bead reinforcement as specified.

C. At locations indicated, install control joint over face of wallboard panels. Cut end joints square, butt together and align to provide neat fit. Attach control joint to wallboard with screws spaced not over 12 inches on center in each flange.

D. At metal studs apply wallboard using screws spaced a maximum of 12” o.c. in the field of the board and 12” on center along the abutting end joints; 8” o.c. at rated walls.

E. At double layer walls install base layer as specified above except install vertically over framing members. Install face layer with fasteners as noted and stagger joints in face layer. At all vertical corners, provide “floating” corner installation per USG Drywall Construction Handbook. When a vapor barrier is required (as noted on drawings) a six mil polyethylene sheet shall be sandwiched between the two layers of wallboard with a 6” overlap all around.

G. Provide perimeter relief where nonload-bearing wallboard partitions abut structural decks or ceilings or vertical structural elements. Allow not less than 1/4”, nor more than 1/2” gap between wallboard and structure. Finish edges of wallboard face layer with square-nose metal casing.
bead and caulk space between casing bead and structure with continuous sealant bead. Attach wallboard to studs not less than 1/2" below bottom edge of ceiling track flanges and to first stud adjacent to vertical tracks. Do not attach wallboard directly to tracks.

H. Where wallboard partitions intersect masonry wall, provide control joint no less than 1/4", nor more than 3/8" wide between wallboard and masonry. Finish exposed edges of wallboard with square-nose metal casing bead and caulk space between casing bead and masonry with continuous sealant bead.

I. At all external wall corners provide metal corner reinforcing. Run corner reinforcing from floor to ceiling.

J. Finishing
   1. Reinforce wall and ceiling angles and inside vertical corner angle with tape folded to conform to the adjoining surface and to form a straight, true angle. Apply a thin uniform layer of compound, approximately 3" wide, under and over the tape in the angle joint to be reinforced. Center tape over all joints to be reinforced and seal into the compound, having sufficient compound under the tape to provide proper bond. Apply a skim coat of compound immediately after embedding tape. Clean excess compound from the wallboard surface. After drying, cover embedding compounds with an additional coat of compound.
   2. Allow joints to dry thoroughly (minimum of 24 hours) between each application of compound.
   3. All joints shall have tape embedded, filled and finished using specified compound.
   4. Cover fill coat with compound spread evenly over and slightly beyond the tapered edge of the board, feathered at the edges, with a smooth uniform slight crown over the joint. All dimples at fastener heads shall receive three coats of compound in succession as used in joints.
   5. Conceal flanges of all metal corner and edge reinforcing by at least two coats of compound. When completed, the compound shall extend approximately 8" to 10" on either side of the exposed metal nosing.
   6. Sand all coats as necessary after each application of compound has dried. The final coat and subsequent sanding shall leave all wallboard and treated areas uniformly smooth and ready to receive decoration, to the extent that after painting of wallboard, there shall be no distinguishable difference in appearance between taped and untaped surfaces.
   7. Apply an orange peel wall texture to all exposed walls that are to receive a painted finish as scheduled. Surfaces shall be free of dust, dirt and oil before application. Use as heavy a mixture as practical and avoid over-thinning of the material. Apply material using spray equipment capable of developing sufficient pressure to produce a fine sand textured finish.

END SECTION