SECTION 09260

GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.0. SUMMARY: The work of this section generally includes, but is not limited to, the following:

A. Interior Gypsum Wall Board: Rated and unrated assemblies where shown or as required. Screw-Attached to metal Framing and Furring Members, and Required Accessories

B. Exterior Gypsum Wall Board: Exterior rated and non-rated Gypsum Soffit Board at Exterior Ceilings where noted and “Dens-Glass Gold” rated and non-rated exterior wall sheathing.

C. Shaft Wall Systems, metal framing CH, double E or H studs.

D. Metal framing for all partitions, ceilings, soffits, etc. where indicated or as required.
Light gauge galvanized steel drywall stud framing members at non-load bearing interior partitions, shaft walls, etc. provided and installed under this section.
Light gauge metal blocking or wood 2 X blocking and grounds as required for cabinets, accessories, toilet partitions, accessories, etc.

E. Acoustical Sealant. At floors and ceilings

F. Finishing systems drywall tape, reinforcement for corners, and all required / other accessories for a complete assembly installation ready to receive finishes.

G. FIBERGLASS JOINT TAPE IS NOT ALLOWED.

H. Gypsum board: Type "C" can be used as an alternate to Type "X" based upon revised UL design assemblies when approved in writing by the Architect. Some assemblies, for example allow one layer of “C” versus two layers of “X” to achieve the same rating. However, there is often a closer framing spacing or other criteria that are affected by the change. Do not change any assembly system without written approval by the Architect. (Note: Type “X” can not be used in lieu of Type “C”.)

1.1 SECTION REQUIREMENTS

A. All work shall conform to industry standards, manufacturer’s installation recommendations, and the “Gypsum Construction Handbook – Centennial Edition” by USG (Available on line at http://www.usg.com/) and Gypsum Association, GA-216 Recommended Specifications for the application and finishing of gypsum board.

B. Interior Steel Framing Members for Gypsum Board Assemblies.

C. Design requirements:

1. Fire-Resistance Ratings: Where indicated, provide materials and construction which are identical to those of assemblies whose fire-resistance rating has been determined per ASTM E-119 by a testing and inspecting organization acceptable to authorities having jurisdiction. Provide fire-resistance-rated assemblies identical to those indicated by reference to GA File Nos. in GA-600 "Fire Resistance Design Manual" or to design designations in U.L. "Fire Resistance Directory" or in listing of other testing and agencies acceptable to authorities having jurisdiction.

2. Sound rating: Construct designated partitions in accordance with manufacturer's submitted product data for obtaining indicated Sound Transmission Class (STC) ratings including perimeter acoustical sealant where indicated.

3. Exterior horizontal work: Design system to resist minimum 25 PSF uplift. Follow local code requirements, if more stringent.

4. Finished ceilings and interior soffits maximum deflection: L/360.

1.2 QUALITY ASSURANCE

A. Fire-Test Response Characteristics: Where fire-rated gypsum board assemblies are indicated, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction. DO NOT SUBSTITUTE MATERIALS NOR METHODS OF CONSTRUCTION DESCRIBED IN THE APPROVAL

B. Acoustical Performance Requirements: Sound Transmission Characteristics: For gypsum board assemblies indicated to have STC ratings, provide materials and construction identical to those of assemblies whose STC ratings were determined per ASTM E 90 and classified per ASTM E413 by a qualified independent testing agency.

SOUND PRIVACY IS IMPORTANT THROUGHOUT THE CONDOMINIUM PROJECT.

PART 2 - PRODUCTS

2.1. STEEL FRAMING FOR EXTERIOR AND INTERIOR WALLS AND PARTITIONS

A. Refer to Section 05400 Cold Formed Metal Framing for Exterior walls.
1. Refer to Section 09111 Non-Load-Bearing Steel Framing for Interior walls and partitions..

2.2 GYPSUM BOARD PRODUCTS

A. Gypsum board:
1. APPROVED MANUFACTURERS:
Georgia Pacific Corp
Gold Bond Building Products Div. National Gypsum Co
U. S. Gypsum Company; Sheetrock

2. Regular gypsum board: ASTM C36-95b; thicknesses indicated, tapered edges. Where non-rated material is acceptable such as soffits, ceilings, etc. constructed below the rated wall or floor/ceiling assembly.

3. Fire retardant gypsum board: ASTM C36-95b; Type X, 1/2" & 5/8" thickness, tapered edges. Where indicated on the partition and floor/ceiling assembly indicated on the partitions types.

4. Special rated gypsum board: Type "C" can be used as an alternate, see partition types. Specially formulated core to achieve superior performance when used in specific fire rated assemblies of UL, GA, FMRC, and other code recognized testing laboratories or agencies and indicated in specific test reports generally as ".proprietary type "C", also listed as Type “G” and other designations.

5. Moisture-resistant gypsum board: To be used at all Bathroom and toilet walls / ceilings. Provide framing at 12” o.c. maximum when used at ceilings.

6. Glass-Mat, Water-Resistant Backing Board: ASTM C 1178/C 1178M, with core type and in thickness indicated.
a. G-P Gypsum Corp.; Dens-Shield Tile Backer.
b. USG, Fiberock brand, Aqua tough.

7. Exterior Gypsum Wall Board: Dens-Glass Gold Sheathing as manufactured by Georgia Pacific Corp. Thickness as indicated on the drawings.

B. Gypsum shaft wall system:

1. Type; manufacturer's standard cavity shaft wall system consisting of:
a. Special formulated gypsum coreboard, 1" thickness, minimum.
b. Special shape C-H or double "E", ASTM A568-85, engineered metal framing members; 25 gauge minimum uncoated thickness.

c. Special metal runners: ASTM A568-85, engineered metal framing members; 24 gauge minimum uncoated thickness; space at 24" O.C.
d. Gypsum board facing on exposed surfaces, thickness and rating for UL system rating.
e. Perimeter sealant: Shaft wall manufacturer's recommended type.
f. Materials for STC rating:
1) Resilient channels.
2) SAB insulation.
2. Maximum allowable deflection: L/360.
3. Pressure load: 5.0 PSF.
4. UL system fire resistive rating: Indicated.
5. Acoustical rating: 51.

C. At interior conditions subject to water exposure prior to finishing. Dens Glass Gold Fireguard Type 'X' in one or two layers as required by the details installed with rust resistant screws as required by UL design or manufacturer's recommendations. Install with Gold side out.

D. Acoustical Sound Barrier

1. Performance criteria: 1/8 inch, Standard Grade boards consisting of high quality, long–fibered specially treated water and water-resistant plies. Plies shall be pressure laminated with water-resistant adhesive. Material shall be in conformance with BOCA 90-69, ICBO 1439, and SBCCI 9664. Boards shall be approved for use in fire-rated wall systems in accordance with ASTME-119 testing procedures.

2. APPROVED MANUFACTURERS:
a. "Thermoply"; Simplex Products Division (800-345-8881)
b. No Substitutions

2.3 TRIM ACCESSORIES

B. Interior Trim: ASTM C 1047.
1. Cornerbead: Use at outside corners.
2. L-Bead: Use where indicated.
3. Expansion (Control) Joint: Use where indicated.

2.4 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475.

B. Joint Tape:
1. Interior Gypsum Wallboard: Paper.
2. Exterior Gypsum Soffit Board: Paper.
3. Tile Backing Panels: As recommended by panel manufacturer.
4. Fiberglass joint tape is not allowed.

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. Pre-filling: 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, flanges of trim accessories, and fasteners, use drying-type, all-purpose compound.
a. Use setting-type compound for installing paper-faced metal trim accessories.
3. Fill Coat: For second coat, use drying-type, all-purpose compound.
4. Finish Coat: For third coat, use drying-type, all-purpose compound.

D. Joint Compound for Exterior Applications:

1. Exterior Gypsum Soffit Board: Use setting-type taping and setting-type, sandable topping compounds.
2. Glass-Mat Gypsum Sheathing Board: As recommended by manufacturer.

E. Joint Compound for Tile Backing Panels:

1. Water-Resistant Gypsum Backing Board: Use setting-type taping and setting-type, sandable topping compounds.
2. Glass-Mat, Water-Resistant Backing Panel: As recommended by manufacturer.
3. Cementitious Backer Units: As recommended by manufacturer.

2.5 Smooth Finish: Refer to section 3.2A for further information.

A. A Level 4 smooth finish shall be provided at all common public areas exposed to view:
1. All ceiling areas including bathrooms and public areas to receive flat paint.
2. All bathroom walls and ceilings to receive semi gloss finish
3. A Level 2 finish shall be provided at all mechanical, electrical, utility rooms normally locked and not exposed to public view.

2.6. Acoustical Sealant

A. Latex Acoustical Sealant: Manufacturer's standard non-sag, paintable, non-staining latex sealant complying with ASTM C 834 and the following requirements:
Flame-spread and smoke-developed ratings of less than 25 per ASTM E 84.

B. Acoustical Sealant for Concealed Joints: Manufacturer's standard nondrying, non-hardening, non-skinning, non-staining, gunnable, synthetic rubber sealant recommended for sealing interior concealed joints to reduce transmission of airborne sound.

PART 3 - EXECUTION

3.1 NON-LOAD-BEARING STEEL FRAMING INSTALLATION

A. General: Comply with ASTM C 754, and ASTM C 840 requirements that apply to framing installation.

B. Suspended Ceiling and Soffit Framing:

1. Suspend ceiling hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
2. Where width of ducts and other construction within ceiling plenum produces hanger spacing that interfere with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
3. Attach hangers to structural members. Do not support ceilings from or attach hangers to permanent metal forms, steel deck tabs, steel roof decks, ducts, pipes, or conduit.
4. Wire-tie furring channels to supports, as required to comply with requirements for assemblies indicated.
5. Grid Suspension System: Attach perimeter wall track or angle where grid suspension system meets vertical surfaces. Mechanically join main beam and cross-furring members to each other and butt-cut to fit into wall track.

C. Partition and Soffit Framing:

1. Where studs are installed directly against exterior walls, install isolation strip between studs and wall.
2. Extend partition framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings.
3. Frame door openings to comply with GA-600 and with gypsum board manufacturer's applicable written recommendations, unless otherwise indicated. Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
   a. Install two studs at each jamb, unless otherwise indicated.
4. Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

D. Z-Furring Members: Erect insulation vertically and hold in place with Z-furring members.

1. Until gypsum board is installed, hold insulation in place with 10-inch (250-mm) staples fabricated from 0.0625-inch- (1.59-mm-) diameter, tie wire and inserted through slot in web of member.

E. Polyethylene Vapor Retarder: Install to comply with requirements specified in Division 7 Section "Building Insulation."

3.2 PANEL PRODUCT INSTALLATION

A. Gypsum Board: Comply with ASTM C 840 and GA-216.

1. Space screws a maximum of 12 inches (304.8 mm) o.c. for vertical applications.
2. Space fasteners in panels that are tile substrates a maximum of 8 inches (203.2 mm) o.c.
3. On ceilings, apply gypsum panels before wall/partition board application to the greatest extent possible and at right angles to framing, unless otherwise indicated.
4. On partitions/walls, apply gypsum panels either vertically (parallel to framing) or horizontally (perpendicular to framing), unless required by fire-resistance-rated assembly, and minimize end joints.
   a. Stagger abutting end joints not less than one framing member in alternate courses of board.
   b. At stairwells and other high walls, install panels horizontally, unless otherwise indicated or required by fire-resistance-rated assembly.
5. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
6. Single-Layer Fastening Methods: Apply gypsum panels to supports with steel drill screws.
7. Multilayer Fastening Methods: Fasten base layers and face layers separately to supports with screws.

B. Form control and expansion joints with space between edges of adjoining gypsum panels. Install control joints at locations indicated on Drawings or according to ASTM C 840 and in specific locations approved by Architect for visual effect.

C. Isolate perimeter of non-load-bearing gypsum board partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations, and trim edges with U-bead edge trim where edges of gypsum panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant. Zip Strip can be used as an alternative.

D. STC-Rated Assemblies: Seal construction at perimeters, behind control and expansion joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through gypsum board assemblies, including sealing partitions above acoustical ceilings.

E. Exterior Ceilings and Soffits: Apply exterior gypsum panel perpendicular to supports, with end joints staggered and located over supports.
   1. Fasten with corrosion-resistant screws.

F. Tile Backing Panels:
   1. Glass-Mat, Water-Resistant Backing Panel: Install with 1/4-inch (6.4-mm) gap where panels abut other construction or penetrations.

3.3 Applying and Finishing Gypsum Board, General

A. Gypsum Board Application and Finishing Standards: Install and finish gypsum panels to comply with ASTM C 840 and GA-216. Use screw application only.

3.4 Finishing Gypsum Board Assemblies

A. Levels of Gypsum Board Finish: Provide the following levels of gypsum board finish per Gypsum Association # GA-214. Finish levels are taken from Recommended Specifications on Gypsum Board Finish, unless indicated otherwise:

1. **Level 1:** for ceiling plenum areas, concealed areas, and where indicated, unless a higher level of finish is required for fire-resistive-rated assemblies and sound-rated assemblies

   a. Joints and interior angles: Tape embedded in joint compound; surfaces free of excess compound; tool marks and ridges acceptable.

   b. Other Locations: Areas where assembly is concealed by final construction, at smoke barriers, and at separation walls in attics where they occur.

2. **Level 2:** where water-resistant gypsum backing board panels form substrates for tile or for synthetic marble panels, and where indicated.

   a. Joints and interior angles: Tape embedded in joint compound.

   b. One separate coat joint compound applied over joints, interior angles, fastener heads, and accessories; surfaces free of excess compound; joint compound surfaces smooth and free of tool marks and ridges.

3. **Level 3**: For all interior ceilings and walls to receive coverings.

   a. Joints and interior angles: Tape embedded in joint compound.

   b. Two separate coats joint compound applied over joints, interior angles, fastener heads, and accessories; surfaces free of excess compound; joint compound surfaces smooth and free of tool marks and ridges.

   c. Locations:

      1) Typical, unless otherwise indicated: Ceilings, soffits, and other interior horizontal surfaces receiving paint.

      2) Other areas: Appearance areas receiving flat paints, light texture finishes, or light or medium weight wall covering. Walls to receive wall covering are to be primed.

4. **Level 4:** Typical wall finish through out project

   a. For Level 4 gypsum board finish, embed tape in joint compound and apply three separate coats of joint compound over joints, angles, fastener heads, and accessories. Touch-up and sand between coats and after last coat as needed to produce a surface free of visual defects and ready for decoration.

b. Locations: At Bathroom ceilings and other areas to receive semi-gloss (untextured) paint.

END OF SECTION