

September 28, 1928

V-1 & IX-8/ICP

City of N.Y.
Bureau of Construction and Maintenance,
(Attn. Mr. Walter C. Martin, Architect,
Superintendent of School Buildings),
Board of Education,
Flatbush Avenue Ext. and Concord St.,
Brooklyn, N.Y.

RECEIVED

Subject: Painting on Plastered Walls and
Ceilings.

Gentlemen:

1. In reply to your letter of September 19th, we have the following to offer:

2. It is our opinion that in many cases the discoloration of paint on plastered walls or ceilings is caused by improper drying of the walls. This is true regardless of whether a lime or a gypsum base is used, and from other evidence we believe that it is due to the action of the alkali contained in the lime of the finish coat on the paint of size. 2

3. We refer you to Bureau of Standards Technologic Paper No. 274, "Use of United States Government Specification Paints and Paint Materials". This publication may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C., at a cost of ten cents a copy. Quoting from page 44 of this paper:

"Too much emphasis cannot be laid on the thorough drying of all plaster, concrete, cement, etc., before painting. It must be remembered that such structures when new contain much water and unless sufficient time under proper conditions of temperature and humidity is allowed for thorough drying the water remaining in the wall will eventually seriously injure any paint coating. It should be pointed out that a wall may appear to be dry on the surface but still be damp in the interior. Even when properly dried, new structures of this kind may contain free lime; hence it is advisable when the structure is less than a year old, even if it is known to be dry, to apply before painting, an aqueous solution of zinc sulphate (3 to 4 pounds crystallized zinc sulphate to 1 gallon of water). Allow

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this to dry thoroughly before applying paint.

4. It is noted that the plastered surfaces are painted two or three months after the plaster is applied. Apparently the plaster is frequently applied directly to the tile or brick wall. We very much question the advisability of attempting to paint plaster that is applied directly on brick wall. The plaster should have air space back of it so as to assure drying. Of course it is presupposed that the building is properly designed and constructed to prevent water seepage from the back of the plaster after the plaster has dried.

5. Bureau of Standards' Circular No. 151, "Wall Plaster: Its Ingredients, Preparation and Properties", obtainable from the Superintendent of Documents at a cost of fifteen cents per copy, contains considerable information regarding specifications and general plastering practice which may be of interest to you.

6. In regard to the painting procedure, it is noted that you propose to use lead and oil paint for the second and third coats. There is nothing better that can be used for these coats. The specification for the first or primer coat is indefinite. There is no reason why if lead and oil paint is used for the second and third coats, that it should not also be used for the priming coat.

7. You are referred to Technologic Paper No. 274, page 36, for a formula for primer coats for plaster, using white lead.

8. We are enclosing a copy of our Letter Circular 59, which lists the Bureau's publications on paint and varnish and gives information as to how they may be obtained. We also enclose United States Government master specifications for gypsum plaster, quicklime and hydrated lime for structural purposes.

Respectfully,

(Signed) GEORGE K. BURGESS,
DIRECTOR.

George K. Burgess, Director.

Enclosure: *JLP*
LC 59,
Specifications.