

**SECTION 09 21 00
LATH / PLASTER**

PART 1.00 - GENERAL

1.01 REFERENCE STANDARDS

- A. ASTM C35 - Standard Specification for Inorganic Aggregates for Use in Gypsum Plaster; 2001 (Reapproved 2019).
- B. ASTM C206 - Standard Specification for Finishing Hydrated Lime; 2014 (Reapproved 2022).
- C. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters, and Gypsum Concrete; 2020.
- D. ASTM C841 - Standard Specification for Installation of Interior Lathing and Furring; 2023.
- E. ASTM C847 - Standard Specification for Metal Lath; 2018.

1.02 RELATED DOCUMENTS

- A. The Contractor is referred to the "Bid Book"; the "Standard Agreement" between the Construction Manager (CM) and the Contractor(s); "Division 01 - General Requirements" of the Contract Specifications"; the "Contract Drawings" and all Amendments and Addenda thereto; all of which govern the Work of this Section

1.03 SCOPE OF WORK

- A. The Work of this Section includes all labor, materials, equipment and services necessary to complete the lath and plastering work in renovated/reconfigured apartments as indicated on the Drawings and/or specified herein including, but not limited to, the following:
 - 1. Patching/replacement of existing deteriorated solid plaster partitions/chase walls/furring/finish indicated to remain, including replacement of metal lath, channel studs, etc. as required, at the following locations:
 - a. Vacant/Reconfigured Apartments
 - b. All spaces excluding bathrooms: Assume 5% patching/ replacement for bidding purposes.
 - c. Bathrooms/Toilets: Assume 10 sq. ft. patching/replacement per location for bidding purposes.
 - 2. Occupied/Renovated Apartments
 - 3. All spaces excluding bedrooms/bathrooms: Assume 5%
 - 4. patching/replacement for bidding purposes.
 - 5. Bathrooms: Assume 10 sq. ft. patching/replacement per
 - 6. location (included in G.C. Add Alternate #1).
 - a. Plaster infill at sealed-up door openings in existing solid plaster demising partitions between apartments (Unit Types C/CR).
 - 1) Plaster finish at room side of SFT infill at sealed-up apartment entrance door openings (Unit Types C/CR).
 - 2) Finishing of ends of existing partially demolished plaster partitions, chase walls, etc. adjoining new gypsum/tile backer board construction.
 - 3) Finish patching of new penetrations as required in existing solid plaster partitions/chase walls/furring/finish by Plumbing/Heating and Electrical Contractors (cutting and rough patching by other Contractors – coordinate work as required).
 - 4) Provide all other labor and materials as may be reasonably inferred to be required to make the Work of this Section complete.

1.04 RELATED WORK SPECIFIED ELSEWHERE

- A. The following additional Sections/Divisions contain requirements that relate to the work of this Section:
 - 1. Section 02 05 00 – Selective Demolition/Removals/Cutting/Patching
 - 2. Section 09 25 00 – Gypsum Wallboard System

3. Section 09 31 00 – Ceramic Tile
4. Section 09 90 00 – Painting
5. Section 12 35 06 – Kitchen Cabinets/Countertops
6. Division 22 – Plumbing/Heating
7. Division 26 – Electrical

PART 2.00 – PRODUCTS

2.01 MATERIALS

- A. Channel Studs: Shall be cold-rolled, 16 ga. galvanized steel, $\frac{3}{4}$ " wide with $\frac{1}{2}$ " flanges to match existing.
- B. Base Clips: To secure studs to existing concrete floors and support metal base shall be 18 ga. galvanized steel to match existing.
- C. "Z" Runners: To secure studs to existing concrete ceilings shall be 26 ga. galvanized steel to match existing.
- D. Metal Base: Shall be galvanized steel, 2- $\frac{1}{2}$ " high, profile and gauge to match adjacent existing (verify in field).
- E. Fasteners: Screws, nails and other fasteners shall be as recommended by the manufacturer of the framing components.
- F. Metal Lath: Shall be 18. ga. galvanized expanded flat rib weighing not less than 3.4 lbs. per sq. yd., free from rust and shall conform to ASTM C847.
- G. Tie Wire: To secure lath to studs shall be 18 ga. galvanized soft annealed wire and shall conform to ASTM A641.
- H. Trim Accessories: Corner beads, corner lath, etc. shall be galvanized steel as recommended by the lath/plaster manufacturer.
- I. Plaster: Shall comply with ASTM C28 requirements and have a minimum compressive strength of 750 psi.
 1. Scratch and Brown Coats: Basecoat plaster shall be Structo-Base Gypsum Plaster by United States Gypsum or approved equal.
 2. Finish Coat: Finish plaster shall be Structo-Gauge Gauging Plaster by United States Gypsum or approved equal.
 - a. Sand Shall comply with ASTM C35 requirements
 - b. Finish Lime (Quick Lime): Shall comply with ASTM C206 requirements.

2.02 PROTECTIVE COATING

- A. Galvanize (zinc-coat) steel studs, runners, base clips, metal base, accessories, etc. as per ASTM A123, G-60 minimum.

PART 3.00 – EXECUTION

3.01 PREPARATION

- A. Where existing plaster finish at existing solid plaster partitions, bathroom chase walls, furring, etc. indicated to remain has deteriorated, plaster and metal lath, together with deteriorated channel studs/clips/runners, shall be removed as required for replacement. The areas to be removed/replaced shall be designated by the Contractor and approved by the CM.
- B. Kitchen chase walls, portions of solid plaster partitions, etc. shall be carefully removed as indicated on the Drawings (in occupied/renovated apartments, do not disturb adjacent existing ACM floor tile/mastic to remain during this procedure).
- C. All partial demolition of existing plaster work shall be done with circular or reciprocating saws having HEPA attachments in full compliance with Section 02090 – Dust Control. All cutting shall be done as neatly as possible, particularly at partition/chase wall ends adjoining new wallboard/metal stud construction.

- D. At locations in occupied/renovated apartments where existing plaster work is to be replaced or removed, the CM/Development Management will request the residents to move all furniture, wall hangings, etc. away from the walls in question. Where residents are unable to perform this work, the Contractor shall move and replace, where applicable, the resident's furnishings at no additional cost to the Authority and in doing so, shall not be relieved of damages specified elsewhere in this Contract.

3.02 INSTALLATION

- A. General: The following new plaster work shall match and be properly tied-in to adjacent existing construction, with exposed surfaces aligning:
1. After removal of deteriorated plaster/lath and metal framing components as required, patch and restore openings with new plaster/lath, channel studs, runners, base clips and metal base as required to align with and match adjacent existing construction.
 - a. After removal of existing doors/frames at solid plaster demising partitions between apartments, seal-up openings with new plaster/lath, channel studs, base clips and metal base as required to align with and match adjacent existing construction.
 - b. After removal of existing apartment entrance doors/frames and sealing-up of masonry openings at SFT Public Hall walls, prepare apartment side of infill wall to receive new plaster finish (+ 3/4" thick – verify in field) as required to match existing construction.
- B. Framing:
- 1) Base clips including supports for metal base shall be properly secured to bottom of new channel studs and shall be fastened to the existing concrete slabs with two (2) 1/2" case-hardened concrete stud nails, spaced to match stud spacing.
 - 2) "Z" runners shall be attached to the underside of the concrete slabs with fasteners similar to above, spaced 9" o.c.
 - 3) Channel studs shall be erected vertically and properly secured to the base clips at the floor and the "Z" runner at the ceiling. Plumb and align vertical members within 1/8". Spacing of studs shall be a min. of 16" o.c. or to match existing. Where existing channel studs have been cut to remove deteriorated portions, install new channel stud sections overlapping existing remaining stud sections a min. of 6" at top and bottom, tied together with wire. As an alternative, existing and new stud sections can be bolted together
 - (a) Base clips and runners shall be installed so as to locate the face of the channel studs on the lath side, 3/4" from the face of the finished plaster.
 - 4) Metal Lath/Trim Accessories:
 - 5) Installation of interior lathing shall conform to ASTM C841.
 - (a) Where deteriorated metal lath is being replaced and at new infill partition locations, new lath shall overlap existing adjacent lath to remain a min. of 1", and shall be properly tied to it and to studs with wire as specified.
 - (1) Whenever possible, metal lath shall be placed with its long dimension perpendicular to channel studs.
 - (2) Metal lath shall be stretched-out properly before fastening without any wobbling or buckling.
 - (3) Ends and edges of lath shall be overlapped a min. of 1" between supports and shall be properly tied together with wire as specified.
 - (4) Install new corner beads at all outside corners, including finished ends of partially demolished plaster partitions.
 - (5) Where metal lath is used on butting walls (i.e. internal corners), start lath one stud away from corner and bend it into corner, carrying it onto the adjoining surface. As an alternative, butt lath into corner and apply corner lath (Cornerite) over the abutting laths.
 - (6) Where abutting surface is not being plastered, attach metal lath to the abutting surface so that lath edge and attachment will be embedded in plaster.
 - (7) Install metal base to match adjacent existing secured to base clips.

3.03 PLASTERING:

1. GENERAL

- (1) a. Plaster for walls shall consist of three (3) coats, scratch, brown and finish, complying with requirements of the pertinent ASTM specifications and the NYC Building Code. Where it meets the requirements of the Building Code, the Authority will accept a two-coat in lieu of a three-coat plaster installation. On exposed surfaces, the last coat shall be a white finish coat.
- (2) b. Plaster mixing and installation shall be in accordance with the manufacturer's recommendations.
- (3) c. Plaster on metal lath shall have a minimum overall thickness of $\frac{3}{4}$ " measured from the face of the lath.
- (4) d. All deteriorated and damaged areas at existing plaster walls shall be repaired and finished to match existing adjacent surfaces.
- (5) e. The Contractor shall protect all existing plaster work to remain. Any damage to existing walls due to the work of this Contract shall be repaired at his own expense.

2. Mixing of Plaster

- 1) Use a proper type of mechanical mixer to ensure that the plaster, aggregate and water are evenly mixed. The mixer shall be kept continuously clean.
 - (a) Proportioning of gypsum plaster materials shall be by weight of gypsum to volume of aggregate as recommended by the manufacturer with variations permitted only where they will improve, under prevailing conditions, the quality of the work.
 - (b) Prepare only one hour's supply of plaster at one time and do not remix if plaster has started to set. All such plaster shall be discarded.
 - (c) Water added to form gypsum plaster shall be clean, fresh and free from mineral and organic substances. Only enough water shall be used to provide a plaster of workable consistency.
 - (d) Aggregate shall be sand, clean and free of dirt, clay and foreign matter.
 - (e) All aggregates shall be properly graded by size in accordance with ASTM C35.
 - (f) Setting time shall be from 2 to 4 hours after mixing for both the scratch and brown coat applications. If conditions exist that affect normal setting time, retarders or accelerators may be used (Red Top Retarder and Red Top Accelerator or approved equals) as approved by the Authority.
 - (g) Temperatures in conformance with manufacturer's recommendations shall be maintained prior to, during and after application of plaster. As soon as setting of plaster occurs, free circulation of air shall be provided to carry off excess moisture.
 - (h) Finish gypsum plaster coat shall be applied over a set high-strength base coat that has been broomed and is partially dry. Scratch in thin coat and then double back with second coat to provide a true hard float finish surface.
 - (i) The Authority may choose to test the several coats of plaster for proportion in accordance with the applicable Federal Specifications and /or ASTM C472-90a.

3. Placement of Plaster

- (a) Typical plaster wall installation shall be three (3) coats with a minimum overall thickness of $\frac{3}{4}$ " consisting of a scratch coat ($\frac{1}{4}$ "), brown coat ($\frac{1}{8}$ ") and finish coats ($\frac{3}{8}$ ", consisting of $\frac{1}{4}$ " undercoat and $\frac{1}{8}$ " top finish coat).
- (b) Plaster shall be applied with sufficient force to cause perfect adhesion and to form good keys on lath.

- b. The scratch coat shall completely cover the lath on which it is applied and shall be cross scratched in both directions before the mortar is set.
- c. The brown coat of plaster shall be applied over the scratch coat after the undercoat has sufficiently set to carry its own weight, but before it is dry.
- d. The brown coat shall be applied in such thickness so that it will produce an overall thickness of plaster equivalent to that specified herein less the thickness of the finish, or as required.
- e. Wherever wood blocking or steel mounting plates are provided, the space between the blocking/plate and the metal lath shall be solidly filled with brown coat plaster.
- f. The brown coat shall be rodded and brought to a true uniform surface, lightly broomed and allowed to set and dry for the finish coat.
- g. h. Plastering on wall surfaces shall be carried to the floor line unless otherwise indicated.
- h. i. The finish coats shall cover the brown coat completely so that no part of the undercoat shall show and shall be of sufficient thickness to produce the surface specified.
- i. j. Top finish coat shall be applied to a thickness of 1/8" and shall be troweled to a hard float finish in accordance with the manufacturer's recommendations
- j. k. Top finish coat of plaster shall be allowed a curing period of two days before application of prime coat of paint.

3.03 CLEANING / PROTECTION

- 5.01 AT THE END OF EACH DAY'S WORK, THE CONTRACTOR SHALL REMOVE ALL DEBRIS AND MATERIALS NOT USED DURING THE DAY TO A DESIGNATED STORAGE AREA(S). NO USED OR UNUSED MATERIALS OR EQUIPMENT SHALL BE PERMITTED TO REMAIN IN OCCUPIED APARTMENTS OR PUBLIC SPACES AFTER THE WORKMEN LEAVE.**
- 5.02 ALL FLOORS AT THE WORK AREA SHALL BE PROTECTED AGAINST DAMAGE AND DEPOSITS OF PLASTER MATERIALS. DAMAGED TILES SHALL BE REPLACED WITH NEW MATERIALS TO MATCH EXISTING AT THE CONTRACTOR'S EXPENSE.**
- 5.03 AFTER COMPLETION OF THE WORK AND BEFORE FINAL ACCEPTANCE, THE WORK AREA SHALL BE THOROUGHLY CLEANED. THE CONTRACTOR SHALL REMOVE FROM THE WORK AREA ALL MATERIAL, RUBBISH, STAINS AND DEFACEMENTS WHICH HAVE BEEN PLACED THEREON AS A RESULT OF HIS WORK. THE ENTIRE WORK SHALL BE LEFT IN A CLEAN CONDITION SATISFACTORY TO THE CM.**

END OF SECTION 09 21 00