SECTION 090398 - HISTORIC TREATMENT OF GILDING

Revise this Section by deleting and inserting text to meet Project-specific requirements.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

1. GENERAL
	* + 1. RELATED DOCUMENTS
				1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
			2. SUMMARY
				1. Section includes historic treatment of gilding on substrates in good condition.
				2. Related Requirements:

Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

Section 013591 "Historic Treatment Procedures" for general historic treatment requirements.

Section 090391 "Historic Treatment of Plain Painting" for substrate repair and for removing painting from and for plain painting on historic substrates if required before gilding.

Section 090394 "Historic Treatment of Decorative Painting" for graining, marbleizing, stenciling, and striping with paint on historic surfaces.

Section 090395 "Historic Treatment of Artistic Painting" for freehand painting and trompe l'oeil on historic surfaces.

* + - 1. ALLOWANCES

Retain products and Work in this Section that are covered by cash or quantity allowance. Do not include amounts. Insert descriptions of items in Part 2 or 3 to provide information affecting the cost of the Work that is not included under the allowance. Delete this article if all work is done by lump-sum price.

Quantity allowances require a Schedule of Quantity Allowances coordinated with a Unit-Price Schedule. See "Planning the Work" Article in the Evaluations for a discussion of the bidding method.

* + - * 1. Allowances for historic treatment of gilding are specified in Section 012100 "Allowances."

If using quantity allowances, retain three subparagraphs below or include similar language in Section 012100 "Allowances" to clarify how work covered by quantity allowances is to be authorized.

Perform historic treatment of gilding under quantity allowances and only as authorized. Authorized work includes [**work required by Drawings and Specifications and**] [**only**] work as directed in writing by Director’s Representative.

Retain first subparagraph below to suit Project.

Notify Director’s Representative [**weekly**] <**Insert time interval**> of extent of work performed that is attributable to quantity allowances.

Perform work that exceeds quantity allowances only as authorized by Change Orders.

Remaining paragraphs below are examples only; revise to suit Project. Insert additional allowances according to retained types of work and allowances established.

* + - * 1. Infill missing parts of gilding on stenciled waiting-room frieze as part of <**Insert name of allowance**>.
				2. Regild waiting-room ceiling ornamentation as part of <**Insert name of allowance**>.
				3. Regild <**Insert item description**> as part of <**Insert name of allowance**>.
			1. UNIT PRICES

Retain this article if Work specified in this Section is measured and paid for under the provisions of unit prices. Do not include amounts. Insert descriptions of items in Part 2 or 3 to provide information affecting the cost of the Work that is not included under the unit price.

Retain this article with "Allowances" Article for unit-price adjustments to quantity allowances.

Retain this article without "Allowances" Article if using a single Unit-Price Schedule with a column of estimated quantities on which bids are priced and evaluated.

* + - * 1. Work of this Section is affected by unit prices specified in Section 012200 "Cost Computations."

Unit prices apply to authorized work covered by [**quantity allowances**] [**estimated quantities**].

Unit prices apply to authorized additions to and deletions from Work as authorized by Change Orders.

* + - 1. DEFINITIONS

Retain terms that remain after this Section has been edited for a project.

* + - * 1. Gilding: Applying metallic leaf onto a surface[**including infilling highlights of decoratively or artistically painted areas**].
				2. Sizing: Adhesive used for gilding.
			1. PREINSTALLATION MEETINGS

Retain "Preinstallation Conference" paragraph below if Work of this Section is extensive or complex enough to justify a conference.

* + - * 1. Preinstallation Conference: Conduct conference at [**Project site**] <**Insert location**>.

If needed, insert list of conference participants not mentioned in Section 013591 "Historic Treatment Procedures."

Retain subparagraphs below if additional requirements are necessary; include information about conference.

Review minutes of Preliminary Historic Treatment Conference that pertain to historic treatment of gilding.

Review methods and procedures related to historic treatment of gilding including, but not limited to, the following:

Verify historic treatment specialist's personnel, equipment, and facilities needed to make progress and avoid delays.

Materials, material application, patterns, and sequencing.

Fire-protection plan.

Gilding historic treatment program.

Coordination with building occupants.

* + - 1. SEQUENCING AND SCHEDULING

Paragraph below is an example only; revise to suit Project. Insert other sequences for different areas of building or types of work if needed.

* + - * 1. Perform historic treatment of gilding in the following sequence, which includes work specified in this and other Sections:

Retain subparagraphs below and insert others if required; revise to suit Project. If adjacent materials are to be replaced, consider inserting them in sequence to ensure that restored and new materials are not damaged by the work.

Dismantle existing surface-mounted objects and hardware that overlie gilding work except items indicated to remain in place. Tag items with location identification and protect.

Verify that temporary protections have been installed.

Examine condition of surfaces to be gilded.

Repair and repaint or touchup existing, substrate and substrate paint to the degree required for a uniform, tightly adhered surface on which to apply gilding.

Apply gilding.

Reinstall dismantled surface-mounted objects and hardware unless otherwise indicated.

* + - 1. SUBMITTALS
				1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
				4. Product Data: For each type of product.

Include recommendations for product application and use.

Retain "Shop Drawings" paragraph below if required, such as for gilded basket-weave or Greek-key patterns and for infill highlighting on stenciled painting; revise to suit Project.

* + - * 1. Shop Drawings: For [**patterned work**] [**infill highlighting on stenciled painting**] <**Insert item**>. Show location and extent of work, whether new, replacement, or infill; and with materials noted. Include field-verified dimensions and the following:

Full-size patterns or design cartoons with complete dimensions and relation to existing work.

Provisions for design modifications as required for each location to decoratively trim or otherwise accommodate penetrations through gilded surfaces for items such as pipes and ductwork.

* + - * 1. Samples: For each type of gilding; [**in sizes indicated below**] [**minimum 6 inches long in least dimension, but not less than whole pattern**].

Include stepped Samples showing both sizing and metallic leaf. Resubmit until each required sheen, color, and texture is achieved.

Label each Sample for location and application.

Retain second option in subparagraph below if gilding is patterned.

Sample Size: [**12-by-24-inch** ] <**Insert dimensions**> Sample[**, but not less than 1-1/2 repeats,**] for each required pattern, on [**hardboard**] [**building surface where indicated**] <**Insert requirement**>.

* + - * 1. Gilding Historic Treatment Program: Submit before work begins.
			1. MAINTENANCE MATERIAL SUBMITTALS

Consider retaining this article only for work that may be subject to abuse in its location or for metallic leaf that is difficult to obtain.

* + - * 1. Furnish extra metallic leaf that matches product applied and that is packaged with protective covering for storage and identified with labels describing contents, including material, alloy composition, source, and location on building.

"Quantity" subparagraph below is an example only; revise to suit Project. A book contains 25 leaves; a pack contains 20 books or 500 leaves.

Quantity: Furnish Director’s Representative with an additional [**3**] [**5**] [**7**] <**Insert number**> percent, but not less than <**Insert number**> whole [**books**] [**packs**] of each metallic leaf applied.

* + - 1. QUALITY ASSURANCE

In "Historic Treatment Specialist Qualifications" paragraph below, insert additional, specific requirements for demonstrating unique skills of firm and personnel to suit Project. See Section 013591 "Historic Treatment Procedures" for general qualifications of historic treatment specialist.

* + - * 1. Historic Treatment Specialist Qualifications: A qualified historic gilding specialist with expertise in matching and infilling existing gilding. Experience only in painting work is insufficient experience for historic treatment of gilding.
				2. Gilding Historic Treatment Program: Prepare a written, detailed description of materials, methods, equipment, and sequence of operations to be used for historic treatment work, including protection of surrounding materials and Project site.

If materials and methods other than those indicated are proposed for any phase of historic treatment work, add a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project.

Retain required mockups in "Mockups" paragraph below; insert others to suit Project. In some regions, the term "benchmark sample" is used for gilded finishes in lieu of "mockup."

* + - * 1. Benchmarks: Provide benchmarks for each type of gilding and substrate indicated and each metallic leaf required to demonstrate aesthetic effects and to set quality standards for materials and execution. Duplicate appearance of approved Sample submittals.

Locate benchmarks [**on existing surfaces where directed by** Director’s Representative] [**in locations that enable viewing under same conditions as the completed Work**] <**Insert requirement**>.

Number and Size: [**Two**] <**Insert number**> [**wall**] [**ceiling**] [**exterior dome**] <**Insert requirement**> surfaces of at least [**100 sq. ft.** ] <**Insert dimension**> to represent surfaces and conditions for application of each type of gilding under same conditions as the completed Work.

Director’s Representative will designate items or areas required for benchmarks of each type of gilding.

Approval of benchmarks does not constitute approval of deviations from the Contract Documents contained in benchmarks unless Director’s Representative specifically approves such deviations in writing.

* + - 1. FIELD CONDITIONS

Generally retain this article; revise to suit Project.

* + - * 1. Weather Limitations: Proceed with gilding only when existing and forecasted weather conditions are within the environmental limits set by each manufacturer's written instructions and specified requirements.

Revise both paragraphs below for unique requirements of gilding materials and to suit Project.

* + - * 1. Apply gilding only when temperature of surfaces to be gilded and ambient air temperatures are between 50 and 95 deg F.
				2. Do not apply gilding in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

Gilding may continue during inclement weather if surfaces and areas to be gilded are enclosed and heated within temperature limits specified by sizing manufacturers for surface preparation and during gilding application and drying periods.

If necessary, insert special requirements for field conditions such as wind enclosures and their heating and ventilation.

1. PRODUCTS
	* + 1. GILDING MATERIALS
				1. Source Limitation for Metallic Leaf: Obtain each type of metallic leaf from single source with resources to provide materials of consistent quality in appearance and physical properties.

Revise remaining paragraphs below to suit Project. If retaining more than one type, purity, or weight of metallic leaf, indicate location of each on Drawings or by inserts. Gold leaf with a karat (K) purity of less than 23 is generally not corrosion resistant enough for exterior use. See Evaluations.

* + - * 1. Metallic Leaf: [**12K gold (white gold)**] [**18K gold**] [**22K gold**] [**23K gold**] [**23.5K gold**] [**23.5K red gold**] [**Palladium**] <**Insert requirement**>.

Retain "Leaf Weight" subparagraph below for gold leaf if leaf weight is important; revise to suit Project. SI (metric) values are standard for weight. See Evaluations.

Leaf Weight: [**15**] [**18**] [**23**] <**Insert value**> g/1000 leaves measuring 3-3/8 inches square.

Generally, retain "Sizing" paragraph below; delete options that are Applicator's choice. Choice of sizing depends on leaf color and conditions of its application. See Evaluations.

* + - * 1. Sizing: [**Yellow,**] [**clear,**] oil-type, [**slow**] [**quick**] drying.

Insert requirements here and in Part 3 if a pigmented lacquer is required for tinting metallic leaf or if a coating is required for protecting metallic leaf from abrasion. Lacquers and coatings are unsuitable for exterior use. Consult product manufacturers or a preservation specialist for recommendations.

1. EXECUTION
	* + 1. HISTORIC TREATMENT SPECIALIST

Retain this article if list of preapproved firms is used as quality-control procedure. Insert additional lists of preapproved firms for specific categories of historic treatment specialists if required.

If retaining second option in "Historic Treatment Specialist Firms" paragraph below, include procedure for approving other firms in Document 002213 "Supplementary Instructions to Bidders."

* + - * 1. Historic Treatment Specialist Firms: Subject to compliance with requirements, [**provide historic treatment of gilding by one of the following**] [**firms that may provide historic treatment of gilding include, but are not limited to, the following**]:

<**Insert, in separate subparagraphs, names of historic treatment specialist firms**>.

* + - 1. HISTORIC TREATMENT OF GILDING, GENERAL

Retain "Historic Treatment Appearance Standard" paragraph below to control overall appearance from a distance. Gilding over a large, contiguous area typically shows a subtle texture created by the dimensions of the applied leaf; this is generally not considered to be a defect unless the texture itself varies considerably.

* + - * 1. Historic Treatment Appearance Standard: Completed work is to have a uniform appearance as viewed by Director’s Representative from building interior at [**20 feet** ] [**50 feet** ] <**Insert distance**> away from gilded surface and from building exterior at [**50 feet** ] [**100 feet** ] <**Insert distance**> away from gilded surface.
				2. Execution of the Work: In treating historic items, disturb them as minimally as possible and as follows:

Verify that substrate surface conditions are suitable for gilding.

Allow other trades to repair items in place and retain as much original material as possible before gilding.

Reproduce original gilding patterns where indicated on Drawings or scheduled.

* + - 1. EXAMINATION
				1. Examine substrates and conditions, with historic treatment specialist present, to review conditions affecting performance of the gilding work. Comply with product manufacturers' written instructions for inspection.
				2. Verify suitability of substrates, including surface conditions and compatibility of sizing with existing finishes.

If existing surfaces cannot be prepared to an acceptable condition for proper gilding, notify Director’s Representative in writing.

* + - * 1. Begin gilding application only after unsatisfactory conditions have been corrected and surfaces are dry.

Beginning gilding application constitutes Contractor's acceptance of substrates and conditions.

* + - 1. GILDING APPLICATION
				1. Comply with manufacturers' written instructions for application methods unless otherwise indicated in this Section.
				2. Apply gilding with adequate illumination that does not distort the condition of surfaces or materials being applied.
				3. Apply sizing and metallic leaf to surfaces after substrate and nearby painting is completed and dry. Gently press metallic leaf into sizing with a soft brush or a cotton or velvet cloth to fully adhere it to the surface. Gently remove overlapped edges with a soft brush after the sizing has fully dried.

Retain "Gilding Pattern" subparagraph below if gilding is patterned; copy subparagraph and re-edit for significantly different gilding patterns.

Insert drawing designation for each pattern. Use these designations on Drawings to identify locations.

Gilding Pattern <**Insert drawing designation**>: Match [**gilding indicated on Drawings**] <**Insert location of design reference sample to be matched**> <**Insert location of gilding to be infilled or replicated**>.

* + - 1. FIELD QUALITY CONTROL
				1. Testing Agency: Director’s Representative will engage a qualified testing agency to perform tests and inspections. Allow inspectors use of lift devices and scaffolding, as needed, to perform inspections.
			2. CLEANING AND PROTECTION
				1. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
				2. Protect work of other trades against damage from gilding application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Director’s Representative, and leave in an undamaged condition.
				3. At completion of construction activities of other trades, infill and restore damaged or defaced gilded surfaces.

END OF SECTION 090398