



Incidental Construction – Miscellaneous Coatings

Revision and Approval

Revision	Date	Nature of Changes	Approved By
0	03-30-2023	Original Issue	Richard Foley

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Background

This process establishes Structure Construction (SC) responsibilities and procedures for review and authorization of submittals, quality assurance, materials, and construction/application of miscellaneous coatings including painting timber, painting concrete, staining concrete and shotcrete, application of anti-graffiti coating and staining galvanized surfaces.

This process does not include coatings applied to structural steel elements. Refer to Bridge Construction Memos (BCMs) from [Section 59](#), *Structural Steel Coatings*, for painting structural steel, galvanized surfaces, and sign structures.

Prior to reviewing this BCM, it is essential to review the following sections of the [Contract Specifications](#) (CS) that this BCM is based on as information in the CS typically will not be repeated in the text of this BCM:

- Section 78-1, *Incidental Construction – General*
- Section 78-4.01, *Incidental Construction – Miscellaneous Coatings – General*
- Section 78-4.02, *Incidental Construction – Miscellaneous Coatings – Painting Timber*
- Section 78-4.03, *Incidental Construction – Miscellaneous Coatings – Painting Concrete*

- Section 78-4.04, *Incidental Construction – Miscellaneous Coatings – Staining Concrete and Shotcrete*
- Section 78-4.06, *Incidental Construction – Miscellaneous Coatings – Anti-Graffiti Coating*
- Section 78-4.07, *Incidental Construction – Miscellaneous Coatings – Staining Galvanized Surfaces*

Process Inputs

1. Contract work that includes painting timber, painting concrete, staining concrete or shotcrete, anti-graffiti coating or staining galvanized surfaces.
2. Submittals required by the CS for:
 - a. Painting concrete
 - b. Staining concrete and shotcrete
 - i. Manufacturer's product data
 - ii. Contractor qualifications
 - iii. Staining quality work plan
 - c. Anti-graffiti coating.

Procedure

1. All work associated with this process is charged as [Project Direct – Construction](#).
2. Inspection of field work for this process is:
 - a. [Benchmark](#) for:
 - i. Inspection of materials upon arrival at the job site for compliance with contract requirements (e.g., color, certificate of compliance).
 - ii. Surface preparation in accordance with manufacturer's instructions.
 - iii. Initial coating application (i.e., condition paint before mixing and application).
 - iv. Proper bonding/adhesion after curing.
 - v. Additional benchmarks if specified by the manufacturer's instructions.
 - b. [Intermittent](#) for all other activities.
3. Before construction begins:
 - a. Contact the following subject matter experts, if needed for construction support:

- i. Materials Engineering and Testing Services (METS) [Translab Specialists](#) for paint, coatings, and chemistry.
 - 1. Questions may be routed through the METS Representative ([METS Rep](#)).
- ii. District maintenance for anti-graffiti coating.
- b. Verify the color of paint/stain/etc. matches the color specified in the contract before it is applied.
 - i. Contact the Project Architect to review and authorize the paint/stain color:
 - 1. Note that for building projects, this contact would likely be the Structures & Engineering Services Project Architect.
 - 2. For other projects, this contact would likely be the District Landscape Architect.
 - ii. Verify the type of stain applied to galvanized surfaces meets contract requirements detailed in the CS.
- c. Locate and identify any referee sample(s) specified in the contract.
- d. Contact the METS Rep to identify which:
 - i. Materials will be released by METS.
 - ii. Materials will be field released (certificate of compliance, authorized material list, etc.).
- e. If the contract requires application of coating to existing elements, visually inspect all surfaces of the existing elements and:
 - i. Note any existing damage or deficiencies that may affect application of new coating. Discuss with the Resident Engineer (RE) whether repair is necessary, and determine if the repair is change order work.
 - 1. Review the contract documents to identify contract item work versus potential change order work.
- f. If the project requires staining concrete or shotcrete, review the CS and confirm seal coat requirements with the Project Architect.
- g. Review and authorize the following submittals as applicable:
 - i. Coating manufacturers product data and application instructions.
 - 1. The Structure Representative (SR) to review the manufacturer's instructions benchmark inspection points with the Assistant Structure Representative.
 - ii. Staining quality work plan, for concrete or shotcrete staining. The Project Architect to assist with review as needed.
 - iii. Manufacturer's application and removal instructions for anti-graffiti coating.

- h. Although it is not contractually required, it is advisable to conduct a preconstruction meeting with the RE and the Contractor to discuss the requirements and Engineer's authorization for the following items of work described in the CS:
 - i. Protecting adjacent surfaces during painting.
 - ii. Surface preparation and application requirements including:
 - 1. For timber structures:
 - a. Permissible moisture content
 - b. Sequence of preparing surface, applying primer, caulking, and painting
 - 2. For painting concrete:
 - a. Minimum age of concrete prior to painting
 - b. Cleaning requirements
 - c. Requirement of surfaces to be thoroughly dry prior to painting.
 - i. If proposed by the Contractor, artificial drying methods must be reviewed and authorized prior to use.
 - iii. Review the unique requirements for staining concrete and shotcrete:
 - 1. Staining quality work plan
 - 2. Test panels
 - a. Test panel disposal
 - 3. Prestaining meeting (see 4.b.i.).
4. During construction:
- a. Review the following, and verify that all work is performed in accordance with:
 - i. Contract documents, including:
 - 1. The Society for Protective Coatings (SSPC) standards, which can be accessed via the "[Engineering Workbench](#)" section of the Caltrans Transportation Library (note – registration required).
 - 2. The applicable subsections of the CS, Section 91, *Paint*:
 - a. Section 91-1, *Paint – General*
 - b. Section 91-2, *Paint – Paint for Metal*
 - c. Section 91-3, *Paint – Paint for Timber*
 - d. Section 91-4, *Paint – Miscellaneous Paint*
 - ii. *Construction Manual (CM)*, Chapter 4, [Section 4-78](#), *Construction Details – Incidental Construction*

- iii. [BCM 59-1](#), *Structural Steel Coatings – General*
 - iv. Manufacturers application and removal specifications for anti-graffiti coatings.
- b. Prior to staining activities, coordinate the following:
- i. Attend a prestaining meeting to review the staining quality work plan submittal and the staining contractor qualifications. If any deficiencies or changes are noted, request the Contractor to revise and resubmit the work plan.
 - 1. Authorize the test panel prior to production work:
 - a. Review the following BCM for information which may be applicable to test panel construction:
 - i. [BCM 51-1.01](#), *Concrete Structures - General*.
 - b. Request input from the appropriate Project Architect.
 - i. The *Special Provisions* may state additional test panels as change order work. The SR must ensure timely coordination with the Project Architect to avoid adverse impacts to the project schedule.
- c. Verify materials comply with the contract documents and authorized submittals. Coordinate with the METS Rep as needed for construction support. Ensure that the following steps are completed:
 - i. Be familiar with which items will be released by METS and which items will be field released by the RE/SR by reviewing:
 - 1. METS [Form TL-608](#), *Notice of Materials to Be Furnished*. These items are released by METS at the source, with TL-0624 *Inspection Release Tag* (Orange Tag). Note that although source inspection and release by METS is typically not anticipated for Section 78 work, if material does arrive on site with an orange tag:
 - a. At a minimum, provide the following information on each orange tag (TL-624, *Inspection Release Tag*): Your name, date, item number, and location where the material is installed.
 - 2. METS [Form TL-28](#), *Notice of Materials to Be Inspected at Jobsite*:
 - a. Field release items using [Form CEM-4102](#), *Material Inspected and Released on Job*, and in accordance with CM, Chapter 6, *Sampling and Testing*, [Table 6-2.2](#), *Materials Accepted Based on Authorized Material List*, and [Table 6-2.3](#), *Materials Accepted by Certificate of Compliance* (e.g., paint). Attach the product data sheets certificates of compliance, and quality assurance test results as applicable.

Attachments

None