SECTION 09200

LATH AND PLASTER

PART 1 - GENERAL

1.01 SUMMARY

A. Furnish and install all lath and plaster work including services, plant, labor, materials, transportation and equipment necessary for and incidental to complete the work as indicated on the drawings, specified herein, or required to complete the contract, including but not limited to the following major items:
   1. Metal plaster accessories.
   2. Patch and seal of exterior plaster.

B. Codes: Materials and work shall conform to the governing Building Code. In case of conflict between these specifications, the standard specifications, and the Building Code, the more stringent shall govern.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.03 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Field conditions: Verify drawing dimensions with actual conditions. Inspect related work and adjacent surfaces.

C. In addition to complying with pertinent codes and regulations of governmental agencies having jurisdiction, comply with Materials Handling and Workmanship Provisions of the "Reference Specifications" of the California Lathing and Plastering Contractors Association.

1.04 SUBMITTALS

A. Comply with pertinent provisions of Section 01300, Shop Drawings and Samples. Submit samples of lath types, metal drip screed and metal expansion joints, as specified or indicated on the drawings. No work shall commence until materials are reviewed by the Architect.

1.05 PRODUCT HANDLING

A. Protect the materials of this Section before, during, and after installation, and protect the work and materials of all other trades per Section 01600.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Lath over steel or wood studs:
   1. Self-furring cold drawn, zinc coated galvanized steel welded-wire fabric lath, 16 x 16 gauge, not to exceed 2" openings with fire-resistive, waterproofed building paper backing conforming to Fed. Spec. QQ-L-101C and I.C.B.O. Report No. 1254 for Flame Spread Rating.

B. Miscellaneous metal trim: Furnish all miscellaneous components not specified herein, but indicated on Drawings or as required to furnish a complete installation.

C. Cement plaster:
   1. Cement: Portland cement, ASTM C150-57, Type II. Color coat integral color by La Habra Stucco Products, Inc. Colors selected by the Architect and indicated on the Drawings. Finish: Machine applied sand finish per approved sample.
   2. Aggregate: Clean natural or manufactured sand conforming with ASTM C144-66T for cement plaster.
   3. Lime: Hydrated lime conforming to ASTM C207.
   4. Water: Fresh, clean and potable; free from mineral or organic substances which would adversely affect the hardening to cement plaster.
   5. Waterproofing admixture: Added to scratch and brown coats in amount recommended by the manufacturer.

D. Accessories: Install all required plaster grounds, casing beads or stops, base screeds, corner reinforcement, special stops, and other metal accessories. Apply and shim out to required thickness. Set plumb, level and straight, free of kinks and bends. Install casing beads or stops at the edges of all plaster continuously. Provide expansion joints or control joints where shown or required. Do not install in conspicuous location unless approved by the Architect. Corner Beads: 26 GA corrosive resistant zinc alloy with expanded flanges. Flange size: 2" min.

E. Expansion joint and drip screed: Install all expansion joints and drip screeds in locations and sizes as noted on the Drawings, and as manufactured by Fry Reglet, 625 South Palm Avenue, Alhambra, CA 91803 (818) 289-4744.

PART 3 - EXECUTION

3.01 APPLICATION OF LATH

A. Inspection and Acceptance of Surfaces: Before applying lath, Contractor shall inspect all surfaces to receive lath and assure himself that they are in satisfactory condition. All backing and blocking and perimeter framing for recessed items shall be in place as required by the other trades. All conduit, piping, and any other required roughing-in shall be complete. Commencing of lathing work will imply acceptance by the Contractor of the surfaces to receive lath.

B. Exterior Lath at Stud Walls: Apply paper-backed stucco lath directly over sheathing and framing members with nails or approved fasteners hereinbefore specified, as appropriate, spaced not more than 6" apart vertically and 16" apart horizontally, directly over studs and framing members. Nails or fasteners shall engage the back wire of the lath securely and shall be driven home tight into framing. Laps of stucco lath shall be 1" minimum and shall be laced with lath tie wire. Furnish and install strip lath where required for transitions or reinforcing.

C. Exterior lath at concrete masonry walls: Apply expanded metal diamond mesh lath directly over CMU with approved fasteners spaced not more than 6^ apart vertically and 16" apart horizontally. Fasteners shall engage the back wire of the lath securely and attach firmly into the CMU. Laps of lath shall be 1" minimurn and shall be laced with lath tie wire.

D. Accessories: Install all required plaster grounds, casing beads or stops, base screeds, corner reinforcement, special stops, and other metal accessories. Apply and shim out to required thickness. Set plumb, level and straight, free of kinks and bends. Install casing beads or stops at the edges of all plaster continuously. Provide expansion joints or control joints where shown or required. Do not install in conspicuous location unless approved by the Architect.

3.02 APPLICATION OF CEMENT PLASTER

A. Scratch Coat shall be applied to a minimum thickness of 3/8", completely embedding the lath. 4 lbs. of Manila fiber shall be added to each cubic yard of plaster. Scratch coat shall be scratched to provide mechanical key, and left to cure and dry a minimum of 14 days. Scratch Coat shall be kept moist for a minimum period of 4 days after application.

B. Brown Coat shall be applied to minimum thickness of 3/8" in two applications and shall be brought to a true, even plane by rodding and floating, and shall be left rough and ready to receive the finish coat. Scratch coat shall be dampened to provide suction before applying brown coat. Brown coat shall be left to dry a minimum of 10 days. Brown coat shall be kept moist for a minimum period of 48 hours after application.

C. Finish Coat where occurs, shall be laid out to permit the completion of entire surface in one operation. Finish coat shall be applied to minimum thickness of 1/8", or in such thickness as may be necessary to insure the full thickness of 7/8" or other thickness where shown as required for this work. Brown coat shall be dampened evenly to provide suction before applying finish coat.

3.03 CURING OF PLASTER

A. Cement plaster and stucco shall be cured for a minimum period of 4 days after completion. Moistening shall begin as soon as the plaster has hardened sufficiently. Water shall be applied in a fine fog spray or other approved method. Soaking of walls shall be avoided.

B. Apply only as much water as will be readily absorbed. Plaster shall be protected from uneven and excessive drying during hot, dry weather, and from strong blasts of wind. Contractor shall provide for curing on Saturdays and Sundays and holidays, if necessary.

C. Provide temporary heat where required for proper curing of plaster and to protect all work against damage from too rapid drying or from any other cause. Provide such temporary enclosures as may be necessary to close openings.

3.04 PROTECTION OF ADJACENT SURFACES

Adjacent surfaces of the building shall be protected from spattering or other staining caused by plastering. Any surfaces so spattered or stained shall be thoroughly cleaned to the satisfaction of the Architect.

3.05 WORKMANSHIP

A. Plastering shall be of the highest quality and finish. Intersections of planes shall be sharp and accurate. Plane surfaces shall finish plumb, straight, and true to an 8-foot straight edge. Finished surfaces shall be uniform as to texture and color throughout the area, and shall be free from imperfections.

B. Where plaster stops, angles, wall panels, etc., are employed for architectural treatment, panels framed by these accessories or other construction shall be finished in one operation. No stopping vertically or horizontally in the middle or intermediate area of a panel will be permitted.

C. Imperfections which occur after curing and drying shall be repaired to the satisfaction of the Architect at no additional cost to the Owner.

3.06 CUTTING AND PATCHING

Do all cutting and patching of plaster as is necessary or required by the work of other trades. Plaster containing cracks, pits, checks, or discoloration will not be acceptable. Such plaster shall be removed and replaced with plaster conforming to the requirements of this Section. Patching of defective work will be permitted only when approved, and patching shall match existing work in texture and color. Finish work shall be left in perfect condition, with angles and lines clean and sharp and surfaces clean and smooth.

3.07 PROTECTION OF PLASTER

Protect all plaster work from subsequent construction and finishing activities, and maintain protection until acceptance of the building by the Owner.

END OF SECTION - 09200

SECTION 09250

GYPSUM WALLBOARD SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

A. Work included: Provide gypsum wallboard system as shown on the Drawings, as specified herein, and needed for a complete and proper installation.

B. Related work:
1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of the Specifications.

C. Codes: Materials and work shall conform to the governing Building Code. In case of conflict between these specifications, the standard specifications, and the Building Code, the more stringent shall govern.

1.02 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Reference specifications: Except as may be modified by these specifications and applicable laws and ordinances at the place of building, install this work to conform to the requirements of "Standard Specifications for Gypsum Wallboard Interior Finishes" as approved by the American National Standards Institute as ANS #A97.1. In case of conflict between these specifications, any applicable law or ordinance and the ANS Standard the better or more restrictive requirement shall prevail.

1.03 SUBMITTALS

A. Comply with pertinent provisions of Section 01300.

B. Product data: Within 30 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
1. Materials list of items proposed to be provided under this Section;
2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements;
3. Manufacturer's recommended installation procedures which, when approved by the Architect, will become the basis for accepting or rejecting actual installation procedures used on the Work.

1.04 PRODUCT HANDLING

A. Deliver the materials to the job site and store in their original containers with labels intact and legible at time of use.

B. Protect the materials of this Section before, during, and after installation and protect the work and materials of all other trades. Keep materials dry and protected from the weather. Avoid damage to edges, ends, and faces of wallboard.

C. In the event of damage, immediately make replacements and repairs to the approval of the Architect and at no additional cost to the Owner.

D. Comply with pertinent provisions of Section 01600.

PART 2 - PRODUCTS

2.01 GYPSUM WALLBOARD

A. General:
1. Provide 5/8" thick gypsum wallboard complying with Federal Specification SS-L-30, and of the grade and form specified below or required.
2. Supply the gypsum wallboard in 48" widths and in such lengths as will result in the minimum of joints.
3. Unless otherwise indicated, provide tapered edges.

B. Fire-retardant wallboard:
1. Provide grade X, form A, 5/8" thick, where fire resistive construction required and in other areas so indicated on the Drawings.

C. Water-resistant wallboard:
1. In Restrooms, Kitchens, and Janitor's Rooms and where waterproof gypsum board is noted on drawings, use 5/8" thick "Sheetrock W/R", Type "X". Conform to ASTM C630.

D. Exterior-rated gypsum sheathing:
1. Provide Dens-Glass Gold, or equal, exterior sheathing in thickness and at locations shown on Drawings.

E. Structural Shear Panels:
1. Provide Sure-Board Series 200 Structural panels, or equal.
a. General: Panels shall consist of a 1/2" thick gypsum board substrate permanently adhered to a galvanized steel sheet by means of special adhesive.
b. Gypsum Board Substrate: Dens-Glass Gold, or equal, exterior sheathing with glass mat face and back over a water-resistant, treated core.
c. Sheet Steel Panels: No. 22 ga. / 0.027" minimum base-metal thickness complying with ASTM A 653 CS, Grade 33, and provided with a G40 minimum hot-dipped galvanized coating conforming to ASTM A 924.
d. Adhesive: The adhesive used to attach the steel to the gypsum substrate shall be a water soluble type adhesive. The adhesive shall be a non-combustible material.

2.02 METAL TRIM

A. Form from zinc-coated steel not lighter than 26 gauge complying with Federal Specification QQ-SP775, type 1, class "D" or "E".

B. Casing beads:
   1. Provide channel-shapes with an exposed wing, and with a concealed wing not less than 7/8" wide.
   2. The exposed wing may be covered with paper cemented to the metal, but shall be suitable for joint treatment.

C. Corner beads:
   1. Provide angle shapes with wings not less than 7/8" wide and perforated for nailing and joint treatment, or with combination metal and paper wings bonded together, not less than 1-1/4" wide, and suitable for joint treatment.

D. Reveals:
   1. Provide Fry-Reglet reveal molding in types and sizes noted on the Drawings.

E. The Drawings do not purport to show all metal trim needed for a complete and proper installation. Study the Drawings and Specifications, and provide all metal trim required for a complete and proper installation.

2.03 JOINTING SYSTEM

A. Provide a jointing system including reinforcing tape and compound designed as a system to be used together and as recommended by the manufacturer of the gypsum wallboard being used.

B. Jointing compound may be used for finishing if so recommended by its manufacturer.

2.04 FASTENING DEVICES

A. For fastening gypsum wallboard to metal studs, provide self-drilling, self tapping, countersunk bugle head drywall screws, lengths as recommended by manufacturer of wallboard.

2.05 ACCESS DOORS

A. In partitions and ceilings installed under this Section install doors where required for access to mechanical and electrical installation. Coordinate locations of access doors with the affected trade and submit proposed locations in drawing form, to the Architect for review prior to any access door installation work.

B. Types:
   1. Unless otherwise directed or required provide 24" x 24" metal access doors with concealed hinges to metal frame and with Allen key lock.
   2. Unless otherwise indicated or directed, provide shop-primed assemblies for finish painting at the job site under Section 09900 of these Specifications.

2.06 METAL FRAMING MATERIALS

A. Furring channels for support of gypsum board if required shall be screw-on furring channels of approved manufacturer rolled from 25 gauge galvanized steel, 7/8" deep.

B. Metal studs:
   1. Non-bearing studs, screw-on dry wall type, galvanized roll formed in a gauge as indicated on the Drawings or as required by their unbraced height. All studs shall have spaces or "knock-outs" for piping and conduit.

2.07 OTHER MATERIALS

A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

3.01 METAL FRAMING

A. Stud Framing:
1. Interior studs shall be designed and erected for a minimum 5 lbs. per sq. ft. lateral load.
2. Provide channel runner tracks for all studs at floors, ceilings or underside of structure above. Use slip track at connections to roof and floor structure.

3. Anchor runner tracks to concrete with power-driven fasteners, drilled-in anchors or cast-in place bolts. Power-driven fastening to concrete shall be a minimum of 3/16" diameter pins spaced at 32" o.c.; not allowed if less than 4" occurs from edge of concrete; use 3/16" diameter minimum drilled-in anchors when space is between 2" and 4" from edge. At bottom runners occurring at curbs, use 3/8" diameter cast-in place or 3/8" diameter drilled in bolts spaced a maximum of 48" o.c..
   a. Attachment of channel studs to concrete and masonry walls and columns shall be identical to runner tracks specified under preceding.
4. Non-bearing studs shall be attached to channel tracks with screws or rivets on both sides of track at top and bottom of studs or as required for slip track attachment. Other methods of attachments may be approved by the Architect and governing agencies. Maximum spacing of studs shall not exceed 24" o.c..
   a. Corners and intersections of partitions shall be formed with 3 studs. Studs adjoining masonry shall be secured thereto at 4 ft. o.c. increments. Metal blocking to receive work of other trades shall be screwed or riveted to the studs. Where forming fire rated partitions studs shall extend through ceiling construction.
   b. Studs which have been cut away to receive piping, conduits and equipment shall be reinforced by two (2) 3/4" standard steel furring channels in a manner to restore the stability of the respective weakened studs.

B. Backing Plates:
1. Provide all necessary backing plates and blocking in the metal framing to receive cabinet work, for rigidly bolting equipment and for special braces or framing, for the attachment and support of electrical outlets, plumbing and heating fixtures, and all other such equipment requiring support by the dry wall stud construction.
2. Backing plates of 16 gauge steel shall be attached to studs with a minimum of three (3) No. 10 FHMS per bearing or three (3) rivets per bearing using rivets of 3/16" shank diameter. Backing plates heavier than 16 gauge shall be installed as detailed.

C. Ceiling Framing:

1. Framing for vertical curtain walls between dropped ceilings shall be installed so as to provide level or plumb surfaces and so that there will be no variation of more than 1/4" within any 10 ft. area. Weld framing as required to provide rigid connections.
   a. At one-hour ceilings, make all cut-outs and "box-in" all recesses for light fixtures in ceilings. Box-in all recesses with 5/8" thick, Type "X" core gypsum board.
2. Additional furring and ceiling framing shall be provided in cooperation with mechanical and electrical trades as necessary to adequately suspend the ceiling where large ventilating ducts are to be installed and to accommodate lighting fixtures in ceilings.

3.02 METAL FRAMING WALLBOARD INSTALLATION

A. Cutting and installing: Cut gypsum wallboard by scoring and breaking or by sawing working from the face side. Sand cut edges and ends where necessary to obtain neat joining when wallboard is erected. Score cutouts or small openings in wallboard in outline before knocking out or cut out with a saw: DO NOT PUNCH. Neatly scribe wallboard meeting projecting surfaces. Stagger joints in the board with abutting ends occurring over a support. To minimize end joints, use wallboard sheets of maximum practical lengths.

B. On ceilings: Boards shall be secured along perimeters of ceilings, around edges of openings and to all furring members. Gypsum board shall be placed with the long dimensions at right angles to supports and secured with screws, spaced at 12" o.c. in the field, and staggered 9" o.c. on each board edge where two boards abut on the channel. Screws shall be located not less than 3/8" from board edges.

C. On walls: Over channel shaped metal studs spaced a maximum of 24" o.c., apply one full length layer of 5/8" thick gypsum wallboard with long dimension of wallboard parallel to studs, with joints directly over studs; attach with 1-1/4" long No. 6 drywall screws. Screws shall be installed 8" o.c. around the perimeter and 12" o.c. on the intermediate studs. Space between bottom edge of wallboard and finish concrete floor shall be 1/2" minimum and 3/4" maximum.

1. Where one hour rated walls occur use 5/8" Type "X" wallboard. Wallboard shall be applied to both sides of studs and minimum thickness of walls, face to face of wallboard, shall be 4-7/8".

3.03 JOINT TREATMENT

A. General:

1. Inspect areas to be joint treated verifying that gypsum wallboard is properly in place and properly attached. Do not commence joint treatment until defects have been corrected.
2. In areas where joint treatment and compound finishing will be performed maintain a temperature of not less than 55 degrees F for 24 hours prior to start of treatment, for the entire period of treatment, and until the joint and finishing compounds have dried.
3. Apply the joint treatment and finishing compound by machine or by hand tool.
4. Provide a minimum of 24 hours drying time between coats with additional drying time in poorly ventilated areas.
5. Field joints: Apply a 3" wide uniform coating of adhesive centered over the joint; center tape over the joint and embed into the adhesive. Allow to dry and sand smooth. Apply 2 coats of adhesive over the tape, extending each

coat slightly beyond the preceding one. Allow each coat to dry and sand smooth. Treat screw head dimples in a like manner.

6. Inside angles: Treat inside corners and angles as for field joints, except fold the tape in the middle to provide a clean, sharp corner fully embedded.
7. Outside angles: Use metal corner beads and accessories standard with the wallboard manufacturer set in and finished with adhesives as for joints.

3.04 OTHER TRIM

A. Install the metal trim in strict accordance with the recommendations of its manufacturer providing not less embedment and finishing than specified above for corner treatment.

3.05 MECHANICAL, PLUMBING AND ELECTRICAL WORK

A. Coordinate with Mechanical, Plumbing and Electrical trades in the location and installation of their work. Provide bridging, bracing and backing to support their work installed in or on drywall construction. Do not close both faces of walls until their installations have been inspected and approved.

3.06 PARTITIONS WITH PLASTER FINISHES

A. Where gypsum drywall partitions intersect plastered partitions or plastered surfaces, the plaster surfaces shall be finished and dried out before the drywall finishes are installed.

3.07 REQUIRED FINISHES

A. Provide the levels of finish described in GA-214, recommended levels of gypsum board finish and as noted below in the area or areas indicated.

B. Definitions of finish:
1. In areas above ceilings, in attics, in areas where the assembly is concealed, provide Level 1 finish:
   a. At all joints and interior angles, apply tape embedded in joint compound;
   b. Leave surfaces free of excess joint compound;
   c. Tool marks and ridges are acceptable.
2. Non-public appearance areas are to receive light texture finishes. Finish non-public walls as noted before final painting, and public walls where wall coverings are to be applied as the final decoration, provide Level 4 finish:
   a. At all joints and interior angles, apply tape embedded in joint compound, and apply three separate coats of joint compound over all joints, angles, fastener heads, and accessories;
   b. Leave surfaces smooth and free of tool marks and ridges.
3. In public appearance areas which are to receive gloss, semi-gloss, enamel, or non-textured flat paints as final decoration, or where severe lighting conditions occur, provide Level 5 finish:
   a. At all joints and interior angles, apply tape embedded in joint compound, and apply three separate coats of joint compound over all joints, angles, fastener heads, and accessories;
   b. Apply a thin skim coat of joint compound over the entire surface;
   c. Leave surfaces smooth and free of tool marks and ridges.

3.08 CLEANING UP

A. In addition to other requirements for cleaning, use care to prevent scattering of gypsum wallboard and scraps, and to prevent tracking of gypsum and of joint compound onto floor surfaces.

B. Leave premises in a neat and broom-clean condition. Remove all masking tape and protective paper. Clean all ceiling and wall texture overspray.

END OF SECTION – 09250

SECTION 09255

DRYWALL/PLASTER SUSPENSION SYSTEM

PART 1 – GENERAL

1.01 SUMMARY

A. Description of Work: Work of this Section includes, but is not limited to, the following:
   1. Gypsum board and accessories.
   2. Veneer plaster.
   3. Metal suspension systems.
   4. Trim and accessories.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. See Section 09250 - Gypsum Board and Plaster Systems.

B. See Section 15880 - Air Distribution.

C. See Section 16000 - Electrical (Lighting).

D. See Section 09510 - Acoustical Ceilings.

1.03 SUBMITTALS

A. Product Data: Submit manufacturer's specifications and installation instructions with Project conditions and materials clearly identified or detailed for each required system.

1.04 SYSTEM REQUIREMENTS

A. Performance Requirements: Fabricate and install systems as indicated but not less than that required to comply with ASTM C754 under the following conditions:
   1. A pre-engineered drywall suspension system consisting of straight main tees and straight furring cross tees, that join together to support screw attached interior gypsum panels and independently supported lighting fixtures, and air diffusers, where applicable.
   2. Maximum deflection of L/360 of distance between supports.
   3. Seismic loads: Fabricate and install systems to resist earthquake loads of Seismic Zone 4, I=1.00, in accordance with the requirements of the 2001 California Building Code.

1.05 QUALITY ASSURANCE

A. Reference Standards
   1. ASTM C635, Standard Specifications for Metal Suspension Systems.
   2. ASTM C636, Recommended Practice for Installation of Metal Suspension Systems.
   3. CISCA Ceiling Systems Installation Handbook.
   4. ASTM C645, Standard Specification for Non-Bearing (Axial) Steel Studs, Runners, (Track), and Rigid Furring Channels for Screw Applications of Gypsum Board.
   5. ASTM C754, Specification for Installation of Steel Framing Members to Receive Screw-Attach Gypsum Boards.

6. ASTM C840, Specification for Application and Finishing of Gypsum Board.

B. Submittals
1. Samples: Submit actual samples and technical data for suspension system main tees and cross tees for review. Submit technical data for interior grade gypsum panels.
2. Shop Drawings:
a. Reflected ceiling plans: Submit ceiling suspension system layout indicating dimensions, lighting fixture locations, and related mechanical components.
b. Assembly drawings: Indicate installation details, accessory attachments and installation of related lighting fixtures and related mechanical system components.
3. Manufacturer's Data:
a. System Details: Submit manufacturer's catalog cuts or standard drawing showing details of system with project conditions clearly identified and manufacturer's recommended installation instructions.

1.06 DELIVERY, STORAGE AND HANDLING

A. Delivery:
1. Delivery material to site promptly without undue exposure to weather.
2. Deliver in manufacturer's unopened containers or bundles, fully identified with name, brand, type, and grade.

B. Inspection:
1. Promptly inspect delivered materials, file freight claims for damage during shipment, and order replacement materials as required. Any damaged materials shall be promptly removed from the job site.

C. Storage:
1. Store above ground in dry, ventilated space.
2. Protect materials from soiling, rusting, and damage.
3. Store board to be directly applied to masonry walls at 70 degrees F for 24 hours prior to installation.

D. Handling:
1. Handle in such a manner to insure against racking, distortion or physical damage of any kind.

1.07 PROJECT CONDITIONS

A. Environmental Requirements:
1. Do not install gypsum board when ambient temperature is below 40 degrees F.
2. For adhesive attachment of gypsum board, and for finishing of gypsum board, maintain ambient temperature above 55 degrees F for one week prior to attachment or joint treatment, and until joint treatment is complete and dry.

1.08 COORDINATION WITH OTHER WORK:

A. General:

1. Coordinate with other work including mechanical and electrical work and partition systems. Installation of conduit and ductwork above suspension system shall be complete before installation of suspension system.

B. Protection:

1. Follow good safety and industrial hygiene practices during handling and installing of all products and systems, with personnel to take necessary precautions and wear appropriate personal protective equipment as needed. Read Material Safety Data Sheets and related literature for important information on products before installation. Contractor to be solely responsible for all personal safety issues during and subsequent to installation; architect, specifier, owner and manufacturer will rely on contractor's performance in such regard.

PART 2 – PRODUCTS

2.01 MANUFACTURER:

A. All manufactured by USG (United States Gypsum Company, USG Interiors) Chicago, IL, USA, or equal, in compliance with applicable ASTM Standards.

2.02 MATERIALS:

A. USG Drywall Suspension Systems – Commercial quality, cold-rolled steel, hot dipped galvanized finish.

1. Main Tees: Fire-rated Heavy Duty classification 1.617" high x 144" long, integral reversible splice with knurled face. (DGL-26 15/16" Face and 1-1/2" high).
2. Cross Members: Fire-Rated members with knurled face. Cross Tees: DGLW-424 cross tee 1-1/2" high x 48" long with 1-1/2" wide face; quick release cross tee ends for positive locking and removability without tools.
3. Accessory Cross Tees: Cross tees must have knurled faces and quick release cross tee ends for positive locking and removability without tools.
   DGL-224 Fire Rated 1-1/2" high x 24" long with 15/16" face
   DGL-324 Fire Rated 1-1/2" high x 36" long with 15/16" face
   DGL-424 Fire Rated 1-1/2" high x 48" long with 15/16" face
   DGL-824 Non Fire Rated 1-1/2" high x 96" long with 15/16" face
   DGLW-224 Fire Rated 1-1/2" high x 24" long with 1-1/2" face
   DGLW-424 Fire Rated 1-1/2" high x 48" long with 1-1/2" face
4. Wall Molding: Single web with knurled face
   (DGWM-16 1" x 1" x 144" long wall molding)
   (DGCM-27 144" x 1-5/8" x 1" x 1" channel molding)
5. Accessories
   Splice Clip DGSC-180
   Compression Posts
   (VSA18/130 18" to 30")
   (VSA30/48 30" to 48")
   (VSA48/84 48" to 84")
   (VSA84/102 84" to 102")
6. Wire: Hanger Wire (12 ga.), galvanized or as noted on the drawings.

B. Grid Suspension Assemblies: Listed products establish standard of quality and are manufactured by United States Gypsum Company (USG), Chicago, IL.

2.03 BOARD MATERIALS

A. Gypsum Board:
1. ASTM C36, regular type except where Type X fire-resistant type is indicated or required to meet fire-rated assembly types.
2. Edges: Tapered.
3. Thickness: 5/8 inch, unless otherwise indicated.
4. Acceptable products:
a. Typical partitions and ceilings: Equivalent to Sheetrock Brand SW, Firecode or Firecode "C" Gypsum Panels by USG.

B. Ceiling Board:
1. ASTM C36, non-sag type.
2. Thickness: 1/2 inch.
3. Acceptable product: Equivalent to Interior Gypsum Ceiling Board by USG.

C. Water-Resistant Gypsum Board:
1. ASTM C630, regular type except where Type X fire-resistant type is indicated or required to meet UL assembly types.
2. Edges: Tapered.
3. Thickness: 5/8 inch, unless otherwise indicated.
4. Acceptable products: Equivalent to Sheetrock Brand W/R, W/R Firecode "C" or W/R Firecode Type X Gypsum Panels by USG.

D. Cement Backer Board:
1. Aggregated Portland cement board with woven glass fiber mesh facing complying with ANSI A118.9.
2. Thickness: 5/8 inch.
3. Acceptable product and manufacturer: DUROCK Cement Board by USG, or equal.

2.04 ACCESSORIES

A. Metal Trim for Gypsum Board:
1. Conform to profile and dimensions indicated.
2. Material for interior Work: Galvanized steel, 26 gage minimum.
3. Corner beads: Equivalent to Dur-A-Bead No. 103 by USG.
4. Casing beads (edge beads): Equivalent to 200A by USG.
5. Control joints:
1. Roll-formed zinc with perforated flanges.
2. Size: 1-3/4 inch wide, with 1/4 inch wide center channel.
3. Provide with removable tape strip over channel.
4. Acceptable product: Equivalent to No. 093 by USG.

B. Special Trim and Reveals: Extruded aluminum alloy 6063-T5, profiles as indicated.

C. Adhesives and Joint Treatment Materials:
1. Conform to requirements of ASTM C475.

2. Joint compounds:
   a. Drying-type (ready-mixed): Equivalent to SHEETROCK Taping Joint Compound and Taping Joint Compound by USG.
   b. Setting (chemically-hardening) type: Equivalent to SHEETROCK Setting-Type Joint Compound by USG.
   c. Primer-Surfacer: Finish Level 4 (GA-214/ASTM C-840) drywall surface with vinyl acrylic latex-based coating to achieve Level 5 gypsum board finish.
   d. Laminating adhesives for multiple layers: Special adhesive or joint compound specifically recommended for laminating gypsum boards.
   e. Laminating adhesive for direct application: Special adhesive or joint compound specifically recommended for laminating gypsum boards and for adhering gypsum boards to solid substrates.
   f. Reinforcing joint tape:
      1. ASTM C475, 2 inch nominal width.
      2. For backer board, provide fiberglass tape as recommended by board manufacturer and acceptable to manufacturer of ceramic tile setting materials.
   g. Gypsum Board Screws: Self-drilling, self-tapping steel screws:
      1. For steel framing less than 0.033 inch thick: Comply with ASTM C1002.
      2. For steel framing for 0.33 inch thick to 0.112 inch thick: Comply with ASTM C954.
      3. Provide Type S or Type S-12 screws.
   h. Backer Board Accessories: Provide accessories and corrosion-resistant-coated steel screws as recommended by backer board manufacturer and required for complete installation.
   i. Acoustical Sealant: Equivalent to Acoustical Sealant by USG.
   j. Miscellaneous Accessories: Provide as required for complete installation.

PART 3 - EXECUTION

3.01 EXECUTION

A. Examine substrates and adjoining construction and conditions under which work is to be installed. Do not proceed with work until unsatisfactory conditions are corrected.

3.02 GENERAL INSTALLATION REQUIREMENTS

A. Standard reference: Install grid members in accordance with ASTM C636, CISCA installation standards, and other applicable references.

B. Manufacturer's reference: Install in accordance with manufacturer's current printed recommendations.

C. Drawing reference: Install in accordance with approved shop drawings and locate ceiling in accordance with main tee dimensions relative to elevations.

D. Install in accordance with reference standards and manufacturer's instructions and as required to comply with seismic requirements.

3.03 APPLICATION INSTALLATION REQUIREMENTS:

A. Flat Ceiling Applications:

1. Hanger Wire Installation: Secure hanger wires to upper structural elements and space hangers so that each hanger wire supports a maximum of 16 sq. ft.
2. Space main tee members a maximum span of 48" on center.
3. Space cross tees recommended 16" o.c. Install extra cross tees where butt joints occur, 8" from each side of the butt joint.
4. Install compression struts per manufacturer's specifications and spacing, in accordance with wind load applicable. Adjust main and cross tee spacing as necessary for loading conditions. (See AC3095, USG).
5. Do not install insulation within 3" of light fixtures unless fixtures are approved for use with insulation.
6. Limit insulation thickness so that combined weight of supported panels and insulation on grid main tees does not exceed 16 plf.
7. Attach gypsum board to the suspension system main runners, cross tees, and cross channels with 1-1/4" bugle head screws – single layer of board spaced 16" o.c. (SHEETROCK gypsum board) 6" o.c. (DUROCK) in the field and at the perimeter of the panels, locate 3/8" in from panel edges. Hold panels in firm contact with framing while driving fasteners. Drive fastener heads flush with, or slightly below surface of gypsum board. Drive fasteners so bottoms of heads are flush with surface of cement panels.
8. Install trim, and similar accessories as necessary and as applicable to meet project requirements where indicated on drawings.
9. Install Control Joints at locations of properly detailed control joints, including additional cross tees as necessary, per direction of Architect.
10. Finish boards as described to achieve 'Level of Finish' specified.

END OF SECTION - 09255