SECTION 09207

METAL LATH AND ACCESSORIES

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section describes the requirements for furnishing and installing metal lath and accessories.

B. Related Sections:

1. Gypsum sheathing is specified in Section 06163.
2. Sheathing paper is specified in Section 07262.
3. Portland cement plaster is specified in Section 09220.

1.02 SUBMITTALS

A. Product Data: Furnish for each type of lath, fastener, and accessory specified.

1.03 QUALITY ASSURANCE

A. Perform work in accordance with the applicable requirements of California Building Code (CBC) Section 2507.

B. Industry Association Recommendations: Conform to recommendations of ANSI/MLSFA A42.3 except where those recommendations conflict with specified requirements.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver products and materials in original unopened packages, containers, or bundles with manufacturer's label intact and legible.

B. Remove items delivered in broken, damaged, rusted, or unlabeled condition from Project site immediately.

C. Protect metal lath and accessories from moisture and other sources of damage.

D. Store metallic materials and accessories indoors, off the floor.

PART 2 - PRODUCTS

2.01 LATH

A. Metal Lath: Steel, cut from zinc-coated steel sheets.

1. Self-Furring Diamond Mesh: 3.4-pounds per square yard, with evenly spaced indentations to hold lath approximately 1/4-inch away from solid surfaces. Use over solid backing.
2. 3/8-Inch Rib Lath: 3.4-pounds per square yard, fabricated in herringbone mesh pattern with 3/8-inch deep ribs. Use at suspended plaster ceilings and soffits.

2.02 FASTENERS

A. Screws:

1. General: ASTM C646, corrosion resistant, for attachment to metal framing 25-gauge and lighter; ASTM C954 for attachment to metal framing 20-gauge and heavier.

2. Thread and head designs and lengths as recommended by manufacturer for uses and materials involved.

B. Tie Wires: No. 16-gauge, galvanized, single strand annealed steel or No. 13-gauge, galvanized, double strand annealed steel.

C. Powder Driven Fasteners: Ramset, Hilti, Bomark, Powerline, T-Nails or approved equal. Fasteners shall have wide heads or shall be installed with washers when used to fasten metal lath.

2.03 METAL ACCESSORIES

A. General: Minimum 26-gauge galvanized steel or zinc alloy, perforated or expanded flanges as manufactured by USG, Western Metal Lath, Keene or approved equal.

1. Casing Beads: No. 66 square edge.

2. Corner Reinforcement: Cornerite, minimum 1.75-pounds per square yard expanded metal lath with minimum 2-inch legs.

3. Strip Reinforcement: For reinforcing joints of dissimilar materials and diagonal reinforcement at opening corners, minimum 1.75-pounds per square yard expanded metal lath.

4. Relief or Control Joints: Keene No. 40 unless special shapes are detailed, or approved equal.

5. Soffit Vent: Fry Reglet Corp. No. DS-875-V-150 or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

A. Install materials in conformance with CBC Section 2510, ANSI/MLSFA A42.3, and as specified.

B. Discontinue metal lath behind vertical control joints. Each control joint flange shall be supported by a separate stud.

3.02 INSTALLATION OF METAL LATH

A. Exterior Surfaces:

1. Attach to metal framing or solid backing with approved fasteners spaced 6-inches apart. Use wire ties or screws at metal framing and powder driven wide-shouldered forced entry fasteners at solid backing.

2. Where solid backing is not provided, apply with long dimension of sheets perpendicular to supports.

3. Lap sides not less than 1/2-inch and ends not less than 1-inch. Lap rib lath at sides by nesting outside ribs.

4. Where solid backing is not provided, securely tie ends of lapped sheets not occurring over supports with minimum 18-gauge tie wire.

5. Metal lath shall be continuous in corners.

6. Insert lath as far as possible into re-entrant space of metal frames, and notch to pass around jamb anchors.

7. Where no external corner reinforcement is used, lath shall be furred out and carried around corners at least one support on frame construction.

3.03 INSTALLATION OF METAL ACCESSORIES

A. General:

1. Fasten in place as required to prevent dislodging or misalignment by subsequent operations. Use self-tapping screws on metal framing.

2. Fasten at both ends and at a maximum of 12-inches on center along sides.

3. Bring grounding edge of accessories to true lines, plumb, level, and straight.

4. Install accessories to provide required depth of plaster and to bring plaster surface to required plane.

5. Connect lengths of accessories as recommended by the manufacturer to assure a continuous line.

6. Install continuous corner reinforcement for full length of external corners.

7. Install casing beads to provide a minimum 1/8-inch clearance between structural units and termination points of surfaces to receive plaster finish.

8. Where location of control joints is not indicated, install control joints to create panels no larger than 100-square feet with no dimension exceeding 10-feet or a length-to-width ratio of 2-1/2-to-one. Miter intersections of vertical and horizontal joints. Joint locations not indicated shall be approved by the Architect.

B. Beads:

1. Use single length of metal beads wherever length of run does not exceed longest standard stock length available; miter or cope corners.

2. Set beads level, plumb, and true to line. Shim as required and align joints with concealed splices or tie plates.

3. Provide casing beads at the following locations:

a. Where plaster abuts dissimilar construction.

b. At perimeter of openings where edges of plaster will not be concealed by other work.

3.04 WASTE MANAGEMENT

A. Separate metal waste and place in designated areas for recycling or reuse.

END OF SECTION

SECTION 09220

PORTLAND CEMENT PLASTER

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section describes the requirements for furnishing and installing the following type(s) of portland-cement plaster:

1. Three-coat application over metal lath.

B. Related Sections:

1. Ceiling suspension is specified in Section 09120.
2. Metal lath and accessories are specified in Section 09207.
3. Painting is specified in Section 09900.

1.02 SUBMITTALS

A. Product Data: Manufacturer's written recommendations, proportion mixes, and installation instructions for each product, including data showing compliance with specified requirements.

B. Certification from an independent Testing Agency that aggregates comply with specified requirements.

1.03 QUALITY ASSURANCE

A. Code Requirements: Comply with applicable requirements of CBC Sections 2507 and 2512.

B. Allowable Tolerances of Finished Surface: Maximum deviation from true plane shall not exceed 1/4-inch as measured from the line of a 5-foot straightedge placed at any location on the surface.

C. Field-Constructed Mock-Up: Prior to plastering work, fabricate panels for each type of finish and application required to demonstrate aesthetic effects of application and qualities of materials and application.

1. Locate mock-ups on site where directed by the Architect.
2. Erect a 4-foot x 4-foot mock-up using materials and methods to be incorporated in the work.
3. Demonstrate range of aesthetic effects, including color, texture, and workmanship to be expected in the completed work.
4. Retain and maintain mock-ups during construction in undisturbed condition as a standard for judging completed plaster work.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver manufactured materials in original unopened packages or containers with manufacturer's label intact and legible.

B. Keep cement and lime dry, stored off the ground, under cover, and away from damp surfaces.

C. Remove wet and deteriorated materials from Project site.

1.05 JOB CONDITIONS

A. Environmental Requirements:

1. Provide sufficient heat and ventilation at enclosed areas where plastering is being performed to allow cement plaster to properly cure.

2. Take precautionary measures necessary to ensure that excessive temperature changes do not occur.

3. Cold Weather Requirements: Do not apply cement plaster unless minimum ambient temperature of 50-degrees F. has been and continues to be maintained for a minimum of 48-hours prior to application and until plaster is cured.

4. Hot Weather Requirements: Protect cement plaster from uneven and excessive evaporation during hot, dry weather.

B. Protection:

1. Cover building openings in areas adjacent to plastering work with plastic film.

2. Protect finished surfaces installed prior to plastering by covering with a suitable non-staining material. Cover metal frames with plastic film.

3. Maintain protection in place until completion of plastering work.

C. Pre-Application Conference: Prior to commencement of portland cement plastering, hold a pre-application conference at the Project site to discuss materials and procedures to be used. Conference shall be attended by the Architect, Contractor, Owner's Representative and plastering subcontractor.

PART 2 - PRODUCTS

2.01 BASE COAT MATERIALS

A. Portland Cement: ASTM C150, Type I or Type II.

B. Hydrated Lime: ASTM C206, Type S, certified not less than 99-percent hydrated.

C. Aggregates: ASTM C897.

1. Gradation, Base (Scratch and Brown) Coats:

U.S. Standard Sieve	Percent Retained by Weight (+2%) Minimum	Maximum
No. 8 (2.36 mm)	0	10
No. 16 (1.18mm)	10	40
No. 30 (600 um)	30	65
No. 50 (300 um)	70	90
No. 100 (150 um)	95	100

2. Independent Testing Agency shall sample aggregate on the Project site and test for compliance with specified ASTM C897 standard.

D. Fiber Reinforcing: 1/2-inch alkaline-resistant chopped-glass fibers or alkaline-resistant polypropylene fibers. Detergent admixtures or clay to aid in pumping plaster will not be permitted.

E. Water: Clean, potable, and free from substances harmful to plaster.

2.02 FINISH COAT MATERIALS

A. Cement: ASTM C150, Type I or II.

B. Hydrated Lime: ASTM C206, Type S, certified not less than 99-percent hydrated.

C. Sand: Washed, kiln-dried silica, naturally and uniformly blended from No. 20 sieve to No. 30 sieve size.

D. Textures: As indicated and as required to match mock-up panels.

2.03 CEMENT PLASTER

A. Mixing:

1. General:

a. Accurately proportion materials for each plaster batch with measuring devices of known volume.

b. Size batches for complete use within maximum of one-hour after mixing.

c. Retemper plaster stiffened from evaporation, but do not use or retemper partially hydrated cement plaster.

d. Do not use caked or lumping materials.

e. Mix factory-prepared plaster in accordance with the manufacturer's written instructions.

f. Use moist, loose sand in mix proportions.

g. Withhold 10-percent of mixing water until mixing is almost complete, then add as needed to produce necessary consistency.

2. Mechanical Mixing:

a. Clean mixer of set or hardened materials before loading for new batch.

b. Maintain mixer in continuous operation while adding materials.

c. Conform to mixing sequence and time recommended by manufacturer of plaster materials. Add fibers by sprinkling in mix during last 2-minutes of mixing cycle.

3. Hand Mixing: Do not hand-mix unless authorized by Architect.

PART 3 - EXECUTION

3.01 INSPECTION

A. Verify that surfaces to be plastered are free of dust, loose particles, oil, and other foreign matter which would affect bond of plaster coats.

B. Examine construction, grounds, and accessories to ensure that finished plaster surfaces will be true to line, level, and plumb, without requiring additional thickness of plaster.

C. Do not commence installation until unsatisfactory conditions have been corrected.

3.02 APPLICATION

A. Number of Coats: Provide three-coat application over metal lath in accordance with ASTM C926.

B. Three-Coat Application:

1. Apply plaster by hand or machine spray. If machine applied, use only experienced machine applicator foreman and nozzleman. Slump for machine applied plaster shall be between 2-1/2- to 4-inches at mixer and 2- to 3-1/2-inches at nozzle.

2. Interrupt plaster coats only at junctions of plaster planes, at openings, or at control joints.

3. Apply scratch coat with sufficient material and pressure to form full keys through and to embed metal base. When firm, score in one direction.

4. Apply brown coat to scratch coat, bringing out to grounds, flat to true surface, and free of imperfections which would reflect in finish coat.

5. Reconsolidate brown coat by floating, and roughen to assure bond with finish coat.

6. Apply finish coat and uniformly float to true, even surface.

7. Nominal Plaster Thickness Measured from Face of Lath, in accordance with ASTM C929, Table 4:

   a. Vertical Surfaces:

      1) Scratch Coat: 3/8-inch, minimum.

      2) Brown Coat: 3/8-inch.

      3) Finish Coat: 1/8-inch, minimum.

   b. Horizontal Surfaces:

      1) Scratch Coat: 3/8-inch, minimum.

      2) Brown Coat: 3/8-inch.

      3) Finish Coat: 1/8-inch, minimum.

C. Curing: Comply with CBC Section 2512.6.

1. Maintain moist conditions by fine fog spraying.

2. Cure scratch coat for a minimum of 48-hours, and maintain a minimum of 48-hours between application of scratch coat and brown coat.

3. Cure brown coat for a minimum of 48-hours, and maintain a minimum of 7-days between the application of the brown coat and finish coat.

3.04 COMPLETION

A. Patching:

1. Upon completion of application, point up plaster around trim and other locations where plaster meets dissimilar materials.

2. Cut out and patch defective or damaged plaster.

3. Match patching of defective or damaged plaster to existing work in form, texture, and color.

B. Cleaning:

1. Remove plaster and protective materials from control and expansion joints, perimeter beads, and adjacent surfaces.

2. Remove stains that would adversely affect subsequent finishes on plaster.

C. When complete, plaster surfaces shall be flat or uniformly curved, true to plane; and free from scaffold and tool marks, stains, or other damage or defects and shall be uniform in required texture.

END OF SECTION

SECTION 09250

GYPSUM BOARD

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section describes the requirements for furnishing and installing gypsum board and associated accessories.

B. Related Sections:

1. Thermal insulation is specified in Section 07210.
2. Ceiling suspension system is specified in Section 09120.
3. Cementitious backer board units are specified in Section 09300.
4. Acoustical insulation is specified in Section 09820.
5. Painting is specified in Section 09900.

1.02 SUBMITTALS

A. Product Data: Manufacturer's specifications and installation instructions for each type of gypsum board and accessory required.

1. Recycled Content: Furnish product data on post-consumer recycled content and post-industrial recycled content as a percentage of the full product composite.
2. Regional Materials: Furnish product data or letter stating the location (closest city, state) where product was manufactured (final processing or assembly) and, if available, the location where raw materials were harvested, extracted or recovered (mine, quarry, plantation, forest, recycling recovery center, etc.).

1.03 QUALITY ASSURANCE

A. Manufacturer: Gypsum board, including accessories and fasteners, shall be the products of the same manufacturer.

B. Gypsum board work shall comply with ASTM C840, and CBC Section 2508 unless otherwise indicated or specified.

C. Installation and finishing of gypsum board shall comply with GA-216.

D. Fire-Resistance Ratings: Where gypsum board systems with fire-resistance ratings are indicated, provide materials and installations identical with those of applicable assemblies tested in accordance with ASTM E119 by fire testing laboratories acceptable to authorities having jurisdiction.

1. Provide fire-resistance-rated assemblies identical to those indicated by reference to GA File No's. in GA-600 "Fire Resistance Design Manual" or to design designations in UL "Fire Resistance Directory" or in listing of other testing and agencies acceptable to authorities having jurisdiction.

E. Allowable Tolerances:

1. Gypsum board surfaces shall have no measurable variation in any 2-foot direction and a maximum variation of 1/8-inch in 10-feet when a straightedge is laid on the surface in any direction. Specified tolerances apply to both plumbness of walls and levelness of ceilings.

2. Shim work as required to comply with specified tolerances.

3. Do not exceed 1/16-inch offset between planes of abutting sheets at edges or ends.

F. All materials shall comply with the requirements of the South Coast Air Quality Management District (SCAQMD) governing the emission of Volatile Organic Compounds (VOC's).

1.04 ENVIRONMENTAL QUALITY ASSURANCE

A. Gypsum board shall be manufactured with 100-percent recycled, unbleached paper facings.

B. Gypsum board shall contain a minimum of 5-percent recycled content.

C. Gypsum board shall have been extracted, harvested or recovered, as well as manufactured within 500-miles of the Project site.

D. Applicable LEED Credits – Refer to Section 01352:

1. Credit MRC2.1 / 2.2 – Construction Waste Management.

2. Credit MRc4.1 / 4.2 – Recycled Content.

3. Credit MRc5.1 / 5.2 – Regional Materials.

4. Credit EQc4.1 – Adhesives and Sealants.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Delivery:

1. Deliver materials to the Project site in original package containers or bundles with manufacturer's labels intact and legible.

2. Deliver fire-rated materials bearing the testing agency's label and classification identification.

B. Storage:

1. Store materials indoors in a dry area, under cover, and stacked flat off the floor.

2. Stack boards so that long lengths are not over short lengths.

C. Handle gypsum board to avoid damaging face and edges of sheets.

D. Protect metal corner beads and trim from being bent or damaged.

1.05 PROJECT CONDITIONS

A. Establish and maintain environmental conditions for application and finishing gypsum board to comply with ASTM C840 and with gypsum board manufacturer's recommendations.

B. Minimum Room Temperatures: For non-adhesive attachment of gypsum board to framing, maintain not less than 40-deg. F. For adhesive attachment and finishing of gypsum board, maintain not less than 50-deg. F. for 48-hours prior to application and continuously thereafter until drying is complete.

C. Ventilate building spaces to remove water not required for drying joint treatment materials. Avoid drafts during dry, hot weather to prevent materials from drying too rapidly.

D. Provide for continuous ventilation during installation, using as close to 100-percent outside air as possible.

PART 2 - PRODUCTS

2.01 APPROVED MANUFACTURERS

A. Georgia-Pacific Corp., Gold Bond Building Products, Div., National Gypsum, United States Gypsum or approved equal.

2.02 GYPSUM BOARD

A. Fire-Rated Gypsum Board: ASTM C36, Type X, 5/8-inch thick, with tapered and wrapped long edges.

B. Regular Gypsum Board: ASTM C36, Regular Type, 5/8-inch thick with tapered and wrapped long edges.

C. Moisture-Resistant Gypsum Board: ASTM C630, Type X, 5/8-inch thick, with tapered and wrapped long edges. Provide for exposed and concealed locations at walls of toilet rooms, janitor rooms, and other wet spaces; do not use on ceilings unless spacing of framing members is approved by gypsum board manufacturer.

1. Moisture resistant gypsum board shall be used in all rooms where ERC is included either on floors or on floors and walls.

2.03 GYPSUM BOARD ACCESSORIES

A. Screws: ASTM C954 or ASTM C1002.

1. Use Type S screws for gypsum board attachment to light steel framing.

2. Use Type S-12 screws for gypsum board attachment to 20-gauge and heavier steel framing.

3. Use Type G screws for gypsum board attachment to gypsum board.

4. Use Type W screws for gypsum board attachment to wood framing.

B. Metal Trim:

1. Corner Bead: Fine-mesh expanded-steel wing type, zinc coated in conformance with ASTM A643, G40 coating designation.

2. Control Joint: Steel, perforated-flange wing type, with single bead, zinc coated in conformance with ASTM A643, G40 coating designation.

3. Edge Trim: Fine-mesh expanded-steel flange, zinc coated in conformance with ASTM A643, G40 coating designation.

4. Reveals: Fry Reglet or approved equal, extruded aluminum, profiles indicated. Reveals will be painted as specified in Section 09900.

C. Joint-Treatment Materials: ASTM C475.

1. Joint Tape: Paper reinforcing tape.

2. Joint Compound: Ready mixed, all-purpose; one grade for bedding tapes and filling depressions, one for second and third coats.

3. Water-Resistant Joint Compound: Use special joint compound to treat joints and cut edges of moisture-resistant gypsum board.

4. Where epoxy wall coatings are scheduled, finish joints and fasteners with special epoxy joint compound as recommended by epoxy wall coating manufacturer. Coordinate with the work of Section 09965.

D. Acoustical Sheet Sealant Pad: Harry A. Lowry & Associates, 3M or approved equal.

E. Resilient Channels: Unimast "RC Deluxe", Cemco "RC-1", Dale/Incor RFC-1", Dietrich "RCSN" or approved equal.

PART 3 - EXECUTION

3.01 INSPECTION

A. Verify that conditions are satisfactory for the installation of gypsum board and accessories.

1. Check framing for accurate spacing, alignment, plumbness, and levelness. Verify that both new and existing framing members will result in gypsum board surfaces complying with specified tolerances.

2. Verify spacing of installed framing does not exceed maximum allowable for thickness of gypsum board to be used.

3. Verify door frames are set for thickness of gypsum board to be used.

4. Repair protrusions of framing, twisted framing members, or unaligned members before installation of gypsum board commences.

B. Do not commence the installation until unsatisfactory conditions have been corrected.

3.02 APPLICATION OF GYPSUM BOARD

A. Apply materials in conformance with ASTM C840, the manufacturer's instructions, and as indicated.

B. When gypsum board is to be applied to both walls and ceilings, apply to ceilings first.

C. Resilient Framing:

1. Partitions: Apply resilient channels at right angles to framing. Position bottom channel with resilient channel attachment flange either up or down; position other channels with resilient attachment flanges down. Attach with 1-1/4-inch screws. Locate resilient channels 2-inches from floor, within 6-inches of ceiling, and not more than 24-inches on center.

D. For partitions, apply full height sheets with long dimension perpendicular to framing members with abutting edges over supports. Where ceiling heights exceed 8'-1" and where required by fire resistive ratings, apply sheets with long dimension parallel to framing members. For ceilings, apply sheets with long dimension either perpendicular or parallel to framing members to result in fewest joints. For fire-rated assemblies, apply gypsum board in accordance with CBC Tables 720.1(2) and 720.1(3) as applicable.

E. Use sheets of maximum lengths to minimize end joints.

F. Neatly fit and stagger end joints.

G. Locate joints on different studs at opposite sides of partition.

H. Cut and fit neatly around outlets and switches. Back-to-back wall penetrations shall be at least two stud spaces apart for acoustic insulation.

I. Double-Layer Application:

1. Apply base layer with long dimension parallel to and centered on framing; apply face layer perpendicular to framing. Apply face layer parallel to framing where required by fire-resistive ratings.

2. Stagger sheets of each layer so that joints of each layer are 16-inches apart.

J. Apply gypsum board to curved framing by scoring approximately one-inch on center.

K. Isolation of Gypsum Board from Other Construction:

1. Provide perimeter relief where gypsum board abuts structural decks, ceilings, vertical structural elements, or window sections.

2. Finish gypsum board edge with metal casing bead.

3. Seal space between casing bead and structure with continuous sealant bead.

4. Seal around electrical boxes and conduit and pipe penetrations.

5. Seal at base of gypsum board sheets.

L. Acoustic Control Requirements for Sound Walls:

1. Leave a 1/8- to 1/4-inch space between gypsum board and adjacent construction to provide a space for acoustical sealant.

2. Seal airtight with acoustical sealant material specified in Section 09820.

3. Seal penetrations through walls, or cuts in one face of walls, with a full bead of sealant at perimeter; this includes provisions for electrical outlet and switch boxes, pipes, ducts, and similar items.

4. Seal electrical boxes at the back with specified sheet sealant pad. Where wires enter the boxes, seal the openings airtight around the wires and knockout openings.

M. Installation of Fasteners:

1. Do not locate fasteners less than 3/8-inch from edges or ends of sheets. Do not locate fasteners less than one-inch from edges or ends in horizontal applications.

1. Fire-Rated Partitions: Install fasteners in accordance with the more restrictive of either CBC Table 720.1(2) or the Underwriters' Laboratories assemblies as denoted on partition schedule.

2. Non-Fire-Rated Partitions: Install fasteners in accordance with GA-216 and ASTM C840.

3. Fire-Rated Ceilings: Install fasteners in accordance with CBC Table 720.1(3) and Gypsum Association "Fire-Resistance Design Manual".

4. Non-Fire-Rated Ceilings: Install fasteners spaced not more than 12-inches on center.

6. Install screws using powered screw guns with adjustable screw-depth control head. Drive shank perpendicular to gypsum board surface. Do not hammer screws.

7. Set fastener heads slightly below surface of gypsum board, but do not break or strip paper face around fastener.

8. Stagger fasteners opposite each other on adjacent ends and edges.

9. Omit fasteners at edges where metal edge trim will be installed.

N. Installation of Accessories:

1. Install corner trim at vertical and horizontal external corners and angles, and edge trim at junctions of gypsum board and other materials and at exposed edges.

2. Control Joints:

a. Ceilings: Maximum area for ceilings with perimeter relief shall be 2,500-sq. ft.; maximum area for ceilings without perimeter relief shall be 900-sq. ft. Do not exceed 50-feet between control joints in ceilings with perimeter relief; 30-feet between control joints in ceilings without perimeter relief.

b. Walls and Partitions: Maximum spacing between control joints shall not exceed 30-feet.

3.03 TAPING AND FINISHING

A. Finish Levels: Specified finish levels are those of the Gypsum Association. Unless otherwise scheduled, required finish levels for various areas shall be as follows:

1. Level 0: In areas of temporary construction, no taping or accessories are required.

2. Level 1: In plenum areas above ceilings, attics, electrical closets, and other areas not normally exposed to the public, joints and interior angles shall have tape embedded in joint compound. Surfaces shall be free of excess joint compound. Tool marks and ridges are acceptable.

3. Level 2: Where water-resistant gypsum backing board is used as a substrate for tile, joints and interior angles shall have tape embedded in joint compound and one separate coat of joint compound applied over joints, angles, fastener heads, and accessories. Surface shall be free of excess joint compound. Tool marks and ridges not affecting the installation of tile are acceptable.

4. Level 3: Where gypsum board is to receive a heavy or medium texture finish before final painting or where heavy grade wall coverings are to be applied, joints and interior angles shall have tape embedded in joint compound and one separate coat of joint compound applied over joints, angles, fastener heads, and accessories. Joint compound shall be smooth and free of tool marks and ridges.

5. Level 4: Provide in Offices and other areas unless otherwise specified in another finish level. Joints and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over joints, angles, fastener heads, and accessories. Joint compound shall be smooth and free of tool marks and ridges.

6. Level 5: Provide on surfaces to receive epoxy paint. Joints and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over joints, angles, fastener heads, and accessories. A thin skim coat of joint compound or material manufactured especially for this purpose, shall be applied to the entire surface and sanded smooth. The surface shall be smooth and free of tool marks and ridges.

B. Mix joint finishing compounds in accordance with manufacturer's directions.

C. Joints:

1. Center tape over joint and embed in uniform layer of joint compound of sufficient width and depth to provide firm and complete bond. Apply skim coat while embedding tape.

a. Treat angles with reinforcing tape folded to conform to adjacent surfaces and straight, true angles.

2. Apply finishing compound over taped joints. Apply number of coats specified for each finish level.

a. Spread first coat evenly and feather out beyond joint center approximately 3-1/2-inches.

b. After first coat is dry, sand or smooth to eliminate any high spots or excessive compound and cover with second coat with edges feathered out approximately 6-inches from center of joint. After second coat is dry, lightly sand with fine sandpaper or wipe with a damp sponge to leave a smooth even surface. When sanding, exercise caution not to raise nap of the gypsum board paper.

D. Give dimples at fastener heads and marred spots on surface of gypsum board one coat of joint compound and two coats of finishing compound, applied in same manner specified for joints.

E. Cut edges and openings around pipes and fixtures shall be caulked flush with sanitary sealant as specified in Section 07920.

F. Install metal corner accessories at external corners.

1. Conceal flanges of metal accessories with a minimum of two coats of compound.

2. Extend compound 8- to 10-inches each side of accessories.

G. In the completed installation, gypsum board shall have plumb and straight surfaces with no waves or buckles. Joints, fastener heads, and trim flanges shall be invisible after finishing. Surfaces shall be uniformly smooth and ready for painting or other decoration.

3.04 PROTECTION OF FINISHED WORK

A. Maintain temperature and humidity conditions as required to protect the installation.

B. Protect completed gypsum board from damage or deterioration until final acceptance of the work.

3.05 WASTE MANAGEMENT

A. Separate clean waste gypsum products from contaminants for recycling in accordance with the Waste Management Plan. Do not include wood, plastic, metal, asphalt impregnated gypsum board or any gypsum board coated with glass fiber vinyl, decorative paper, paint or other finish. Place in designated area and protect from moisture and contamination.

B. Clean, unpainted waste gypsum products may be recycled by:

1. Returning to gypsum board manufacturer in lieu of landfill.

2. Hauling to alternative use manufacturer in lieu of landfill.

C. Separate metal waste and place in designated areas for recycling or reuse.

END OF SECTION