

Executive Summary

This study was initiated by Neal Vogel of Restoric LLC to examine the finishes on the wood trim from the interior and windows of the Keokuk Train Station in Keokuk, IA to determine the original finishes. A total of four samples were provided to be examined; two from the baggage room, one from the freight room and an exterior window. In order to determine the original finishes, samples were extracted from the three sample boards provided which were examined under a stereo zoom microscope illuminated with a fiber optic ring light adjusted to daylight.

Findings

Freight Room Wainscot

The earliest finish appears to be an oil or oil and resin clear finish. It does not appear to be tinted and is likely an oil because of the heavy saturation of the finish in the wood grain, leaving very little or no film on the surface. The oil is followed by a series of at least six paint layers the most recent being a silver metallic paint.

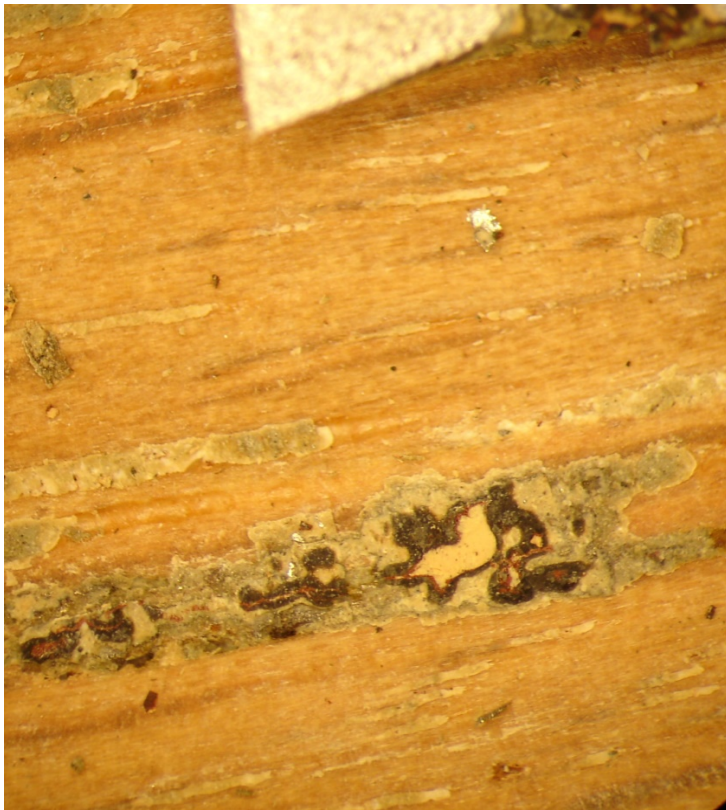


Figure 1: Photomicrograph of sample from the Freight Room wainscot. The initial finish of the oil is clearly seen prior to the paint layers.

Baggage Room / Stair Paneling to 2nd Floor

The earliest finish appears to be an oil or resin clear sealant. It differs from the previous sample in that it is a film forming finish similar to a varnish. The finish was tested with alcohol to see if it would become resoluble and it did not. This is a common test for shellac finishes. Common varnishes from this period include gum, fossil, or oil resin. The clear sealant is followed by multiple layers of paint the most recent being tan.

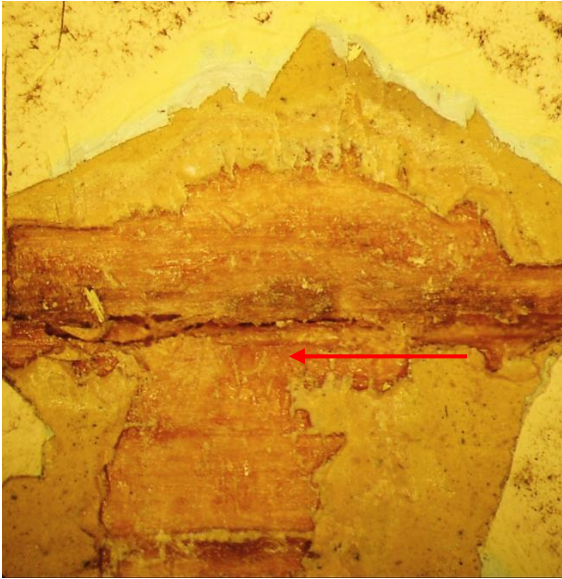


Figure 2: Photomicrograph of sample from the Baggage Room paneling. The initial finish of the clear sealant is easily seen prior to the paint layers. There is moderate build-up that is seen in areas that form a film that has a somewhat glossy sheen (red arrow).

Baggage Room / Ceiling

The earliest finish appears to be an oil or oil and resin clear finish similar to the Freight Room. It does not appear to be tinted and is likely an oil because of the heavy saturation of the finish in the wood grain, leaving very little or no film on the surface, however there is a wax like residue that is on top of the surface which may be part of the original finish or applied for maintenance. The oil is followed by a series of multiple paint layers the most recent being white.

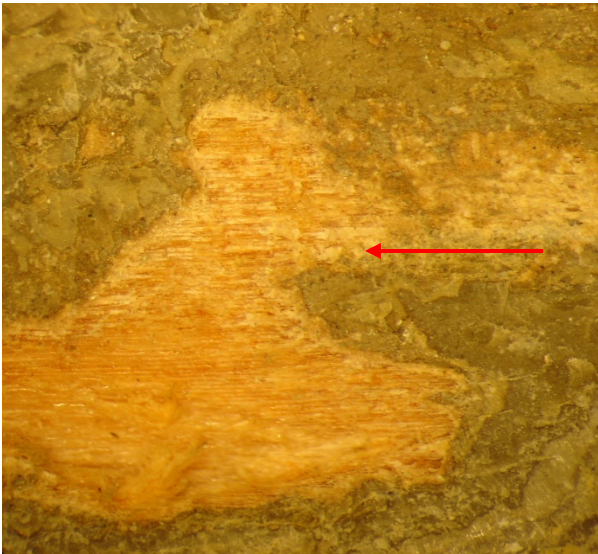


Figure 3: Photomicrograph of sample from the Baggage Room ceiling. The initial finish of the oil is easily seen prior to the paint layers. There is some build-up of a soft clear substance (white like) that appears to be a wax (red arrow).

Additional lab analysis would be needed to verify the make of oil and clear sealant finishes.

Exterior Window

An entire window sash was provided to examine both the interior and exterior sides. Exposure windows were created on both sides of the window by carefully removing the overpaint layers in order to view the original paint surfaces. On the exterior face the earliest complete layer is a Green paint. This type of Green is a common exterior trim color used during the late nineteenth century. The original green was followed by a series of brown and green paint layers.



Figure 4: Detail Photo of the exterior side of the window sash. The exposure revealed a Green paint in the center of the wood section on the right as the earliest color (red arrow).

The exposure on the interior face revealed a painted faux wood grain finish. The graining is quite simply done to imply the look of wood, likely oak, rather than copy it. The glaze color used to produce the grain is Orangish Brown (Munsell 7.5YR 4/4 - 3/4) over an Off-White base color (Munsell 10YR 8/2 - 8/4). The glaze was likely applied and stuck off with a steel comb to produce the graining. It does not appear to have any additional manipulation of the glazing.



Figure 5: Detail Photo of the interior side of the window sash. The exposure revealed a painted faux wood grain finish of an Orangish Brown glaze over an Off-White base color (red arrow).