



An old industrial building was converted into a training center with administrative offices, and the finished paint jobs to the interior walls, exterior siding walls, exterior windows, exterior brick walls, and rooftop areas were not acceptable.

The Case of the Three Coats That Won't Cover

By **Brian O'Farrell**, Owner of **DP Coatings LTD**

Disentangling a project gone wrong can be daunting and reminiscent of a forensic investigation.

It entails a lot of back and forth and fingerpointing.

This project was an old industrial building converted into a training center with administrative offices. Owner involvement with the project was constant as the facility was used throughout the renovations.

The Problems

The painting contractor was having trouble with the interior and exterior jobs despite using the specified materials. Both exhibited poor finishes, and additional coats did not improve the appearance of the finishes.

The owner kept rejecting the finished paintwork, calling it poor

quality. The painting contractor responded that there was a problem with the paint — not the workmanship. He maintained that they used only the products that the architect specified. In his opinion, he had complied with his contractual obligations.

The project reached an impasse when the owner stopped paying

me, an independent Master Painters Institute (MPI) inspector, to review the paint job.

The Project Tasks: Interior Walls and Exterior Walls

The interior walls were a combination of new and existing gypsum wallboard. The paint finish on the new walls had no

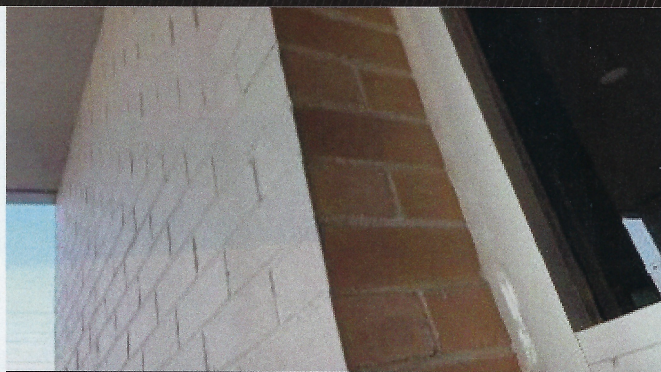
He maintained that they used only the products that the architect specified. In his opinion, he had complied with his contractual obligations.

the general contractor, pending the resolution of the paint issue. In response, the general contractor hired

issues. However, sections of the existing walls had exhibited flashing and inadequate coverage. The paint used for



Standing water painted over on windowsill



No stain was seen on the window return

both new and old wallboards was the same brand and color. The contractor stated that a primer and two coats were applied to all surfaces.

The exterior walls had two different substrates: bricks and metal siding. The architect had specified a premium quality stain specifically formulated for the brick, and no substitutions were permitted. The painting contractor had recommended the paint for the metal siding.

Three different paint suppliers were used for the interior paint, the exterior siding paint, and the stain for the exterior brick.

Problems With the Interior Walls

While the new interior wall paint had a very uniform finish, the existing walls had multiple issues. Minor defects in the walls had not been patched before painting because the painting contractor had stated that patching was not their responsibility. However, the specifications clearly stated that minor defects were to be repaired by the painter and were part of the painting contractor's scope of work. The specification further stated that the painting contractor had to inspect all surfaces to ensure that paints were compatible prior to commencing work.

In addition, the tops and bottoms of many of the existing walls had inconsistent finishes. A close inspection revealed that the tops and bottoms of these walls had not been cut in for the second coat. Many minor repairs had also flashed due to a single

coat of paint. The inspection further revealed that some repairs had not been performed before painting. After the initial review of the interior walls, the painting contractor agreed to apply an additional coat of paint where needed. This resolved the paint issues with the interior of the building.

Problems With the Exterior Metal Siding Walls

The siding was 24-feet (7.3 m) high and featured the original paint. The siding was repainted to match the existing color. The painting contractor stated that the exterior siding had been cleaned, and two coats of manufacturer-recommended paint had been applied.

The painting contractor provided a letter from the paint representative stating that priming was not required because the 50-year-old siding had been cleaned and power washed.

A visual inspection from the ground revealed that the paint applied to the siding had an excessive amount of dry spray and runs. This was especially noticeable when the sun was setting. There were multiple areas of exposed chalking, and many bird droppings, cobwebs, and other debris had been painted over.

The painting contractor stood by his claim that the siding had been

cleaned and that two coats had been applied. A closer inspection confirmed that the lower 8 feet (2.4 m) of siding had received a second coat of paint. However, I rubbed my fingers over the exposed chalking, and it came off easily. These areas had been missed.

The manufacturer's product data sheet for the exterior siding paint stated that pre-finished siding required a bonding primer before the paint application. This was not done. The painting contractor argued that the product was self-priming and did not require a primer. He further stated that he had a written recommendation from the paint manufacturer to this effect. The painting contractor provided a letter from the paint representative

stating that priming was not required because the 50-year-old siding had been cleaned and power washed.

The date on the letter was current, but it was never produced prior to the job performance.

I measured the dry film thickness of the paint on the metal siding and found that most areas had less than the minimum dry film thickness recommended for a single coat of paint.



No cleaning or surface preparation done prior to applying the paint



Delaminating paint visible

A few areas had a heavy buildup of paint exceeding the overall recommended thickness. The applied paint had wrinkled in some of these areas, indicating that it had been applied too thickly.

Exterior Window Problems

The exterior anodized aluminum windows had been painted in with the siding paint, and debris had been painted over. The paint was already delaminating from the aluminum windows. The painting contractor stated that he would touch up the windows. I noted that the anodized aluminum required surface preparation and bonding primer before paint application. The paint had to be removed before priming because this was not done.

Problems With the Exterior Brick Walls

The stain for the exterior brick was a specialized product. The exterior brick and cementitious soffits were coated with it. The soffits and upper walls were white, and the lower walls were a dark gray.

Roller and brush marks were highly visible. At a glance, the finish had very poor aesthetics.

The painting contractor was adamant that the product was the problem. The contractor stated that he had applied three coats to many areas, but it did not make a difference to the finish; it was simply a bad product. However, the architect had specified this product based on excellent

experience with it on other projects.

I contacted the stain manufacturer to discuss the problem. The manufacturer indicated that they had never had an issue with the product in the past. Their product was designed specifically for aged brick. Product literature, batch numbers, and material quantity were forwarded to me for review. The colors were custom ordered, and out-of-date product issues were excluded.

Further inspection of the gray stain on the brick revealed several issues. The brick was still visible in many areas despite three layers of stain. However, other areas had no stain at all. There was also a distinct shading difference in some areas — as if two different shades of gray had been applied.

Roof Problems

A section of the building had a low roof surrounded by higher walls on three sides. The walls and flashings in this area were to be painted white. The walls were a combination of brick, metal siding, and concrete masonry units. The brick and concrete masonry units were to be stained. The stain on these walls appeared very thin, and debris had been painted over in many areas.

There was considerable overspray on the windows and rooftop equipment. There were numerous drips, runs, and misses on the substrates. Old, flaking paint had not been removed prior to application, and standing water on the windowsill flashings had been painted over. It appeared as though everything had been painted with the same paint product.

The manufacturer recommended 4–5 mils (101.6–127.0 microns) of stain per coat for a two-coat system on brick and masonry walls. The product data sheet recommended priming old, aged brick prior to applying the stain to obtain a uniform finish. However, the contractor stated that the brick was in good shape; hence, there was no need to prime it.

I calculated the area of the brick that was stained. The quantity of material required to apply three coats of stain was higher than the amount purchased. In fact, the quantity of stain purchased was not enough to properly apply even a single coat per the manufacturer's recommendation.

The Remedy

The general contractor had no option but to bring in a different painting contractor to repaint the metal siding.

The contractor stated that he had applied three coats to many areas, but it did not make a difference to the finish; it was simply a bad product.

There was an extensive amount of rework required on the exterior siding and brick to rectify the problems. The original paint contractor only offered to perform touch ups. The general contractor could not find another painting contractor to complete the stain work on the exterior brick. The owner ended up accepting the stain work as is simply to close out the contract.

The owner's concerns on this project were justified. The problems with the finished products were a result of poor quality workmanship. The painters had not cut in the tops and bottoms of the walls on the final coat of paint to the interior walls. Patches and repairs had not been sealed prior to being painted. The touch-ups had flashed and were very noticeable.

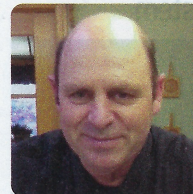
The exterior metal siding had not been properly cleaned prior to painting.

The paint contractor's repair procedures were inadequate and would only prolong imminent failures.

The brick should have been primed as recommended by the stain manufacturer. The quantity of stain applied was considerably less than required to obtain a uniform finish. The contractor's insistence that three coats had been applied was difficult to believe as the substrate was visible through the stain in most areas that were inspected.

When an owner is specifying premium quality products, it usually means that he/she wants a first-class job. In the end, the paint work took longer to do and cost more to complete than doing it right the first time. This is a classic case of what it costs to cut corners. **CP**

BRIAN O'FARRELL is a certified coating inspector with more than 30 years of experience in the coatings industry. His certifications include NACE Coating Inspector Program (CIP) level 3, SSPC: The Society for



Protective Coatings Protective Coatings Inspector (PCI) level 3, SSPC Concrete Coating Inspector (CCI) level 3, SSPC Master Coatings Inspector (MCI), ICorr level 3, and a certified MPI inspector. O'Farrell is an SSPC Coating Application Specialist, SSPC Protective Coating Specialist, and a NACE Certified Coating Applicator with multiple red seal trade certificates from the Ontario Ministry of Training Colleges and Universities, including Commercial Painter and Industrial Painter. For more information, contact: Brian O'Farrell, brian@dpcoatings.ca.



StrataShield®

RELIABLE SUPPORT. UNMATCHED PERFORMANCE.

With StrataShield floor coatings from Tnemec, you get a wide variety of durable and reliable coating options complete with the best application support in the industry. Formulated to perform and easy to apply, StrataShield products help you and your crew finish your projects without application-related delays.

To request free samples of our high-performance floor and wall products, visit tnemec.com/StrataShield.

