

1 Amend **Section 507 – Railings** to read as follows:

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3 **“SECTION 507 – TEXTURED AND STAINED CONCRETE RAILING**

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5 **507.01 Description.** This work includes furnishing and installing concrete  
6 railings with textured concrete surfaces using a formlining system and staining of  
7 the exposed concrete surfaces according to the contract.

8  
9 **507.02 Materials.** Materials shall conform to the following:

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11 Concrete for concrete railings shall have a 28-day compressive strength,  
12 f'c, of 4,000 psi conforming to Section 601 – Structural Concrete.

13  
14 Reinforcing steel shall conform to Section 602 – Reinforcing Steel.

15  
16 Formliners shall conform to Section 660 – Formliners.

17  
18 **507.03 Construction Requirements.** The Contractor shall construct the  
19 concrete railings according to the details shown in the contract and as indicated  
20 below.

21  
22 The line and grade of the railing shall be true to that shown in the contract.  
23 The Contractor shall not install the railings on concrete foundations until the  
24 Contractor has removed the falsework and backfills required are in place.

25  
26 The Contractor shall construct the portion of the concrete railing that the  
27 Contractor will cast-in-place according to Section 503 – Concrete Structures. The  
28 Contractor shall secure smooth and tight fitting forms so that the Contractor can  
29 hold rigidly in line and grade and remove without damage to the concrete.

30  
31 **(A) Concrete Railing Texturing.** The Contractor shall texture the  
32 roadside, oceanside, and top face of the concrete railing as specified in  
33 Section 660 – Formliners of the Special Provisions.

34  
35 Prior to constructing the permanent concrete railing, the Contractor  
36 shall produce a 3 feet by 3 feet test specimen for approval by the  
37 Engineer at no increase in contract price and contract time.

38  
39 **(B) Staining of Exposed Concrete Surfaces.** All exposed concrete  
40 railing surfaces shall be stained with a penetrating liquid stain that  
41 produces permanent color in the concrete surfaces. The stain shall be a  
42 water based formulation of hydrochloric acid and metallic salts that  
43 creates a reaction within the concrete substrate. The reaction should  
44 slightly etch the concrete to provide deep and permanent color  
45 penetration. Stain data shall be submitted to the Engineer for approval.

46  
47 The concrete surface must be uniformly cleaned, cured and dried

as required by the stain manufacturer before applying the stain. The concrete shall be cured for a minimum of 28 days and any membrane curing compounds must be completely removed and surface shall be thoroughly rinsed. Pressure washing may be necessary to clean the concrete surfaces. Acid wash shall not be used to clean the concrete surfaces.

The 3 feet by 3 feet concrete test specimen shall be stained by the Contractor to experiment with the colors and application method. Two or more applications to the concrete surfaces may be required to produce the required color. Color of the concrete surface shall match the color of the existing concrete railing completed in the first two phases of the project.

Adjacent areas and vegetation shall be protected during the preparation and application of the stain. Use of the product shall be as recommended by the manufacturer.

**507.04 Method of Measurement.** The quantity to be paid for the railing is the quantity shown in the proposal schedule. The contract quantity will be adjusted for authorized changes that affect the quantity or for errors made in computing this quantity. If there is evidence that a quantity specified as a contract quantity is incorrect, submit calculations, drawings, or other evidence indicating why the quantity is in error and request, in writing, that the quantity be adjusted."

**507.05 Basis of Payment.** The Engineer will pay for the accepted railing at the contract unit price per pay unit, as shown in the proposal schedule. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposed schedule:

Pay Item	Pay Unit
Textured and Stained Concrete Railing	Cubic Yard"

**END OF SECTION 507**