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**Historic Paint Finishes Study**  
**Thomas Cole House, Privy and Studio**  
**218 Spring Street**  
**Catskill, New York**

**September, 2000**

**National Park Service**  
**Northeast Cultural Resources Center**  
**Building Conservation Branch**  
**Boott Cotton Mills**  
**400 Foot of John Street**  
**Lowell, Massachusetts 01852-1195**



# United States Department of the Interior

## NATIONAL PARK SERVICE

Northeast Cultural Resources Center  
Boott Cotton Mills Museum  
400 Foot of John Street  
Lowell, Massachusetts 01852-1195

IN REPLY REFER TO:

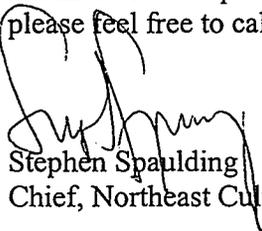
September 29, 1999

Mr. Robert H. Stackman  
Chairman Board of Governors  
Thomas Cole's Cedar Grove  
c/o The Lodge  
Riverside Avenue  
Coxsackie, NY 12051-1520

Dear Bob:

Per that certain Agreement by and between the Building Conservation Branch (BCB) of the Northeast Cultural Resources Center (NCRC) and the Greene County Historical Society (Catskill, NY), please find enclosed one original copy of the Historic Paint Finishes Study for the Thomas Cole House, Privy and Studio.

Those paint finishes determined to have been found on the buildings at Cedar Grove during the estates historic period (1836-1848) have been color matched using the Munsell Color Notation System. However, for your convenience in obtaining paints that match the historic finishes, commercially available swatches from Benjamin Moore's Color Preview System have been attached to the report. Should you have any questions or comments regarding any of the above, please feel free to call John Scott at 970-5136 or Peggy Albee at 970-5131 at your convenience.

  
Stephen Spaulding  
Chief, Northeast Cultural Resources Center, Building Conservation Branch

Enclosure

cc/encl: Project Manager, NCRC (Albee)  
Conservator, NCRC (Scott)  
N.E. Museum Services Center ~~(Waters)~~

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## Forward

This report outlines the findings of a historic paint finishes study carried out on the Thomas Cole House, privy and studio located at 218 Spring Street in Catskill, New York. Field work, analysis and report writing were carried out by John A. Scott, an architectural conservator with the Building Conservation Branch, under the terms of that certain Agreement dated May 16, 2000 by and between the National Parks Service's Northeast Cultural Resources Center, Building Conservation Branch (BCB) and the Thomas Cole National Historic Landmark, an affiliated National Historic Site (NHS), with Green County Historical Society, Catskill, NY. Included in the report is an analysis of the paint finishes found on the exterior portions of the Home, the privy and the "old studio," as well as certain of the Home's basement, first and second story rooms. Historical references contained within this report relied on Alice L. McGown's thesis entitled "Cedar Grove: The Residence of Thomas Cole," submitted in partial fulfillment of the requirements for the degree Master of Science in Historic Preservation, Graduate School of Architecture and Planning, Columbia University, 1985.

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## Introduction

The Thomas Cole House (also known as Cedar Grove), located at 218 Spring Street in the town of Catskill, New York, is an elevated two-story brick building with a walk-in basement at ground level. At all three levels the south facing home has a central stair that extends from the basement to the attic dividing the home into east and west components. In the basement is found the original kitchen and pantry as well as a number of utility rooms. At the first floor level are found an east and west parlor, with secondary rooms located north of the west parlor and north of the central stair hall. This same room configuration is found at the second floor level with a rear porch located north of the east bedroom chamber. The attic stair leads to a single room located on the eastside of the building. The home also has a two-story wood-framed ell added to the northwest corner of the building around the turn of the 20<sup>th</sup> century, and has been somewhat altered at the north facing rear entrance. Photographic documentation also indicates that the east chimney, originally constructed within the frame of the building, was reconstructed as an exterior chimney, and the front porch-roof parapet was removed sometime in the 20<sup>th</sup> century.

Originally constructed for merchant brothers Thomas and Alexander Thomson in 1815, the building became home to Thomas Cole in 1836 after marrying their niece, Maria Bartow. From this time until his death in 1848, Cole resided at Cedar Grove where as an already acknowledged major American landscapist, he reached his artistic maturity with works such as Dream of Arcadia (1838) and The Architect's Dream (1840). Between the years 1844 and 1846, the home also became the residence of Frederic Church whom Cole accepted as a student and befriended.

Following Cole's death, the house passed through his descendents until its sale to the Catskill Center for Conservation and Development, Inc., by Cole's great-granddaughter Edith Cole Silberstein in 1979. Today, the home, which is a registered National Historic Landmark, sits on an approximate 3.4 acre site that also retains Cole's "old studio" (now a caretaker's residence) and a wood-framed privy dating from the time of Cole's occupancy.

This report outlines the findings of an extensive historic paint finishes study carried out on the exterior portions of the Cole House, the old studio and the privy, as well as selected interior rooms of the Cole House, as agreed to under that certain Project Agreement by and between the National Park Service and the Green County (New York) Historical Society, dated may 16, 2000. Color matching of the finishes believed to have been extant during Cole's occupancy of the home between the years 1836 and 1848 were carried out using the "Munsell" color notation and the "Benjamin Moore Color Preview" systems, with the Benjamin Moore color samples being attached hereto at Appendix "A".

## **Historic Paint Finishes Study Thomas Cole House, Privy and Studio**

**Objective:** The objective of this historic paint finishes study was to (1) determine the sequence of paint layers applied to the exterior elements of the Thomas Cole House, privy and studio as well as those certain rooms in the Cole House specified under that certain Project Agreement dated May 16, 2000, and to (2) determine and color match those individual paint finishes applied to the building's during the time of Thomas Cole's occupancy of the Home (1836-1848).

**Methodology:** In July 2000, 245 individual paint samples were removed from the exterior and interior architectural elements of the Thomas Cole House. These samples were taken from carefully selected areas of the representative elements (believed to contain intact historic paint stratigraphies), using an X-acto knife fitted with a #18 blade. The individual samples were placed in sequentially numbered envelopes and the location and element from which each of the samples were taken was recorded. All paint samples were assigned individual log numbers (THCO-01-P001 through THCO-01-P245), based on the Integrated Research Organization System (IROS). This system provides a four-part code for each sample that identifies not only the individual sample, but also the site and structure from which the sample was taken. Likewise, 11 individual paint samples were removed from the exterior elements of the studio (building number 02), and 14 samples were removed from the exterior elements of the privy (building 03). The samples removed from the studio were assigned log numbers THCO-02-P001 through THCO-02-P011, while those removed from the privy were assigned numbers THCO-03-P001 through THCO-03-P014. Subsequently, all paint samples were packaged and transported to the paint laboratory of the Northeast Cultural Resources Center in Lowell for analysis.

In the lab, the samples were mounted in individual numbered petri-dishes, previously filled with micro-crystalline wax. The samples were then analyzed using a stereo-zoom binocular microscope at 10x-70x magnification as well as standardized chemical testing procedures. Chromochronologies for the individual samples were recorded on 3"x5" paint analyses cards corresponding to the sample numbers assigned in the field. All paint samples and paint analysis cards are stored at the Northeast Cultural Resources Center, Building Conservation Branch in Lowell, and are available for further study.

The following historic paint finishes study is based on a detailed examination of the above-referenced samples. Color chromologies have been recorded for each sample, and color matching has been carried out using Munsell color notation and Benjamin Moore Color Preview systems.

**I. Paint Analysis Data and Conclusions, Thomas Cole House**

## Exterior

### Data

#### A. Location of Removed Paint Samples

68 paint samples were removed from the **Exterior** of the Thomas Cole House at the following locations:

Sample No.	Location Description
THCO -01-P001	South facing front porch stair-riser (1984 replacement)
THCO -01-P002	South facing front porch stair-west newel post
THCO -01-P003	South facing front porch stair-handrail
THCO -01-P004	Lattice at ground floor spandrel
THCO -01-P005	Bracket supporting lattice spandrel at ground floor
THCO -01-P006	South facing brick pier (rebuilt in 1984)
THCO -01-P007	Exposed underside of first floor porch at SW corner of bldg.
THCO -01-P008	Wood wall at ground floor level beneath front porch.
THCO -01-P009	Wall surface of building at ground floor level
THCO -01-P010	Kitchen door rail at south entrance to room
THCO -01-P011	Kitchen door panel at south entrance to room
THCO -01-P012	Door jamb associated with kitchen's south entrance
THCO -01-P013	Paneled window shutter located at ground floor level (façade)
THCO -01-P014	Window trim located at ground floor level (façade)
THCO -01-P015	Stone window sill located at ground floor level (façade)
THCO -01-P016	East facing front porch stair-handrail
THCO -01-P017	East facing front porch stair-tread
THCO -01-P018	East facing front porch stair-newel post
THCO -01-P019	Front porch railing
THCO -01-P020	Front porch baluster
THCO -01-P021	Front porch floor
THCO -01-P022	Front porch column base
THCO -01-P023	Front porch column
THCO -01-P024	Front porch column capital
THCO -01-P025	Front porch architrave
THCO -01-P026	Front porch ceiling
THCO -01-P027	Wall surface of bldg. façade at first floor level
THCO -01-P028	Louvered window blind at first floor level (façade)
THCO -01-P029	Trim of window at first floor level (façade)
THCO -01-P030	Stile of front door
THCO -01-P031	Rail of front door
THCO -01-P032	Pilaster at front door architrave
THCO -01-P033	Flat panel in lower portion of front door architrave
THCO -01-P034	Decorative eagle found in fan light above front door
THCO -01-P035	Center raised bead of carved panel found in the frieze of the front door architrave
THCO -01-P036	Slightly beveled circular boarder of the carved panel found in the frieze of the front door architrave

Sample No.	Location Description
THCO -01-P037	Front door stoop
THCO -01-P038	Window lintel (west window, 1 <sup>st</sup> floor façade)
THCO -01-P039	Window sill (west window, 1 <sup>st</sup> floor façade)
THCO -01-P040	Window shutter dog (west window, 1 <sup>st</sup> floor façade)
THCO -01-P041	Front porch skirtboard
THCO -01-P042	Molding beneath fascia of front porch
THCO -01-P043	Siding board at east end of front porch roof
THCO -01-P044	East chimney
THCO -01-P045	Flat seamed tin metal roof of porch
THCO -01-P046	Wall surface of bldg. removed from 2 <sup>nd</sup> story (façade)
THCO -01-P047	Paneled window shutter, 2 <sup>nd</sup> story, center window (façade)
THCO -01-P048	Stone lintel, 2 <sup>nd</sup> story, center window (façade)
THCO -01-P049	Roof soffit (underside of original box gutter section)
THCO -01-P050	Box gutter
THCO -01-P051	West chimney
THCO -01-P052	Nail removed from porch ceiling
THCO -01-P053	Siding board at east side of rear porch roof
THCO -01-P054	Porch ceiling beaded board from rear 2 <sup>nd</sup> floor porch
THCO -01-P055	Porch column, 2 <sup>nd</sup> floor rear porch
THCO -01-P056	Rear 2 <sup>nd</sup> floor porch floor from beneath modern metal floor
THCO -01-P057	Wall surface of bldg. at north wall, 2 <sup>nd</sup> story level
THCO -01-P058	Rear 2 <sup>nd</sup> floor porch banister
THCO -01-P059	Sloped ceiling within 2 <sup>nd</sup> floor rear porch ceiling area
THCO -01-P060	Board cheek wall at attic level of rear porch
THCO -01-P061	Basement bulkhead cheek wall
THCO -01-P062	Basement bulkhead door
THCO -01-P063	Siding at west side of c.1900 addition
THCO -01-P064	Door surface at west side of c.1900 addition
THCO -01-P065	Window trim at west side of c.1900 addition
THCO -01-P066	Corner trim board at west side of c.1900 addition
THCO -01-P067	Brick foundation at east side of c.1900 addition
THCO -01-P088	Exterior side of 1 <sup>st</sup> floor window sash (façade)

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the **Exterior** of the Thomas Cole House:

Sample Nos.	P001, P003	P002, 016, 018, 020, 024, 025, (037-stone)	P004, 013, 028, 047	P005, 014, 019, 022, 023, 029, 032-036, 041, 042, 049, 050, 053, 055, 058, 088	P006	P007	P008	P009	P010, 011	P012
Substrate	Wood	Wood	Wood	Wood	Brick	Wood	Wood	Brick	Wood	Wood
(P)			Cr Wht. (P)	Cream White (P)				Cr.White (P)	Cr.White (P)	Cr.White (P)
c.1815			Gray	Cream White				Cream Wht.	Lt. Grn-Ylw	Lt. Grn-Ylw
(P)								Off-Wht (P)		
2 <sup>nd</sup> Finish			Green	White		White		Off-White	Lt. Blue-Grn	Lt. Blue-Grn
(P)										
c.1841			Dk. Green	White	Lt. Yellow	↓	(unfinished)	Lt. Yellow	Beige	Beige
4 <sup>th</sup> Finish				Off White		Off White			Off-White	Off-White
(P)								White (P)		
5 <sup>th</sup> Finish			Blue Green	White	Tan Yellow		Tan Yellow	Tan Yellow	Biege	Biege
(P)										
6 <sup>th</sup> Finish				Cream White						
(P)										
7 <sup>th</sup> Finish			Dk. Green	White				Cream	Black	
8 <sup>th</sup> Finish										
(P)		White (P)								
9 <sup>th</sup> Finish		Cream White	Sage Green	Cream White			Beige	Cream White	Cream White	Cream White
10 <sup>th</sup> Finish		Off White	Blue green	Off White			Off White	Off White	Off White	Off White
(P)										
11 <sup>th</sup> Finish		Off White		Off White			Off White	Off White	Off White	Off White
(P)										
12 <sup>th</sup> Finish		White	Black	White				White		
(P)	White (P)	White (P)	White (P)	White (P)	White(P)		White(P)	White(P)	White (P)	White(P)
c.1984	White	White	Green	White	Yellow		White	Yellow	Green	White

Throughout this report, the symbol "(P)" represents a primer layer.

Sample Nos.	P015, 038, 039	P017, 021, 056,	P026, 052	P027, 046, 051	P057	P030,031	P040	P043	P044	P045
Substrate	Stone	Wood	Wood	Brick	Brick	Wood	Metal	Wood	Brick	Metal
(P)		Ylw-Gold (P)				Crn-Wht (P)				
c.1815		Beige-Gold				Gray				
(P)										
2 <sup>nd</sup> Finish		Beige				Grn / Varnish				
(P)				Crn-Wht (P)	Crn-Wht (P)					
c.1841		Beige-brown		Lt. Yellow	Lt. Yellow	Peach	Lt. Yellow			
4 <sup>th</sup> Finish		Beige				Gray				
(P)	Off-Wht (P)									
5 <sup>th</sup> Finish	White	Beige		Tan Yellow	Tan Yellow	Green	Tan Yellow			
(P)			Cream (P)							
6 <sup>th</sup> Finish	Cream White	Beige	Pink Beige			Green-Ylw				
(P)			Off-Wht(P)							
7 <sup>th</sup> Finish	White	Beige	Off White	Cream	Cream	Cream-White	Cream			
8 <sup>th</sup> Finish		Beige				Dk. Green				
(P)										
9 <sup>th</sup> Finish	Cream White	Beige	Lt. Green	Cream-White	Cream-White	Green / Wht.	Cream-White			
10 <sup>th</sup> Finish	Off White	Gray	Lt. Blue	Off-White	Off-White	Charcoal	Off-White			
(P)						White (P)				
11 <sup>th</sup> Finish	Off White	Pink-Beige	Blue			White				
(P)								Off White(P)		
12 <sup>th</sup> Finish	White	Gray	White	White	White	White	White	White		
(P)	White (P)	White (P)	White (P)	White (P)		White (P)		White (P)	White (P)	
c.1984	White	Gray	White	Yellow	White	Green	Green	White	Yellow	Roof Tar

"(P)" represents a primer layer

Sample Nos.	P048	P054	P059, 060	P061	P062	P063-067
Substrate	Stone	Wood	Wood			
(P)			Cr. Wht (P)			
c.1815			Cream Wht			
(P)						
2 <sup>nd</sup> Finish			White			
(P)						
c.1841			White			
4 <sup>th</sup> Finish			Off White			
(P)					White (P)	
5 <sup>th</sup> Finish			White		Beige	
(P)						
6 <sup>th</sup> Finish			Cream Wht		Beige	
(P)						
7 <sup>th</sup> Finish			White		Beige	
8 <sup>th</sup> Finish					Beige	
(P)						Off-White (P)
9 <sup>th</sup> Finish		Dk. Blue	Dk. Blue	Cream White	Beige	Cream-Wht
10 <sup>th</sup> Finish	Off-White	Blue	Blue	Off-White	Gray	Off White
(P)						
11 <sup>th</sup> Finish		Off-White	Off-White	Off-White	Pink-Beige	Off-White
(P)						
12 <sup>th</sup> Finish	White			White	Gray	White
(P)		White (P)	White (P)		White (P)	
c.1984	White	White	White	White	Gray	White

"(P)" represents a primer layer

## Conclusions (Exterior)

### A. Exterior Wall Surfaces, Brick Piers, West Chimney, Window Shutter Dogs

Analysis of paint samples removed from the home's exterior brick wall surfaces, the brick piers that support the home's front porch, the west chimney and the window's wrought iron shutter dogs were all painted a light yellow color falling between Munsell colors 2.5Y 9/2 and 2.5Y 9/4 (Benjamin Moore color 2154-50) during the home's period of significance (1836-1848).

Comparison of the paint samples removed from the upper and lower parts of the building however indicate that only the basement level of the home's wall surfaces were painted originally (c.1815). The light yellow finish found on the exterior of the home corresponds to the third finish found at the basement level of the home and was not likely applied to the building until the late 1830's or early 1840's. This finish is in all likelihood the "Light Yellow" color indicated on Frederick Church's 1848 rendering of the home.

The brick piers that support the home's front porch were completely rebuilt in the 1980's. However, original bricks were used in their reconstruction leaving the paint history of these elements available for this study. The paint sample from the home's west chimney was removed prior to this element of the building being rebuilt in July of 2000. The paint sample removed from the home's east chimney which was reconstructed as an exterior chimney in the early part of the 20<sup>th</sup> century indicates that this element was unpainted until around the 1980's.

### B. Brackets Supporting Lattice Spandrels at Ground Floor, Exposed Undersides of Porch Floors, Front and Rear Porch Elements, Window Trim and Sash, Front Door Architrave, Box Gutters

Analysis of the paint samples removed from the above referenced elements indicate these items were all painted white matching Munsell color N 9.25/ (Benjamin Moore color AC-41) during the home's period of significance.

Analysis of the samples removed from the home's front porch and its associated stairs also indicates that a significant portion of these elements were either replaced or reconstructed around the turn of the 20<sup>th</sup> century and once again as part of the 1980's restoration effort. The underside of the front porch floor which is exposed at the ground floor level on the west side of the home retains its earliest finishes and should be left as is. Analysis of the nails found in the front porch ceiling also indicates that these are not the original porch ceiling boards. These boards were likely installed in the second half of the 19<sup>th</sup> century. Also, the unpainted tin roof found on the front porch is a replacement roof as no evidence of the earlier roof balustrade could be found on its surfaces.

Samples removed from the c.1900 two-story addition found at the northwest corner of the home also indicate that all elements associated with this part of the building have always been painted white.

C. Porch Floors, Front Porch Stair Treads, Bulkhead

Analysis of the paint samples removed from the front and rear porch floorboards and a front porch stair tread indicate that these elements were painted a beige-brown color matching Munsell color 2.5Y 6/2 (Benjamin Moore Historic Color 38) during the home's period of significance.

A paint sample removed from the basement bulkhead (which appears to post date the home's period of significance), indicates that this element should also be painted the above referenced beige-brown color as its late 19<sup>th</sup> century finishes tended to match those found on the porch floors.

D. Window Shutters, Lattice at Ground Floor Level

Analysis of paint samples P004, 013, 028, and 047, removed from window shutters at the ground, first and second story levels of the home and the lattice found between the piers at the ground floor level indicate that these elements were painted dark olive green during the home's period of significance. This dark olive green finish matches Munsell color 2.5GY 3/2 (close to Benjamin Moore color 2142-10).

E. Front Door

Analysis of paint samples P030 and 031 removed from a panel and a rail of the home's front door indicates that this element of the home was painted a peach color during the home's period of significance. The finish falls between Munsell colors 7.5YR 7/4 and 7.5YR 7/6 (Benjamin Moore Historic Color 52). While the monotone color of the door is contradictory to Charles Herbert Moore's painting of the home executed around 1860, the physical evidence clearly shows that this door was painted a single color throughout the home's period of significance (1836-1848).

F. Kitchen Doors and Frames

Analysis of paint samples P010 through P012 indicate that the kitchen doors located at the ground floor level of the home and their associated door frames were painted a beige color matching Munsell color 10YR 7/2 (Benjamin Moore color AC-32) during the home's period of significance.

G. Stone Sills and Lintels

Analysis of paint samples removed from the marble window sills and lintels of the home and the marble front door stoop indicate that these elements have been painted some variation of white since the later part of the 19<sup>th</sup> century. However, since these elements were unpainted during the home's period of significance it is recommended that the paint coatings be removed from these elements following "American Institute for Conservation" (AIC) standards pertaining to the removal of coatings from marble surfaces.

## Kitchen

### Data

#### A. Location of Removed Paint Samples

14 paint samples were removed from the original **Kitchen** (located in the southwest corner of the ground floor level of the Thomas Cole House) at the following locations:

Sample No.	Location Description
THCO -01-P145	Floor board
THCO -01-P146	Baseboard
THCO -01-P147	Door rail (south entry door)
THCO -01-P148	Door panel (south entry door)
THCO -01-P149	Door trim (south entry door)
THCO -01-P150	Window trim
THCO -01-P151	Window sash
THCO -01-P152	Chair rail
THCO -01-P153	Wainscot
THCO -01-P154	Plaster wall surface beneath chair rail
THCO -01-P155	Wall surface above chair rail
THCO -01-P156	Ceiling molding (modern ceiling)
THCO -01-P157	Fireplace mantle
THCO -01-P158	West door to kitchen (rail)

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples in the home's original **Kitchen**:

Sample Nos.	P145	P146	P147, 149, 150	P148	P151	P152, 153	P154	P155	P156	P157	P158
Substrate	Wood	Wood	Wood	Wood	Wood	Wood	Gypsum	Plaster	Wood	Wood	Wood
	Ylw-Gold (P)		Off-White (P)	Off-White (P)	Off-White (P)			White (P)		Off White (P)	
c.1815	Gold		Grn-Ylw	Grn-Ylw	White			White		White	
											Cream (P)
2 <sup>nd</sup> Finish			Blue-Grn	Blue-Grn	Cream					Black	Beige-Tan
c.1836-48			Beige	Beige	Cream-White			Cream-White		Black	Beige
4 <sup>th</sup> Finish	Gray		Beige	Beige	Off-White			White			
			White (P)	White (P)						White (P)	White (P)
5 <sup>th</sup> Finish	Blue-Gray		Gray	Gray	Off-White			White		Gray	Gray
6 <sup>th</sup> Finish			Brown	Red	Lt. Beige			Off-White		Brown	Brown
			Cream (P)	Cream (P)							Cream (P)
7 <sup>th</sup> Finish	Beige-Tan		Crn-Wht	Crn-Wht				Off-Wht *			Crn-Wht
8 <sup>th</sup> Finish			Green	Green	Green						Green
			Off-White (P)	Off-White (P)	Off-White (P)					Off-White (P)	Off-White (P)
9 <sup>th</sup> Finish	Biege-Tan		Cream	Cream	Cream					Cream	Cream
10 <sup>th</sup> Finish			Cream	Cream	Cream					Cream	Cream
			Off-White (P)	Off-White (P)	Off-White (P)	Varnish (P)				Off-White (P)	Off-White (P)
11 <sup>th</sup> Finish	Dk. Beige		Cream	Cream	Cream	Cream				Cream	Cream
12 <sup>th</sup> Finish			Off-White	Off-White	Off-White	Off-White				Off-White	Off-White
13 <sup>th</sup> Finish			Green	Green	Green	Green		White			Green
14 <sup>th</sup> Finish	Beige		Lt. Blue	Lt. Blue	Lt. Blue	Lt. Blue	Lt. Blue	Lt. Blue		Lt. Blue	Lt. Blue
15 <sup>th</sup> Finish		Yellow	Yellow	Yellow	Yellow	Yellow	Yellow			Yellow	Yellow
16 <sup>th</sup> Finish		Lt. Green	Lt. Green	Lt. Green	Lt. Green	Lt. Green	Lt. Green	Lt. Green		Lt. Green	Lt. Green
	Black (P)								Off-White (P)		
c.1970	Red-Brown								White		

\*Heavy dirt layer present (numerous finishes appear to be missing). "(P)" represents a primer layer

## Conclusions (Kitchen)

### A. Baseboards, Door and Window Trim, Doors

Analysis of paint samples P147-P150 and P158 removed from the above referenced elements indicate that all of these items were painted a beige color matching Munsell color 10YR 7/2 (Benjamin Moore color AC-32) during the home's period of significance. Analysis of paint sample P146 removed from the kitchen's baseboard along the south wall of the room indicated that this element of the room (at least the portion from which the sample was taken), was replaced in the recent past. However, for rehabilitation purposes it is recommended that this element also be painted the above referenced beige color as throughout the house each room's baseboards were painted to match the rest of the room's wood trim during the home's period of significance.

### B. Window Sash, Wall Surface

Analysis of paint sample P151 removed from the sash in the kitchen's south facing window reveals that this element of the room was painted a cream-white color matching Munsell color 5Y 9/1 (Benjamin Moore color 2154-70) during the home's period of significance.

### C. Wall Surfaces

Analysis of paint sample P155 removed from the room's south wall surface above the existing chair rail revealed that the walls of the room were also painted the above referenced cream-white color during the home's period of significance (Munsell 5Y 9/1; Benjamin Moore color 2154-70). A second paint sample (P154) removed from the a section of the room's wall below the chair rail indicated that like portions of the room's baseboards, sections of the room's lower wall had also been replaced in the recent past. Today, much of the kitchen's lower wall surfaces are again in need of repair due to serious moisture problems found throughout the home's basement level rooms.

During this investigation a mural painting was found directly beneath the wallpaper on the kitchen walls. While this mural is not thought to date to Thomas Cole's residency, it is recommended that the wallpaper be removed only by a qualified conservator to allow for a full assessment of this finding.

### D. Wainscot and Chair Rail

Analysis of paint samples P152 and P153 removed from the kitchen's south wall chair rail and wainscot, respectively, indicate that these elements of the room were likely added around the turn of the 20<sup>th</sup> century. For rehabilitation purposes, it is recommended that these elements of the room be documented and then removed as they clearly did not exist at the time of Thomas Cole's residency in the home (1836-1848).

#### E. Ceiling and Ceiling Molding

Examination of the kitchen's gypsum board ceiling and analysis of paint sample P156 removed from the ceiling molding indicate that these elements were only recently installed in the room. For rehabilitation purposes, it is recommended that (1) the ceiling molding be removed and (2) the ceiling be painted white matching Munsell color N 9.25 (Benjamin Moore color "Ready Mix White").<sup>1</sup>

#### F. Fireplace Mantle

Surprisingly, analysis of paint sample P157 removed from the breast of the kitchen's fireplace mantle revealed that this element of the room was painted black prior to and during the home's period of significance. These black colored finishes are not a build-up of soot from the fireplace but rather paint finishes probably applied to the woodwork to hide much of the fireplace's sooty residue. Thus for rehabilitation purposes, this mantle should be repainted with a black colored paint matching Munsell color N 1.0/ (Benjamin Moore color 2120-10).

#### G. Floor

Analysis of paint sample P145 removed from the room's wood floor indicates that the original gold colored paint applied to this element of the room was likely retained through the home's period of significance. This gold colored paint matches Munsell color 10YR 6/6 (Benjamin Moore color 2165-30).

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<sup>1</sup> Analysis of rooms in the home where the original ceiling paint finishes remain intact revealed that this particular white colored paint was the predominant finish found on the home's ceilings during the period of significance.

## Pantry

### Data

#### A. Location of Removed Paint Samples

11 paint samples were removed from the **Pantry** located north of the home's original ground level kitchen at the following locations:

<b>Sample No.</b>	<b>Location Description</b>
THCO -01-P159	Floor (sample removed from wood substrate beneath linoleum that was apparently installed in 1934)
THCO -01-P160	Baseboard
THCO -01-P161	Wall surface (south wall)
THCO -01-P162	Wall surface (north wall)
THCO -01-P163	Window trim
THCO -01-P164	Window sash
THCO -01-P165	Shelves at north wall
THCO -01-P166	Shelves at south wall
THCO -01-P167	Ceiling
THCO -01-P168	Door trim (south doorway)
THCO -01-P169	Door (south doorway, interior side)

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the home's ground level **Pantry**:

Sample Nos.	P159	P160, 164	P161, 162	P163, 168, 169	P165, 166	P167
Substrate	Wood	Wood	Plaster	Wood	Wood	Plaster
		Off-White (P)	White (P)	Off-White (P)		
c.1815	Cream-Beige	Cream-White	Cream	Blue-Green		White
2 <sup>nd</sup> Finish	Cream-White	Cream-White	Cream	Cream-White	Cream / Varnish	Beige
c.1841	Lt. Cream	Lt. Beige	Cream-Yellow	Lt. Beige	Lt. Beige	Lt. Beige
4 <sup>th</sup> Finish	Brown	Beige	Cream	Beige	Beige	Beige
		Off-White (P)		Off-White (P)	Off-White (P)	Off-White (P)
5 <sup>th</sup> Finish	Gold-Tan	Gold-Tan	Off-White	Gold-Tan	Gold-Tan	Gold-Tan
	Off-White (P)					
6 <sup>th</sup> Finish	Beige	Gold-Tan	Cream	Gold-Tan	Gold-Tan	Gold-Tan
	Off-White (P)					
7 <sup>th</sup> Finish	Beige	Off-White	Cream	Off-White	Off-White	Cream-White
8 <sup>th</sup> Finish	Beige	Off-White	Yellow	Off-White	Off-White	Cream-White
9 <sup>th</sup> Finish	Beige-Brown	Off-White	Yellow	Off-White	Off-White	Cream-White
1934	Red Linoleum	White	Green-Yellow	White	White	Off-White
11 <sup>th</sup> Finish		Green	Green	Green	Green	White

Dating based on 9 finishes from 1815 to 1934 (average 13 years)

"(P)" represents a primer layer

## Conclusions (Pantry)

### A. Baseboards, Window and Door Trim, Window Sash, Door, Shelves, Ceiling

Analysis of the paint samples removed from the above referenced items reveals that all of these elements were painted a light beige color falling between Munsell colors 2.5Y 8.5/2 and 2.5Y 8.5/4 (Benjamin Moore Historic Color 26) during the home's period of significance. Analysis of the paint samples removed from the shelves found along the north and south walls of the room indicate that these elements, if not original to the home's c.1815 construction date, were installed in the room shortly thereafter. The utilitarian nature of this room is the likely reason so many of the elements found in this room were all finished in the same manner.

### B. Wall Surfaces

Analysis of paint samples P161 and P162 removed from the room's south and north walls, respectively, reveal that the room's wall surfaces were finished with a cream-yellow colored paint falling between Munsell colors 5Y 9/1 and 5Y 9/2 (Benjamin Moore color 2151-60) during the home's period of significance.

### C. Floor

Analysis of paint sample P159 removed from the pantry floor indicates that this element of the room was finished with a light cream colored paint during the home's period of significance. This light cream finish matches Munsell color 2.5Y 8/2 (Benjamin Moore Historic Color 93). Dating of this particular finish was made easier by the discovery of a 1934 dated newspaper found beneath the existing red linoleum floor surface. Analysis revealed that 9 painted finishes had been applied to the floor of the pantry between 1815 and 1934 when the linoleum was likely installed, each finish then lasting on average slightly more than 13 years. Hence, the light cream colored finish which was the third finish applied to the floors of the pantry was probably applied in the late 1830s or early 1840s.

## Stair Hall at Ground Floor Level

### Data

#### A. Location of Removed Paint Samples

10 paint samples were removed from the **Stair Hall at the Ground Floor Level** of the Thomas Cole House at the following locations:

<b>Sample No.</b>	<b>Location Description</b>
THCO -01-P235	Baseboard at stair (west wall)
THCO -01-P236	Wall surface at stair (west wall)
THCO -01-P237	Trim at door to kitchen
THCO -01-P238	Ceiling
THCO -01-P239	Wall surface (north wall)
THCO -01-P240	Window at north wall
THCO -01-P241	Window trim at south wall
THCO -01-P242	Window sash at south wall
THCO -01-P243	Wainscot at south wall
THCO -01-P244	Floor

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the **Stair Hall at the Ground Floor Level** of the Thomas Cole House:

Sample Nos.	P235, 240, 241	P236	P237	P238	P239	P242, 243	P244
Substrate	Wood	Plaster	Wood	Plaster	Plaster		
	Off-White (P)	White (P)	Off-White (P)	White (P)	White (P)		
c.1815	Yellow-Green	White	Yellow-Green	White	White		
2 <sup>nd</sup> Finish	Blue-Green	Off-White	Blue-Green	White	Off-White		
c.1841	Beige	Cream-White	Beige	White	Cream-White		
4 <sup>th</sup> Finish	Lt. Beige	Off-White	Dk.Beige-Ylw	Cream-White	Off-White		
	White (P)		White (P)				
5 <sup>th</sup> Finish	Off-White	White	Beige	White	White		
			Off-White (P)				
6 <sup>th</sup> Finish	Cream-White	Cream-White	Cream-White	White	Cream-White		Lt. Beige-Tan
7 <sup>th</sup> Finish	Cream-White	Cream-White	Cream-White	White	Cream-White		
						Off-White (P)	
8 <sup>th</sup> Finish	Off-White	Off-White	Off-White	White	Off-White	Off-White	Lt. Beige-Tan
		Salmon (P)			Salmon (P)		
9 <sup>th</sup> Finish	Off-White	Salmon	Off-White	Beige-Yellow	Salmon	Off-White	
10 <sup>th</sup> Finish	Lt. Green	Salmon	Lt. Green	Cream Yellow	Salmon	Lt. Green	Dk. Beige-Tan
	Off-White (P)		Off-White (P)			Off-White (P)	
11 <sup>th</sup> Finish	Cream-White	Salmon	Cream-White	Cream-Yellow	Salmon	Cream-White	
12 <sup>th</sup> Finish	Off-White	Blue	Off-White	White	Blue	Off-White	Beige-Tan
c.1970's	White	Beige-White	White	Off-White	Green	White	

"(P)" represents a primer layer

## **Conclusions (Stair Hall, Ground Floor Level)**

### **A. Baseboard, Window and Door Trim, Window at North Wall of Room**

Analysis of paint samples removed from the west baseboard of the room, door and window trim elements associated with this space and the window found in the north wall of the room indicate that all of these elements were painted a beige color during the home's historic period. This beige finish which matches Munsell color 10YR 7/2 (Benjamin Moore color AC-32) is the 3<sup>rd</sup> of 13 finishes applied to these items and is believed to date to c.1841 based on mathematical averages.

### **B. Wall Surface**

Analysis of paint samples P236 and P239 removed from the plaster wall surfaces of the room indicate that the walls of this space were painted cream-white matching Munsell color 5Y 9/1 (Benjamin Moore color 2154-70) during the home's period of significance (1836-1848).

### **C. Ceiling**

Analysis of paint sample P238 removed from the ceiling indicates that this element of the room was painted white matching Munsell color N 9.25 (Benjamin Moore color "Ready Mix White") during the home's period of significance.

### **D. Floor**

Analysis of the paint sample removed from a floorboard in the room indicates that at least part of the flooring in this space is replacement material likely installed around the turn of the 20<sup>th</sup> century. This is not unexpected as it appears that the floors joists in the basement of the home were laid directly on the moist ground surface. Today, these replacement boards are rotted due to their proximity to the soil and will again need to be replaced in the near future. For rehabilitation purposes it is recommended that the floors in this area of the home be painted the same gold color found in the adjacent Kitchen and the Entry / Stair Hall during the historic period. This gold colored paint should match Munsell color 10YR 6/6 (Benjamin Moore color 2165-30). If new flooring is to be installed, it is strongly recommended that at the very least a vapor barrier be installed between the soil and the flooring members.

### **E. Wainscot at South Wall**

Analysis of paint sample P243 removed from the wainscot found along the room's south wall indicates that this element of the room was apparently introduced into the home around the turn of the 20<sup>th</sup> century. For rehabilitation purposes, it is recommended that the wainscot found in this room be removed in keeping with the home's period of significance (1836-1848).

## West Parlor

### Data

#### A. Location of Removed Paint Samples

10 paint samples were removed from the **West Parlor** of the Thomas Cole House at the following locations:

Sample No.	Location Description
THCO -01-P068	Baseboard at south wall
THCO -01-P069	Window trim from south facing window
THCO -01-P070	Window sash at south window
THCO -01-P071	Wall surface (east wall)
THCO -01-P072	Wall surface (west wall at chimney breast)
THCO -01-P073	Ceiling molding (modern)
THCO -01-P074	Ceiling (modern)
THCO -01-P075	Floor sample removed from northwest corner of room near fireplace
THCO -01-P076	Door panel (from door to north room)
THCO -01-P077	Door rail (from door to north room)

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the **West Parlor** of the Thomas Cole House:

Sample	P068	P069	P070	P071, 072	P073	P074	P075	P076	P077
Substrate	Wood	Wood	Wood	Plaster	Wood	Gypsum	Wood	Wood	Wood
	White (P)							Off-Wht (P)	Off-Wht (P)
	Yellow (Base)	White (P)	White (P)					Gold	Gold
c.1815	Olive Green	Cream	Cream				Varnish	Varnish	Varnish
c.1840	Off-Wht (P)	Cream Ylw	Cream Ylw	(Probably wallpaper or Calcimine paint that has been removed?)			Red-Brn	Red-Brn	Lt. Gold
	Cream Ylw							Varnish	Varnish
								Pink-beige (P)	Pink-beige (P)
3 <sup>rd</sup> finish	Cream	Cream	Cream				Cream-beige	Pink-beige	Pink-beige
	Off-Wht (P)	Off-Wht (P)		Skim coat(P)					
4 <sup>th</sup> finish	Beige	Beige		Beige			Beige-tan	Beige	Beige
5 <sup>th</sup> finish	Tan-Yellow	Tan-Yellow	Tan-Yellow	Lt. Yellow			Beige-olive	Olive	Olive
	Crn-Wht (P)	Crn-Wht (P)	Crn-Wht (P)	Off-Wht (P)				Beige (P)	Beige (P)
6 <sup>th</sup> finish	Cream	Cream	Cream	Yellow			Cream-beige	Gold-Tan	Gold-Tan
	Off-Wht (P)	Off-Wht (P)						Off-Wht (P)	Off-Wht (P)
7 <sup>th</sup> finish	Cream	Cream	Cream	Lt. Yellow				Cream-Wht	Cream-Wht
8 <sup>th</sup> finish	White	White	White					White	White
9 <sup>th</sup> finish	Cream-Wht	Cream-Wht	Cream-Wht	Blue			Lt.Beige-tan	Cream-Wht	Cream-Wht
					White (P)	Plaster skim coat (P)			
c.1970s	White	White	White	Beige	Off-White	Off-White		White	White

"(P)" represents a primer layer

## Conclusions (West Parlor)

### A. Floor

Analysis of sample P075 removed from the floor of the house's west parlor shows possible indications of an early resin finish directly above the wood substrate. On top of what appears to be the resin layer is seen a red-brown paint layer matching Munsell color 7.5R 4/6 (Benjamin Moore color 2005-10). It is this red-brown finish that is believed to have existed in the room during the home's historic period of 1836-1848. Evidence of this particular paint was also found on the panels of the door to the adjoining north room, which corresponded to the door's second finish, verifying the time frame of the floor's red-brown painted finish.

### B. Baseboards, Door and Window Trim, Window Sashes

Analysis of samples P068, 069, and 070 respectively removed from the room's baseboards, window trim and window sash, indicate that the finish found on these elements during the home's historic period was a light cream-yellow colored paint matching Munsell color 5Y 9/2 (Benjamin Moore color 2151-60). Of interest, a glossy green-colored paint was found to be the first finish applied to the room's baseboards which was also found to be the first finish applied to those doors associated with the entry hall.

### C. Door to North Room

Analysis of paint sample P076 removed from a panel of the door to the adjoining north room, indicates that during the home's period of significance, the door's panels were painted the same red-brown color found on the floor at that time matching Munsell color 7.5R 4/6 (Benjamin Moore color 2005-10). Analysis of sample P077 removed from the center rail of the door however, shows that the styles and rails of the door at that time were painted a light golden color slightly lighter than Munsell color 2.5Y 7/6 (Benjamin Moore color 2152-40). On top of the red-brown and light-golden colored paints was applied a varnish finish, probably giving the door a very rich lustrous appearance.<sup>2</sup>

### D. Walls

Analysis of samples P071 and P072 removed from the east and west walls of the room indicate that in all likelihood the walls of the room were originally decorated with wallpaper. This conclusion is based on the fact that only 6 paint finishes were found in these samples compared with 9 finishes found on the room's wooden trim elements and the door to the adjoining north room. The earliest existing finish found on the walls is a beige-colored paint likely applied around 1870. For rehabilitation purposes, an off-the-shelf reproduction wallpaper appropriate to the periods of significance or paint complementary to the other known historic era finishes (such

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<sup>2</sup> Of note, the olive colored paint found associated with the c.1895 finish appears to contain fugitive pigments (possibly Prussian blue) that have discolored and altered the original appearance of this particular finish.

as the cream-white colored paint found on the walls in the adjoining Entry / Stair Hall –Munsell color 5Y 9/1, Benjamin Moore color 2154-70 ) should be selected for the walls.

E. Ceiling, Ceiling Molding

Analysis of paint samples P073 and P074 removed from the ¼ round ceiling molding and the ceiling of the room indicate that both of these elements of the room are modern additions. The existing ceiling of the room is composed of gypsum wallboard, likely installed in the 1960s or 70s. It is possible that the room's original plaster ceiling exists beneath the modern wallboard, however this was not investigated and is beyond the scope of this report. For rehabilitation purposes, it is recommended that the molding at the ceiling be removed and the ceiling be painted white matching the historic finish found on the ceiling in the home's Entry / Stair Hall (matching Munsell colors N 9.25/, Benjamin Moore color "White" Interior Ready-Mixed). (See footnote 1)

## Room North of West Parlor

### Data

#### A. Location of Removed Paint Samples

11 paint samples were removed from the **Room North of the West Parlor** of the Thomas Cole House at the following locations:

Sample No.	Location Description
THCO -01-P089	Floor
THCO -01-P090	Baseboard (west wall)
THCO -01-P091	Window trim
THCO -01-P092	Window sash
THCO -01-P093	Door panel
THCO -01-P094	Door rail
THCO -01-P095	Door trim
THCO -01-P096	Wall surface (east wall)
THCO -01-P097	Ceiling molding (modern)
THCO -01-P098	Ceiling (modern)
THCO -01-P099	Built in cabinet on east wall

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the **Room North of the West Parlor** of the Thomas Cole House:

Sample	P089	P090-092, 095	P093	P094	P096	P097	P098	P099
Substrate	Wood	Wood	Wood	Wood	Plaster	Wood	Gypsum	Wood
	Ylw-Gold (P)	Off-White (P)	Off-White (P)	Off-White (P)				Off-White (P)
c.1815	Gold	Cream-White	Gold	Gold/Varnish				Cream-White
c.1841	↓	Lt. Cream-Ylw	Red-Brown Varnish	Lt-Gold Varnish	(Probably Wallpaper or Calcimine paint )			Lt. Cream-Ylw
3 <sup>rd</sup> Finish			Pink-Beige	Pink-Beige				
4 <sup>th</sup> Finish		Cream-White	Lt. Green	Lt. Green	↓			Cream-White
	Off-White (P)							
5 <sup>th</sup> Finish	White	Cream-White	Cream	Cream	↓			Cream-White
			Beige-Tan (P)	Beige-Tan (P)	Off-White (P)			
6 <sup>th</sup> Finish		Cream-White	Gold-Tan	Gold-Tan	Salmon			
			Off-White (P)	Off-White (P)	Off-White (P)			Lt. Pink (P)
7 <sup>th</sup> Finish	Beige-Brown	Off-White	Cream-White	Cream-White	Yellow			Lt. Pink
8 <sup>th</sup> Finish			White	White				
9 <sup>th</sup> Finish	Beige-Tan	Off-White	Cream-White	Cream-White	Blue			
						Off-White (P)	Off-White (P)	Off-White (P)
c.1970's		White	White	White	Green	Off-White	Off-White	Green

"(P)" represents a primer layer

## **Conclusions (Room North of the West Parlor)**

### **A. Baseboards, Window and Door Trim, Window Sash, Cabinet at East Wall of Room**

Analysis of paint samples removed from the room's above referenced elements indicate that these items were finished with a light cream-yellow colored paint matching Munsell color 5Y 9/1.5 (Benjamin Moore color 2151-60 during the building's period of significance).

### **B. Wall Surfaces**

Analysis of paint sample P096 removed from the room's east wall surface contained only 20<sup>th</sup> century paint finishes. The earlier finishes found on the room's walls were likely calcimine based paints removed at an early date to permit better adhesion of subsequent paint finishes or wallpaper. For rehabilitation purposes, it is recommended that the walls of this room either be papered with an off-the-shelf reproduction wallpaper appropriate to the periods of significance or be painted with a color complimentary to the cream-yellow woodwork found in the room during the period of significance. One such color would be the same cream-white color found in the Entry / Stair Hall from the historic period which matches Munsell color 5Y 9/1 (Benjamin Moore color 2154-70).

### **C. Ceiling and Ceiling Molding**

Analysis of the paint samples removed from the above referenced elements indicate that the ceiling which is composed of Gypsum wallboard and the cornice molding were likely installed in the 1970s. For rehabilitation purposes, it is recommended that (1) the molding be removed and (2) the ceiling be painted white matching Munsell color N 9.25/ (Benjamin Moore color "Ready Mix White"). (See footnote 1 at page 12 of this report)

### **D. Door**

Analysis of the paint samples removed from the inside surface of the door associated with this room shows that the finish for this element from the home's historic period matched the historic finish found on the exterior side of the door which when closed faces the west parlor. This finish consists of the door's panels being painted a red-brown color matching Munsell color 7.5R 4/6 (Benjamin Moore color 2005-10), and the styles and rails of the door being painted a light golden color slightly lighter than Munsell color 2.5Y 7/6 (Benjamin Moore color 2152-40). On top of the red-brown and light-golden colored paints a varnish finish was applied.

### **E. Floor**

Analysis of paint sample P089 removed from a portion of the room's floor indicates that this element of the room likely retained its original gold colored paint finish throughout the home's historic period. This gold colored finish matches Munsell color 10YR 6/6 (Benjamin Moore color 2165-30).

## Entry / Stair Hall

### Data

#### A. Location of Removed Paint Samples

19 paint samples were removed from the first floor level **Entry / Stair Hall** of the Thomas Cole House at the following locations:

Sample No.	Location Description
THCO -01-P217	West wall at stair
THCO -01-P218	Stair tread
THCO -01-P219	Stair riser
THCO -01-P220	Baseboard at stair (west wall)
THCO -01-P221	Door trim at west parlor (southern doorway)
THCO -01-P222	Coat hook bracket on east wall
THCO -01-P223	Underside of stair at north wall
THCO -01-P224	Wall surface at north wall
THCO -01-P225	Door rail at north room entrance
THCO -01-P226	Door panel at north room entrance
THCO -01-P227	Face stringer of stair
THCO -01-P228	Front door panel
THCO -01-P229	Front door rail
THCO -01-P230	Panel beneath sidelight at front door architrave
THCO -01-P231	Panel above sidelight at front door architrave
THCO -01-P232	Trim at front door architrave
THCO -01-P233	Ceiling surface of stair above basement stair
THCO -01-P234	West wall at 1 <sup>st</sup> floor level at stair to basement
THCO -01-P245	Floor

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the **Entry / Stair Hall** of the Thomas Cole House:

Sample	P217, 224, 234	P218	P219	P220,221,222, 230,231,232	P223, 233	P225, 226, 228, 229	P227	P245
Substrate	Plaster	Wood	Wood	Wood	Plaster	Wood	Wood	Wood
						Off-White (P)		
	Lt. Yellow (P)	Ylw-Gold (P)	Off-White (P)	Off-White (P)	Off-White (P)	Yellow (Base)	Off-White (P)	Ylw-Gold (P)
c.1815	Yellow	Gold	Dk.Blue-Gray/ varnish	White/glaze	White	Green/varnish	White/glaze	Gold / Varnish
c.1828	Cr.Wht/glaze	Off-White	Off-Wht/glaze	Off-Wht/glaze	White			
c.1841	Cream-White	Lt. Beige-tan	Cream-Yellow	Cream-Yellow	White	Lt. Beige-tan	Cream-Yellow	↓
	Glaze		Glaze	Glaze				
				Crm. Wht (P)				
c.1854	Off-Wht/glaze	Golden-beige/ varnish		Cream-Yellow	Off-White	Lt. Pink-beige / varnish	Cream-Yellow	
c.1867	White/glaze	Gray	White/glaze	White/glaze	White			Gray
				White (P)				
c. 1880	Cream/glaze	Blue-gray	Off-White.	Off White.	Cream-White	Off-White.	Off White.	Blue-gray
c.1893	Cream/glaze	Lt. Beige-tan	Lt. Beige-tan	Lt. Beige-tan	Cream-Yellow	Lt. Beige-tan		Lt. Beige-tan
	Off-White (P)							
c.1906	Violet	Off-White	Cream	Cream		Cream	Cream	Lt. Beige-tan
c.1919	Pinkish-beige	Off-White	Cream	Cream	Off-White	Cream	Cream	
c.1932	Beige	Cream-Wht	Off-White	Off-White		Off-White	Off-White	Lt. Beige-tan
	Salmon (P)							
c.1945	Dk. Salmon	Cream-Wht	White	White	Off-White	Lt.Green/Crm.	White	Dk. Beige-tan
	Salmon (P)							
c.1950s	Salmon	Off-White	Off-White	Cream-Yellow	Off-White	Cream-White	Cream-Yellow	Lt. Beige-tan
c.1960s	Blue	Cream-White	Cream-White	Cream-White	White	Cream-White	Cream-White	
c.1970s	Beige White	White	White	White	Off-White	White	White	

The dating of the finishes for this room is based on the fact that 14 finishes were found in most of the paint samples removed from the elements in this room. This indicates that the room was painted on average every 13 years. "(P)" represents a primer layer

## Conclusions (Entry / Stair Hall)

### A. Baseboards, Door Trim, Front Door Architrave, Wall Mounted Coat Hook Board, Face Stringer of Stair, Stair Risers

Analysis of the paint samples removed from the above referenced elements indicate that all of these items were painted a cream-yellow color falling between Munsell colors 5Y 9/1 and 5Y 9/2 (5Y 9/1.5), and matching Benjamin Moore color 2151-60. A clear glaze also appears to have been applied over this finish giving the woodwork a glossy finish. \_

### B. Wall Surfaces

Analysis of samples P217, P224, and P234 removed from the plaster wall surfaces of the Entry / Stair Hall indicate that walls in this space were painted a cream-white color during the building's historic period matching Munsell color 5Y9/1 (Benjamin Moore color 2154-70). Here too, a clear glaze coat is seen over the historic paint finish.

### C. Ceiling

Analysis of paint samples P223 and P233 removed from the ceiling surfaces of the room indicate that these plastered surfaces were painted white during the home's period of significance matching Munsell color N 9.25/ (Benjamin Moore color "Ready Mix White").

### D. Doors

Analysis of the paint samples removed from the door to the room north of the Entry / Stair Hall and the inside surface of the Home's front door indicate that both of these elements were painted a light beige-tan color during the home's period of significance. This finish which falls between Munsell colors 10YR 7/4 and 10YR 7/6 (and matches Benjamin Moore color 2162-40), is also covered with a varnish coat.

### E. Floor

Analysis of the paint sample removed from the floor surface of the room indicates that this element of the space had the original gold colored paint and varnish finish still applied to it during the home's period of significance. This gold colored paint matches Munsell color 10 YR 6/6 (Benjamin Moore color 2165-30). The second finish found on the room's floors was a gray colored paint that matched the 5<sup>th</sup> finish found on the stair treads and was likely not applied to these elements until the second half of the 19<sup>th</sup> century.

F. Stair Treads

Analysis of paint sample P218 removed from one of the stair treads associated with the Entry / Stair Hall indicates that the treads of the home's main stair were painted the same light beige-tan color found on the doors of the room during the historic period (between Munsell colors 10YR 7/4 and 10YR 7/6; Benjamin Moore color 2162-40). However, unlike the doors associated with this space, the paint sample removed from the stair tread showed no evidence of varnish associated with the historic finish.

## Room North of Entry / Stair Hall

### Data

#### A. Location of Removed Paint Samples

10 paint samples were removed from the **Room North of the Entry / Stair Hall** of the Thomas Cole House at the following locations:

Sample No.	Location Description
THCO -01-P100	Floor
THCO -01-P101	Baseboard
THCO -01-P102	Window trim
THCO -01-P103	Window sash
THCO -01-P104	Door panel (from door to entry hall)
THCO -01-P105	Door rail (from door to entry hall)
THCO -01-P106	Coat hook bracket on east wall
THCO -01-P107	Wall surface
THCO -01-P108	Ceiling molding (modern)
THCO -01-P109	Ceiling (modern)

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the **Room North of the Entry / Stair Hall** of the Thomas Cole House:

Sample	P100	P101-103	P104	P105	P106	P107	P108	P109
Substrate	Wood	Wood	Wood	Wood	Wood		Wood	Gypsum
			Off-White (P)	Off-White (P)				
	Ylw-Gold (P)	Off-White (P)	Gold	Gold	Off-White (P)			
c.1815	Gold	Cream-White	Red-Brown / Varnish	Varnish	Cream-White			
c.1841	Lt. Gray		Off-White (P)	Off-White (P)				
	Shellac	Lt. Cream-Ylw	Lt. Cream-Ylw	Lt. Beige-Tan	Lt. Cream-Ylw			
		Off-White (P)			Off-White (P)	Off-White (P)		
3 <sup>rd</sup> Finish	Gold-Tan	Off-White	Off-White	Off-White	Off-White	Red Glaze		
						Lt. Yellow (P)		
4 <sup>th</sup> Finish	Beige-Brown	Cream-White	Cream-White	Cream-White	Cream-White	Lt. Yellow		
5 <sup>th</sup> Finish	Beige	Cream-White	Cream-White	Cream-White	Cream-White	Yellow		
						White (P)		
6 <sup>th</sup> Finish	Beige	Cream-White	Cream-White	Cream-White	Green	Green		
7 <sup>th</sup> Finish	Beige	White	White	White	Blue	Blue		
		Crm-White (P)						
8 <sup>th</sup> Finish	Beige	Lt. Green	Lt. Green	Lt. Green	Yellow	Yellow		
			Off-White (P)	Off-White (P)				
9 <sup>th</sup> Finish	Beige-Tan	Cream-White	Cream-White	Cream-White	Biege	Biege	Off-White (P)	Skim-Coat (P)
c.1970's		Off-White	Off-White	Off-White	Beige-White	Beige-White	Off-White	Off-White

"(P)" represents a primer layer

## **Conclusions (Room North of the Entry / Stair Hall)**

### **A. Baseboards, Trim, Window Sash, Coat Hook Bracket**

Analysis of the paint samples removed from the above listed items show that all of these architectural elements were painted a light cream-yellow color during the home's period of significance. This cream-yellow paint matches Munsell color 5Y 9/1.5 (Benjamin Moore color 2151-60) and has a semi-gloss like appearance.

### **B. Wall Surfaces**

Ten paint finishes were found in the paint samples removed from the room's wooden trim elements, however, only eight finishes were found in the sample removed from the plaster wall surface. The earliest finish found in the wall sample is a red-colored glaze over an off-white colored paint. This finish however is believed to post-date the home's historic period. In all likelihood the earliest finishes found on the room's walls were either wallpaper or calcimine-based paints that were removed prior to this red-glazed finish being applied. For rehabilitation purposes, it is recommended that the walls of this room be finished with an off-the-shelf reproduction wallpaper appropriate to the historic period or a paint complimentary to the known historic finishes found on the woodwork throughout the room.

### **C. Ceiling, Ceiling Molding**

Analysis of the paint samples removed from the above reference elements indicate that the ceiling which is composed of Gypsum wallboard and the cornice molding were likely installed in the 1970s. For rehabilitation purposes, it is recommended that (1) the molding be removed and (2) the ceiling be painted white matching Munsell color N 9.25/ (Benjamin Moore color "Ready Mix White"). (See footnote 1 at page 12 of this report)

### **D. Doors**

Analysis of the paint samples removed from a panel and rail of the inside surface of the door leading to the Entry / Stair Hall indicate that the doors associated with this room had a two-color paint scheme applied to their surfaces during the home's period of significance. Sample P104 removed from a panel of the door indicates that this portion of the door's interior surface was painted with the same light cream-yellow colored paint found on the room's trim work at that time matching Munsell color 5Y 9/1.5 (Benjamin Moore color 2151-60). The rails and styles of the door, however, were finished with the same light beige-tan colored paint found on the exterior side of the door (Entry / Stair Hall side of the door) which falls between Munsell colors 10YR 7/4 and 10YR 7/6 (Benjamin Moore color 2162-40).

### **E. Floor**

Analysis of paint sample P100 removed from the floor of the room shows that this element of the room was finished with a light gray colored paint matching Munsell color N 8/ (Benjamin Moore color 2111-60) and a coat of shellac during the home's period of significance.

## East Parlor

### Data

#### A. Location of Removed Paint Samples

10 paint samples were removed from the **East Parlor** of the Thomas Cole House at the following locations:

Sample No.	Location Description
THCO -01-P078	Floor-removed from northwest corner of room
THCO -01-P079	Baseboard at north wall
THCO -01-P080	Window trim from north window
THCO -01-P081	Window trim (corner block) from north window
THCO -01-P082	Window trim (center block above window)
THCO -01-P083	Window sash from north window
THCO -01-P084	Mantle
THCO -01-P085	Wall surface (north wall)
THCO -01-P086	Ceiling
THCO -01-P087	Wall surface (south wall)

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the **East Parlor** of the Thomas Cole House:

Sample	P078	P079	P080, 084	P081-082	P083	P085, 087	P086
Substrate	Wood	Wood	Wood	Wood	Wood	Plaster	Plaster
	Cream(P)	Off Wht (P)			White (P)	Glue Size (P)	Off-White (P)
c.1815	Beige	Cream			Cream-Wht	(Wallpaper ?)	Cream-White
c.1841	Dark Beige-Brown	Lt. Green-Ylw			Cream-White	Lt. Green (P)	Cream-White
						Green	
		White (P)					
3 <sup>rd</sup> finish		Cream-Wht				Beige	
				Off-White (P)			
4 <sup>th</sup> finish	Beige	Cream		Cream	Cream	Off-White	Cream-White
5 <sup>th</sup> finish		Cream		Cream	Cream	Cream	Cream
6 <sup>th</sup> finish		Off-White	Off-White	Off-White	Off-White	Cream	
7 <sup>th</sup> finish	Brown Pigmented Varnish	White	White	White	White	Yellow	White
8 <sup>th</sup> finish		Cream-Wht	Cream-Wht	Cream-Wht	Cream-Wht	Blue	
9 <sup>th</sup> finish		Cream-Wht	Cream-Wht	Cream-Wht		Green	
c.1970s	↓	White	White	White	White	Beige	Off-White

"(P)" represents a primer layer

## Conclusions (East Parlor)

### A. Walls

Analysis of samples P085 and P087, respectively removed from the room's north and south walls, indicate that the walls of the East Parlor were in all likelihood originally papered as a beige colored size is evident on the surface of the plaster substrate. However, based on the numbers of finishes found on the other elements sampled in the room, and a comparison of their paint stratigraphies, the second finish found on the walls appears to date to the home's period of significance. This finish was a vibrant green colored paint matching Munsell color 2.5G 7/4 (Benjamin Moore color 2034-40) and appears to have had what we would today call a semi-gloss finish giving the paint a somewhat reflective quality.

### B. Baseboards (Wood Trim)

Sample P079 removed from the room's baseboard supports the premise that the walls were painted green during the period of significance. This sample appears to contain all ten finishes applied to the wood trim in the room since the time of the building's construction in 1815-16, only one more finish than was found in the samples removed from the room's walls. This supports the premise that the room was originally wall papered, and that the green finish found above the size layer in the wall samples was the room's second, and likely historic finish.

Additionally, the second finish found in the sample removed from the room's baseboard appears to have been a light green-yellow paint matching Munsell color 2.5GY 8/2 (Benjamin Moore color 2145-40) and having semi-translucent qualities. This finish would in all likelihood have also been found on the rest of the room's original wooden trim elements including the window and door trim, and possibly the original fireplace mantle. However, the original mantle may also have been painted a different, but complementary color.

Paint analysis of sample P084 removed from the room's current mantle supports oral history that this element was installed in the early part of the 20<sup>th</sup> century.<sup>3</sup> Analysis of sample P080 removed from the reeded section of the room's window trim shows the same paint stratigraphy as the room's mantle, indicating that those elements containing the reed motif were also likely installed in the first part of the 20<sup>th</sup> century. Samples P081 and P082 removed from the Greek revival window trim corner and center blocks contain two earlier finishes than is found on the reeded sections of the trim indicating that portions of the existing window trim likely date to the middle of the 19<sup>th</sup> century.

### C. Window Sashes

Paint sample P083 removed from one of the room's window sashes indicate that this architectural element of the room has always been painted some variation of the color white or cream. The second finish found in the sample, which is believed to date to the home's historic period, is a cream-white colored paint falling between Munsell colors 5Y 9/1 and 5Y 9/2 (Benjamin Moore color "Bone White" Interior Ready-Mixed).

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<sup>3</sup> Dr. Raymond Beecher, Chairman of the Board, Greene County Historical Society, and noted Thomas Cole House historian, (personal interview, July 6, 2000).

D. Ceiling

Like the room's window sashes, paint sample P086 indicates that the ceiling has also only been painted a variation of the color white or cream during its history. Like the sash sample, the second finish found in the ceiling sample is cream-white in color falling between Munsell colors 5Y 9/1 and 5Y 9/2 (Benjamin Moore color "Bone White" Interior Ready-Mixed), and is believed to date to the house's historic period.

E. Floor

Analysis of the paint sample removed from the East Parlor's floor indicates that this element of the room was originally finished with a beige colored paint. Later the floor was repainted with a dark beige-brown colored paint matching Munsell color 2.5Y 5/2 (Benjamin Moore color AC-3). It is this dark beige-brown colored paint that is believed to have existed at the time of Thomas Cole's occupancy of the home (1836-1848).

## West Bedroom Chamber

### Data

#### A. Location of Removed Paint Samples

10 paint samples were removed from the second floor level **West Bedroom Chamber** of the Thomas Cole House at the following locations:

<b>Sample No.</b>	<b>Location Description</b>
THCO -01-P127	Floor
THCO -01-P128	Baseboard
THCO -01-P129	Window trim
THCO -01-P130	Window sash
THCO -01-P131	Door panel (east door)
THCO -01-P132	Door rail (east door)
THCO -01-P133	Wall surface
THCO -01-P134	Ceiling
THCO -01-P135	Mantle
THCO -01-P136	Cornice of closet in northwest corner of room

**B. Sample Chromochronologies**

Under microscopic examination the following paint layers were identified for the given samples removed from the **West Bedroom Chamber** of the Thomas Cole House:

Sample	P127	P128-132, 135	P133	P134	P136
Substrate	Wood	Wood	Plaster	Plaster	Wood
		Off-White (P)			
c.1815	Red-Brown	Cream-White			
c.1841	↓	Off-White	(Probably wallpaper or Calcimine paint that has been removed)		
					Off White (P)
3 <sup>rd</sup> Finish	Charcoal Gray	Cream-White			Cream-White
4 <sup>th</sup> Finish	Beige	Off-White			Off-White
			White (P)	White (P)	
5 <sup>th</sup> Finish		Cream-White	Beige	Beige	Cream-White
			White (P)		
6 <sup>th</sup> Finish	Beige-Brown	White	Cream	Off-White	White
7 <sup>th</sup> Finish	Beige	Off-White	Lt.Blue		
8 <sup>th</sup> Finish		Off-White	Red	Cream-White	Cream
9 <sup>th</sup> Finish	Beige-Tan	Cream-White	White		Lt. Blue
c.1970's	Red-Brown	Off-White	Green	Off-White	Green

"(P)" represents a primer layer

**Conclusions (West Bedroom Chamber)**

**A. Baseboards, Window and Door Trim, Window Sash, Doors, Mantle**

Analysis of the paint samples removed from the room's above referenced elements indicate that all of these items were finished with an off-white colored paint matching Munsell color N 9/ (Benjamin Moore color "Bone White") during the home's historic period. Of note, the mantle which appears to have been modified in the early part of the 20<sup>th</sup> century, is believed to be in its original location.

**B. Wall and Ceiling Surfaces**

Analysis of samples P133 and P134 removed from the room's wall and ceiling surfaces indicate that these elements were likely painted with calcimine paints that have since been removed or papered during the home's period of significance. This premise is based on the fact that all of the woodwork in the room (except for the floors) contain ten painted finishes while the wall and ceiling surface have only six and four finishes remaining, respectively. For rehabilitation purposes, it is recommended that the walls of this room either be painted a color complimentary to the off-white colored woodwork found in the room during the period of significance, or be papered with an of-the-shelf reproduction wallpaper appropriate to the historic period. Likewise,

it is recommended that the ceiling of the room be painted white matching Munsell color N 9.25/ (Benjamin Moore color "Ready Mix White"). (See footnote 1 at page 12 of this report)

C. Closet in Northwest Corner of Room

Analysis of paint sample P136 removed from the cornice of the built in closet located in the northwest corner of the room indicates that this architectural element of the room was likely added shortly after the home's period of significance. However since an exact date of construction cannot be determined at this time it is strongly recommended that this element be retained and painted the same color selected for the room's walls.

D. Floor

Analysis of the paint sample removed from the room's floor reveals that this element of the room likely retained its original red-brown colored paint finish throughout the home's period of significance. This red-brown paint finish matches Munsell color 7.5R 4/6 (Benjamin Moore color 2005-10).

## Room North of West Bedroom Chamber

### Data

#### A. Location of Removed Paint Samples

8 paint samples were removed from the **Room located North of the West Bedroom Chamber** of the Thomas Cole House at the following locations:

Sample No.	Location Description
THCO -01-P137	Floor (sample removed from inside closet)
THCO -01-P138	Baseboard
THCO -01-P139	Window trim
THCO -01-P140	Window sash
THCO -01-P141	Door
THCO -01-P142	Wall surface
THCO -01-P143	Ceiling molding
THCO -01-P144	Ceiling

**B. Sample Chromochronologies**

Under microscopic examination the following paint layers were identified for the given samples removed from the **Room located North of the West Bedroom Chamber** of the Thomas Cole House:

Sample	P137	P138-141	P142	P143	P144
Substrate	Wood	Wood	Plaster	Wood	Plaster
	Ylw-Gold (P)	Off-White (P)			
c.1815	Gold	Cream-White			
c.1841	↓	Off-White			
			White (P)		
3 <sup>rd</sup> Finish	Gold-Beige	Off-White	White*		
			Size (P)	Off-White (P)	Size (P)
4 <sup>th</sup> Finish	Beige	Off-White	Biege	Off-White	Off-White
5 <sup>th</sup> Finish		Off-White	Cream Yellow	Cream Yellow	Cream-Yellow
				White (P)	
6 <sup>th</sup> Finish	Beige	Off-White	Mint-Green	Mint-Green	Off-White
7 <sup>th</sup> Finish		Yellow	Green-Yellow	Yellow	Yellow
8 <sup>th</sup> Finish	Beige-Tan		Blue		
c.1970's		White	Pink-Beige	White	Off-White

\*White paint gave positive reaction when hydrochloric acid (HCl) was applied indicating that the finish is lime-based finish, likely calcimine paint.                      "(P)" represents a primer layer

**Conclusions (Room North of West Bedroom Chamber)**

**A. Baseboards, Window and Door Trim, Window Sash, Door**

Analysis of the paint samples removed from the room's above referenced elements indicate that these items were finished with an off-white colored paint matching Munsell color N 9/ (Benjamin Moore color "Bone White") during the home's period of significance.

**B. Wall Surfaces**

Analysis of paint sample P142 removed from the room's south wall indicates that calcimine paints were used on the plaster surfaces of the home at an early date. Many of these finishes have since been removed from their plaster substrates leaving limited physical evidence of the home's wall and ceiling colors from the historic era. Unfortunately, the earliest finish found in the sample removed from the wall in this room is believed to post date the home's historic period. For rehabilitation purposes it is recommended that a paint complimentary to the off-white colored trim found in the room from the home's period of significance be selected.

C. Ceiling and Ceiling Molding

As was the case with the room's wall surfaces, the earliest existing paint finish found in the sample removed from the room's ceiling appears to post date the home's historic period. For rehabilitation purposes, the ceiling molding which likely dates to the early 20<sup>th</sup> century should be removed from the ceiling, labeled and saved, and the ceiling should be painted white matching Munsell color N 9.25/ (Benjamin Moore color "Ready Mix White) (See footnote 1 at page 12).

D. Floor

Analysis of paint sample P137 removed from the room's wood floor indicates that the original gold colored paint applied to this element of the room was likely retained through the home's historic period. . This gold colored paint matches Munsell color 10YR 6/6 (Benjamin Moore color 2165-30).

## 2<sup>nd</sup> Story Stair Hall

### Data

#### A. Location of Removed Paint Samples

13 paint samples were removed from the 2<sup>nd</sup> Story Stair Hall of the Thomas Cole House at the following locations:

Sample No.	Location Description
THCO -01-P204	Baseboard (floor covered with wall-to-wall carpet and inaccessible)
THCO -01-P205	Door trim at west bedroom chamber
THCO -01-P206	Door rail at west bedroom chamber
THCO -01-P207	Door panel at west bedroom chamber
THCO -01-P208	Window sash
THCO -01-P209	Window trim
THCO -01-P210	Wall surface at east wall
THCO -01-P211	Ceiling
THCO -01-P212	Wall surface at north wall (west of doorway to north room)
THCO -01-P213	Underside of stair to attic
THCO -01-P214	Newel drop at attic stair landing
THCO -01-P215	Trim board at east side of landing between 1 <sup>st</sup> and 2 <sup>nd</sup> floor levels where iron stair hanger is suspended from
THCO -01-P216	Face stringer from landing to 2 <sup>nd</sup> floor level

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the 2<sup>nd</sup> Story Stair Hall of the Thomas Cole House:

Sample	P204, 205, 209	P206	P207	P208	P210, P212	P211, 213	P214	P215	P216
Substrate	Wood	Wood	Wood	Wood	Plaster	Plaster	Wood	Wood	Wood
	Off-White (P)	Off-White (P)	Off-White (P)	Off-White (P)		Off-White (P)			Off-White (P)
c.1815	White/glaze	White/glaze	White/glaze	White/glaze		White	Varnish		White
c.1841	Off-White	Cream-White	Cream-White	Off-White	(Crm.-Wht?)	White	↓		Cream-Ylw
3 <sup>rd</sup> Finish	Off-White	Cream-White	Cream-White			Off-White			Off-White
4 <sup>th</sup> Finish	Off-White	Cream-Yellow	Cream-Yellow	Off-White		Cream-Yellow	Off-White		Off-White
5 <sup>th</sup> Finish	Cream-White	Off-White	Off-White	Cream-White		Off-White	Cream	Cream	Cream
6 <sup>th</sup> Finish	White	White	White	White	Beige	Off-White	Off-White	Off-White	Off-White
					Salmon (P)				
7 <sup>th</sup> Finish	Cream	Off-White	Off-White		Dk. Salmon		White		White
8 <sup>th</sup> Finish	Off-White	Off-White	Off-White	Off-White	Salmon	Off-White	Off-White	Cream-Yellow	Cream-Yellow
9 <sup>th</sup> Finish	White	White	White	White	Blue	White	Off-White	Cream-White	Cream-White
c.1970s	Off-White	White	Green	Off-White	Beige-White	Off-White	Off-White	White	White

"(P)" represents a primer layer

## **Conclusions (2<sup>nd</sup> Story Stair Hall)**

### **A. Baseboards, Window and Door Trim, Window Sash**

Paint analysis of the room's above referenced elements indicate that these items were finished with an off-white colored paint matching Munsell color N 9.0/ (Benjamin Moore color "Bone White") during the home's period of significance.

### **B. Wall Surfaces**

Paint samples P210 and P212 removed from the wall surfaces of the 2<sup>nd</sup> Story Stair Hall are incomplete. The earliest finish found on the walls in this space is a beige colored finish believed to date to the turn of the 20<sup>th</sup> century. The earlier finishes associated with the walls in this space were likely removed for one of two reasons. Either the walls of the space prior to the beige finish were papered for an unknown period of time or the early paint finishes used on the walls in this space were calcimine type paints that were later removed. Evidence of such early calcimine paints were found on the wall surfaces of the attic stair as well as the room north of the West Bedroom Chamber leading one to believe that the walls in this space were like wise finished during at least part of the 19<sup>th</sup> century. Because no evidence of the historic finish could be found in the paint samples removed from the walls of this space, it is recommended that the walls of this 2<sup>nd</sup> Story Stair Hall be painted to match the historic finishes found on the walls of the Entry / Stair Hall and the Attic Stairway which was cream-white in color and matched Munsell color 5Y 9/1 (Benjamin Moore color 2154-70).

### **C. Ceiling and Underside of Stair**

Analysis of paint samples P211 and P213 removed from the above referenced elements indicate that these surfaces of the 2<sup>nd</sup> Story Stair Hall were painted white during the home's period of significance matching Munsell Color N 9.25/ (Benjamin Moore color "Ready Mix White").

### **D. Doors**

Paint samples P206 and P207 removed from the rail and panel of the door to the West Bedroom Chamber show the doors surfaces associated with the 2<sup>nd</sup> Story Stair Hall were painted cream-white matching Munsell color 5Y 9/1 (Benjamin Moore color 2154-70) at the time of the home's period of significance.

### **E. Face Stringer of Stair**

The face stringer of the stair at the second floor level which is a continuation of the stringer from the first floor level was painted cream-yellow during the historic period matching Munsell color 5Y 9/1.5 (Benjamin Moore color 2151-60).

## Room North of 2<sup>nd</sup> Story Stair Hall

### Data

#### A. Location of Removed Paint Samples

8 paint samples were removed from the **Room located North of the 2<sup>nd</sup> Story Stair Hall** of the Thomas Cole House at the following locations:

<b>Sample No.</b>	<b>Location Description</b>
THCO -01-P119	Floor
THCO -01-P120	Baseboard
THCO -01-P121	Window trim
THCO -01-P122	Window sash
THCO -01-P123	Door panel
THCO -01-P124	Door rail
THCO -01-P125	Wall surface
THCO -01-P126	Ceiling

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the **Room located North of the 2<sup>nd</sup> Story Stair Hall** of the Thomas Cole House:

Sample	P119	P120-124	P125	P126
Substrate	Wood	Wood	Plaster	Plaster
	Ylw-Gold (P)	Off-White (P)		Off-White (P)
c.1815	Gold	Cream-White	(Probably wallpapered or calcimine paint that has been removed)	White
c.1841	↓	Off-White	↓	White
			Size (P)	
3 <sup>rd</sup> Finish	Beige	Cream-White	Yellow	Cream-White
4 <sup>th</sup> Finish	Dark-Beige	Off-White	Cream-Yellow	Cream-White
5 <sup>th</sup> Finish		Cream-White	Off-White	Cream-White
6 <sup>th</sup> Finish	Beige	Off-White	Cream-White	Off-White
7 <sup>th</sup> Finish	Beige-Brown	Cream-White	Pink-Beige	Cream-White
8 <sup>th</sup> Finish	Beige-Tan	Off-White	Gold-Yellow	White
c.1970's		White	Pink-Beige	Off-White

"(P)" represents a primer layer

**Conclusions (Room North of 2<sup>nd</sup> Story Stair Hall)**

A. Baseboards, Window and Door Trim, Window Sash, Door

Analysis of the paint samples removed from the room's above referenced elements indicate that these items were all finished with an off-white colored paint matching Munsell color N 9/ (Benjamin Moore color "Bone White") during the home's period of significance.

B. Wall Surfaces

Analysis of paint sample P125 removed from the room's south wall contained only seven paint finishes compared to nine found on the room's woodwork. It is likely that the two earliest finishes were either calcimine paints or wallpaper removed prior to the earliest existing finish being applied. Because the earliest wall finish seen in the removed paint sample is believed to post date the home's historic period, it is recommended that for rehabilitation purposes either (1) a paint color complimentary to the off-white colored woodwork found in the room from the home's period of significance be selected, or (2) an off-the-shelf reproduction wallpaper appropriate to the historic period be installed.

C. Ceiling

Analysis of paint sample P126 removed from the ceiling of the room indicates that at the time of Cole's residency (1836-1848), the ceiling in this room was painted white matching Munsell color N 9.25/ (Benjamin Moore color "Ready Mix White").

D. Floor

Analysis of paint sample P119 removed from the room's wood floor indicates that the original gold colored paint applied to this element of the room was likely retained through the home's historic period. This gold colored paint matches Munsell color 10YR 6/6 (Benjamin Moore color 2165-30).

## East Bedroom Chamber

### Data

#### A. Location of Removed Paint Samples

9 paint samples were removed from the second story **East Bedroom Chamber** of the Thomas Cole House at the following locations:

Sample No.	Location Description
THCO -01-P110	Floor
THCO -01-P111	Baseboard
THCO -01-P112	Window trim
THCO -01-P113	Window sash
THCO -01-P114	Door
THCO -01-P115	Wall surface
THCO -01-P116	Ceiling molding
THCO -01-P117	Ceiling
THCO -01-P118	Wood plug at former location of stove pipe riser in floor

## B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the **East Bedroom Chamber** of the Thomas Cole House:

Sample	P110	P111-114	P115	P116	P117	P118
Substrate	Wood	Wood	Plaster	Wood	Plaster	Wood
		Off-Wht (P)				
c.1815	Beige	Cream-White	(Probably wallpapered or calcimine paint that has been removed)		(Probably papered or calcimine paint that has been removed)	
c.1841	Lt. Gray Shellac	Off-White	↓		↓	
3 <sup>rd</sup> Finish		Off-White				
			Size (P)		Size (P)	
4 <sup>th</sup> Finish	Beige	Yellow	Off-White	Off-White	Off-White	Beige
		Off Wht (P)				
5 <sup>th</sup> Finish	Dark-Beige	Off White	Crn-White	Crn-White	Crn-White	Dark-Beige
6 <sup>th</sup> Finish	Beige	White	Lt. Grn-Ylw	Lt. Grn-Ylw	Crn-White	Beige
7 <sup>th</sup> Finish		Off-White	Mint Green	Mint Green	Crn-White	
8 <sup>th</sup> Finish	Beige-Tan	Crn-White	Lt. Yellow		Off-White	Beige-Tan
c.1970's	Red-Brown	White	Dark-Green	Off-White	Off-White	Red-Brown

"(P)" represents a primer layer

## Conclusions (East Bedroom Chamber)

### A. Baseboards, Window and Door Trim, Window Sash, Door

Analysis of the paint samples removed from the room's above referenced elements indicate that these items were finished with an off-white colored paint matching Munsell color N 9/ (Benjamin Moore color "Bone White") during the home's period of significance.

### B. Wall Surfaces

Analysis of paint sample P115 removed from the room's east wall contained only six paint finishes compared to nine found on the room's woodwork. It is likely that the three earliest finishes were either calcimine paints or wallpaper removed prior to the earliest existing finish being applied. Because the earliest wall finish seen in the removed paint sample post dates the home's historic period, it is recommended that for rehabilitation purposes either (1) a paint color complimentary to the off-white colored woodwork found in the room from the home's period of significance be selected; or (2) an off-the-shelf reproduction wallpaper appropriate to the home's period of significance be installed.

### C. Ceiling and Ceiling Molding

As was the case with the room's wall surfaces, the earliest existing paint finish found in the samples removed from the room's ceiling and ceiling molding appear to post-date the home's historic period. For rehabilitation purposes, the ceiling molding which likely dates to the early 20<sup>th</sup> century should be removed from the ceiling, labeled and saved, and the ceiling should be painted white matching Munsell color N 9.25/ (Benjamin Moore color "Ready Mix White") (See footnote 1 at page 12 of this report).

### D. Floor

Analysis of paint sample P110 removed from the floor of the room shows that this element of the room was finished with a light gray colored paint matching Munsell color N 8/ (Benjamin Moore color 2111-60) and a coat of shellac during the home's period of significance.

As an aside, analysis of paint sample P118 removed from the wooden plug found in the room's floor at the former flue location showed that the use of this flue for heating purposes was probably discontinued in the later part of the 19<sup>th</sup> century when the wooden plug was likely installed.

## Attic Stairway

### Data

#### A. Location of Removed Paint Samples

34 paint samples were removed from the **Attic Stairway** of the Thomas Cole House at the following locations:

Sample No.	Location Description
THCO -01-P170	Suspended drop at center of vaulted ceiling
THCO -01-P171	North cove of vaulted ceiling 4" out from ceiling apex
THCO -01-P172	" " 8" "
THCO -01-P173	" " 1' "
THCO -01-P174	" " 18" "
THCO -01-P175	" " 2' "
THCO -01-P176	" " 30" "
THCO -01-P177	" " 3' "
THCO -01-P178	" " 4' out from ceiling apex where vault begins
THCO -01-P179	North wall of attic stairway 6' above stair landing
THCO -01-P180	" " 5' "
THCO -01-P181	" " 4' "
THCO -01-P182	" " 3' "
THCO -01-P183	North wall of attic stairway at dark blue stripping
THCO -01-P184	North wall of attic stairway 2' above stair landing
THCO -01-P185	" " 1' "
THCO -01-P186	North wall of attic stairway directly above baseboard cap molding
THCO -01-P187	Baseboard of stairway at north wall landing
THCO -01-P188	Floor at stair landing
THCO -01-P189	Riser of stair to attic
THCO -01-P190	West wall of stairway at dark blue stripping
THCO -01-P191	" " 1' above dark blue stripping
THCO -01-P192	" " 2' "
THCO -01-P193	" " 3' "
THCO -01-P194	" " 1' beneath dark blue stripping
THCO -01-P195	" " 2' "
THCO -01-P196	Wood trim at 2 <sup>nd</sup> floor ceiling level at attic stairway
THCO -01-P197	Cap molding of wood trim at 2 <sup>nd</sup> floor ceiling level at attic stairway
THCO -01-P198	Wall surface 1' above cap molding of trim at 2 <sup>nd</sup> floor ceiling level (south wall of attic stairway)
THCO -01-P199	Wall surface 2' above cap molding of trim at 2 <sup>nd</sup> floor ceiling level (south wall of attic stairway)
THCO -01-P200	Wall surface 3' above cap molding of trim at 2 <sup>nd</sup> floor ceiling level (south wall of attic stairway)
THCO -01-P201	Stair baluster
THCO -01-P202	Tread of stair to attic
THCO -01-P203	Riser of stair to attic (same as P189)

B. Sample Chromochronologies

Under microscopic examination the following paint layers were identified for the given samples removed from the Attic Stairway of the Thomas Cole House:

Sample	P170, 171	P172-182, 184-186, 191-195, 198-200	P183, 190	P187, 196, 197	P188, 202	P189, 203	P201
Substrate	Metal/Plaster	Plaster	Plaster	Wood	Wood	Wood	Wood
		White (P)	White (P)	Off-Wht (P)	Ylw-Gold (P)	Off-White (P)	
c.1815		Yellow	Dark Blue *	White	Gold / Varnish	Off-White	Shellac
c.1841		Cream-White	Off-Wht (P) Cream-White	Off-White	↓	Cream-Ylw Glaze	Resin Coating
3 <sup>rd</sup> Finish		Off-White	Off-White	Off-White	Gray	Off-White	
4 <sup>th</sup> Finish		Off-White	Off-White	Off-White			
5 <sup>th</sup> Finish	Off-White	Off-White	Off-White	Cream-Wht	Blue-Gray		Resin Coating
6 <sup>th</sup> Finish	Violet	Violet	Violet	White	Lt.Beige-Tan	Lt.Beige-Tan	
						Off-Wht (P)	
7 <sup>th</sup> Finish	Beige	Beige	Beige	Cream-Wht		Cream	Resin Coating
	Salmon (P)	Salmon (P)	Salmon (P)		Off-Wht (P)		
8 <sup>th</sup> Finish	Dk. Salmon	Dk. Salmon	Dk. Salmon	Off-White	Off-White	Off-White	
9 <sup>th</sup> Finish	Salmon	Salmon	Salmon	White	Dk. Beige	Cream-Wht	Resin Coating
c.1960's	Blue	Blue	Blue	Off-White	Beige-Tan	White	

"(P)" represents a primer layer

## **Conclusions (Attic Stairway)**

### **A. Baseboards and Wood Trim**

Analysis of the paint samples P187, P196, and P197 indicate that the wood trim elements found associated with the Attic Stairway were finished with an off-white colored paint matching Munsell color N 9/ (Benjamin Moore color "Bone White") during the home's period of significance.

### **B. Wall and Ceiling Surfaces**

Analysis of samples removed from the wall and ceiling surfaces of the Attic Stairway indicate that these elements were painted cream-white during the building's historic period matching Munsell color 5Y 9/1 (Benjamin Moore color 2154-70). Paint sample P183 and P190 removed from areas of the walls where early striping was evident showed this original dark-blue colored paint to be a calcimine finish. However, by the time of the home's period of significance it appears that this striping was painted over with the c.1841 cream-white finish referenced above.

### **C. Metal Drop Found at Apex of Ceiling**

Analysis of paint samples removed from the metal drop in the center of the Attic Stairway ceiling and the adjacent plastered ceiling surface indicates that this element was likely installed in the later part of the 19<sup>th</sup> century, from which lighting apparatuses were presumably suspended.

### **D. Stair Risers and Treads**

Analysis of paint samples P189 and P203 show that the stair risers at the attic level were finished with the same cream-yellow color paint and glaze found on the risers at the first floor level of the stair during the home's historic period. This cream-yellow paint color falls between Munsell colors 5Y 9/1 and 5Y 9/2 (5Y 9/1.5), and matches Benjamin Moore color 2151-60.

The treads of the stair at the attic level and the stair landing, however, are believed to have retained their original c.1815 gold colored paint matching Munsell color 10YR 6/6 (Benjamin Moore color 2165-30) and varnish finish throughout the home's period of significance (1836-1848).

### **E. Stair Banister**

Analysis of paint samples removed from a stair baluster (P201) and the drop of the newel post associated with the attic stair landing (P214) indicate that the banister of the stair including the handrail was simply finished with a resin coating during the home's period of significance. Chemical analysis of the earliest coating found on the baluster indicates that the finish was a shellac-based resin.

II. Paint Analysis Data and Conclusions, Privy,  
Thomas Cole National Historic Site

## Exterior

### Data

#### A. Location of Removed Paint Samples

14 paint samples were removed from the **Exterior of the Privy** located at the Thomas Cole National Historic Site at the following locations:

THCO -03-P001	Siding (west wall)
THCO -03-P002	Corner trim board
THCO -03-P003	Oval window trim
THCO -03-P004	Oval window louvered window shutter
THCO -03-P005	Oval window sash
THCO -03-P006	Front door panel
THCO -03-P007	Front door rail
THCO -03-P008	Elliptical decorative panel above front door
THCO -03-P009	Cornice
THCO -03-P010	Gable pediment trim at roof line
THCO -03-P011	Elliptical panel in pediment (sample removed from area outside carved sunburst)
THCO -03-P012	Elliptical panel in pediment (sample removed from area inside carved sunburst)
THCO -03-P013	Rear (east) door
THCO -03-P014	Louvered shutter at rear (east) wall of privy

**B. Sample Chromochronologies**

Under microscopic examination the following paint layers were identified for the given samples removed from the **Exterior of the Privy** located at the Thomas Cole National Historic Site:

Sample	P001-003, 009, 010	P004, 008, 011-014	P005	P006, 007
Substrate	Wood	Wood	Wood	Wood
	Off-White (P)	Off-White (P)	Off-White (P)	Off-White (P)
c.1815	Lt. Yellow	Dk. Blue-Grn	Lt. Yellow	White
c.1841	Lt. Yellow	Dk. Green	↓	Lt. Beige-Tan
				Gray (P)
3 <sup>rd</sup> Finish	White	Dk. Blue-Grn		Gray
4 <sup>th</sup> Finishes	White	Dk. Green	White	Dk. Green
		Green (P)		Green (P)
5 <sup>th</sup> Finish	White	Dk. Green		Dk. Green
6 <sup>th</sup> Finish	White	Dk. Blue-Grn	↓	Dk. Blue-Grn
7 <sup>th</sup> Finish	White	Black		Black

"(P)" represents a primer layer

**Conclusions (Exterior of Privy)**

**A. Privy Siding and Trim Boards, Window Trim and Sash**

Analysis of the individual paint samples removed from the above listed elements of the Privy indicate that these elements were painted light-yellow during the estate's period of significance. Evidence that this light-yellow paint matching Munsell color 5Y 9/2 (Benjamin Moore color 2154-50) was the privy's predominant color during the period of significance is supported by Fredrick Church's color coded sketch of the estate executed in October of 1848.

**B. Louvered Window Shutters, Elliptical Panels Found Above Front Door and in Gable Pediment, East (Rear) Facing Door**

Paint samples removed from the elliptical panels found above the front door and in the pediment of the west facing gable indicate that these elements of the privy were painted dark olive green matching Munsell color 2.5 GY 3/2 (close to Benjamin Moore color 2142-10) during the estate's period of significance (1836-1848). Analysis of a paint samples removed from the building's shutters and east (rear) facing door showed that these elements were also painted dark olive green during the period of significance.

**C. West Facing (Front) Door**

Analysis of paint samples P006 and P007 removed from a panel and rail of the Privy's west facing front door indicates that this element of the building was painted a light-beige tan color during the period of significance. This light-beige-tan color falls between Munsell colors 10YR 7/4 and 10YR 7/6 (Benjamin Moore color 2162-40).

**III. Paint Analysis Data and Conclusions, "Old Studio,"**  
**Thomas Cole National Historic Site**

## Exterior

### Data

#### A. Location of Removed Paint Samples

11 paint samples were removed from the **Exterior of the "Old Studio"** located at the Thomas Cole National Historic Site at the following locations:

THCO -02-P001	Siding (north wall-west end of structure)
THCO -02-P002	Siding (east wall-south end of structure)
THCO -02-P003	Door trim at north wall
THCO -02-P004	Window trim at north wall (west end of structure)
THCO -02-P005	Exterior surface of bee hive oven on west wall of structure
THCO -02-P006	Double doors at south wall-west end of structure
THCO -02-P007	Wide board siding at rear (south) porch of structure
THCO -02-P008	Window sash (north wall, east window)
THCO -02-P009	East door
THCO -02-P010	Semi-pyramidal metal roof at building's east wall above projecting windows
THCO -02-P011	Corner trim board at east wall

**B. Sample Chromochronologies**

Under microscopic examination the following paint layers were identified for the given samples removed from the **Exterior of the "Old Studio"** located at the Thomas Cole National Historic Site:

Sample	P001, 002, 004, 005, 007, 011	P003	P006	P008, P010	P009
Substrate	Wood	Wood	Wood	Metal	Wood
					Off-White (P)
c.1815					Green-Yellow
c.1841					Lt. Beige-Tan
3 <sup>rd</sup> Finish					Pink-Beige
4 <sup>th</sup> Finish					Beige-Tan
5 <sup>th</sup> Finish					Cream-Wht
	Off-White (P)				Off-White (P)
6 <sup>th</sup> Finish (c. 1920)	White		Dark Green	Dark Green	Dark Green
7 <sup>th</sup> Finish	Cream-White		Green		Green
8 <sup>th</sup> Finish	White		Blue-Green	Blue-Green	Blue-Green
		White (P)			
c.1980's	White	White	Black	Black	Black

"(P)" represents a primer layer

**Conclusions (Exterior of the "Old Studio")**

**A. Siding, Trim Boards, Exterior Surface of Brick Oven**

Analysis of paint samples removed from the above referenced elements indicate that these elements were either unpainted prior to the 20<sup>th</sup> century or are replacement elements. In the case of the Studio's siding and trim boards, sample P003 shows us that at least some of these materials are replacements. The exterior side of the brick bee-hive oven found on the west wall of the building in all likelihood was simply unpainted during the 19<sup>th</sup> century.

An item of interest that should be mentioned here is that the color coded sketch of the estate executed by Fredrick Church in 1848 appears to show the west chimney of this studio having been painted the same light yellow color that was found on the Home and Privy at that time. If this is correct, then it is likely that the primary portions of this building were also painted the same light yellow color. Unfortunately, no evidence of this finish was found in any of the samples removed from the building leading the author to speculate that most of the exterior fabric found on the building today does not date to the estate's historic period (1836-1848). Sampling of less accessible areas of the building in the future may well prove this hypothesis.

B. Double Doors at South Side of Building, Window Sash, Semi-Pyramidal Metal Roofs at East Side of Building

It appears that the double doors found at the southeast corner of the Studio were either unpainted until the early part of the 20th century or are replacement doors dating to the early 20<sup>th</sup> century. The paint samples removed from the sash of the easternmost window of the north façade of the building and one of the metal semi-pyramidal roofs on the east side of the building have virtually the same paint chronologies as that found on the building's double doors. This indicates that these elements were also either originally unpainted, or more likely, they were added to the building in the early 20th century.

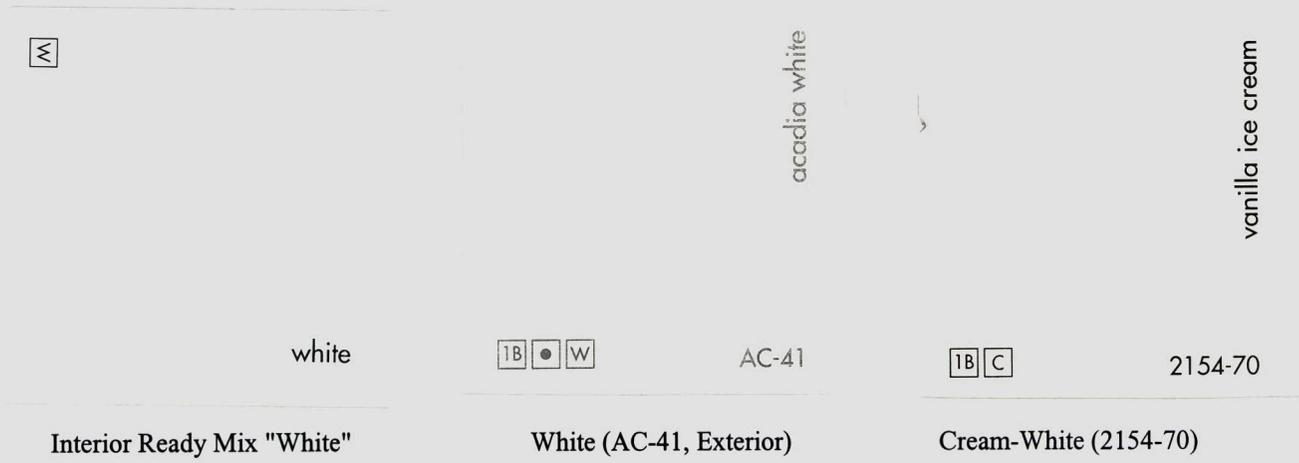
C. East Door

Analysis of paint sample P009 removed from the east door of the studio indicates that this element of the building was painted a light beige-tan color during the estate's period of significance (between Munsell colors 10YR 7/4 and 10YR 7/6; Benjamin Moore color 2162-40).

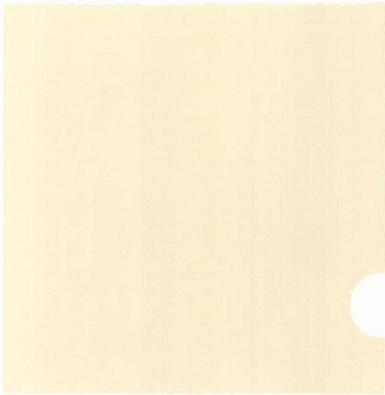
Appendix A

Benjamin Moore Color Samples

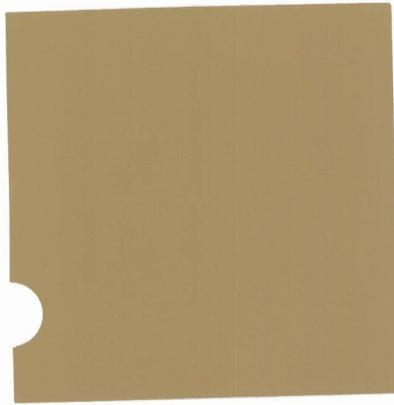
**Benjamin Moore Color Preview Samples  
for the  
Rehabilitation of the Thomas Cole Estate to the  
Period of Significance (1836-1848)**



**Benjamin Moore Color Preview Samples  
for the  
Rehabilitation of the Thomas Cole Estate to the  
Period of Significance (1836-1848)**



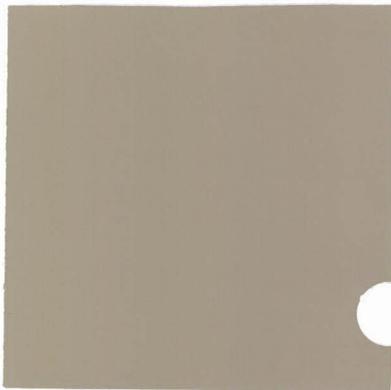
Light Beige (HC-26)



Beige Brown (HC-38)



Light Beige-Tan (2162-40)



Beige (AC-32)



Dark Beige-Brown (AC-3)

**Benjamin Moore Color Preview Samples  
for the  
Rehabilitation of the Thomas Cole Estate to the  
Period of Significance (1836-1848)**

linen sand



2151-60

Cream-Yellow (2151-60)



2154-50

Light Yellow (2154-50)



golden tan



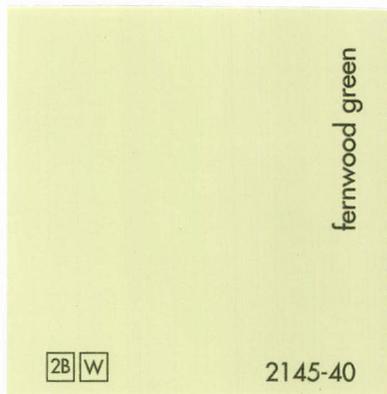
2152-40

Light Gold (2152-40)

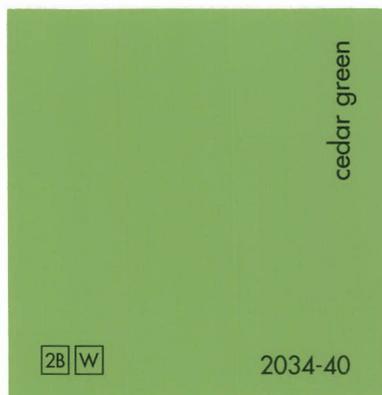


Gold (2165-30)

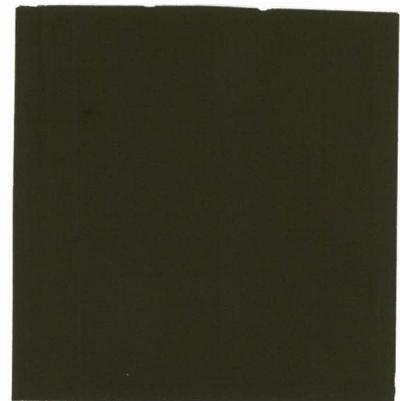
**Benjamin Moore Color Preview Samples  
for the  
Rehabilitation of the Thomas Cole Estate to the  
Period of Significance (1836-1848)**



Light Green-Yellow (2145-40)



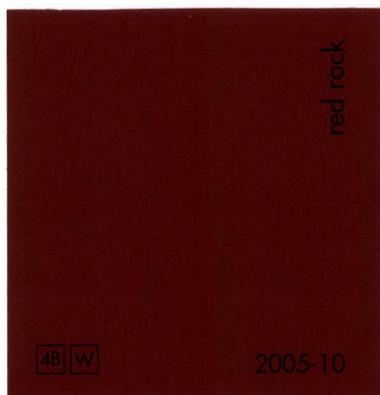
Green (2034-40)



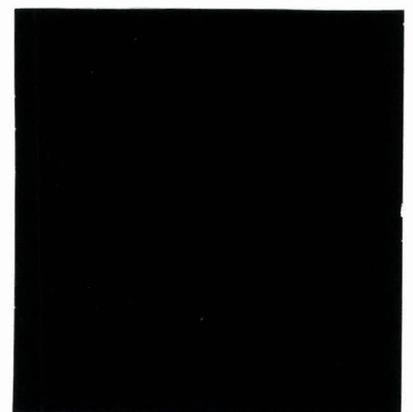
Dark (Olive) Green (2154-70)  
2142-10



Peach (HC-52)



Red-Brown (2005-10)



Black (2120-10)