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| Include the following with projects when staining riprap, boulders, slopes, guardrail or wall facing is required. |

## Section 563. — PAINTING

**Description**

**563.01** Add the following:

This work also consists of staining riprap, boulders, slopes, guardrail and wall facing to produce a natural weathered appearance.

**Material**

**563.02** Add the following:

Furnish a desert varnish weathering material that is an aqueous solution containing salts of iron and manganese, built in oxidizers and other trace elements including copper and zinc. Furnish a stable, one-step component solution applied directly to the natural and galvanized surfaces.

Provide a material that has a projected life expectancy range from 50 to 100 years. Furnish a material that develops full coloration within two weeks of application. Supply a material where the final color is controlled or modified by custom blending of the basic ingredients, application techniques, dilution rate of the color concentrate with water or a combination of these methods.

Furnish a material that contains chemical components that have no adverse reactions or effects on soils, plants, or animals. The material can not contain corrosive by-products once the product has been applied. Only nitrate fertilizer products are permitted to be present as soluble residues.

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| The following products have been used on CFLHD projects.  Natina has successfully been applied to rock, soil, metal, and concrete.  Permeon is to be used on rock and soil ONLY. |

The following stain system has been previously used on CFLHD projects or by client agencies and is suitable for rock, soil, metal, and concrete surfaces:

NATINA manufactured by Natina Products, LLC

1577 First Street

Coachella, CA 92236

Telephone: (877) 762-8462

[www.natinaproducts.com](http://www.natinaproducts.com)

The following stain system has been previously used on CFLHD projects or by client agencies and is suitable for rock and soil surfaces:

PERMEON manufactured by Soil-Tech, Co.

6420 S. Cameron Dr., Suite 207

Las Vegas, Nevada 89118

Telephone: (702) 873-2023

[www.soil-tech.com](http://www.soil-tech.com)

Alternate stain systems from various manufacturers may be proposed provided they meet the minimum material requirements and application limitations as indicated by the manufacturer.

**Construction Requirements**

**563.05 Protection of Public, Property, and Workers**. Add the following:

Comply with all applicable federal, state, and local regulations. Furnish material safety data sheets for all cleaning and staining products.

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| Include 563.10A only when staining riprap, boulders and slopes. |

Add the following:

**563.10A Weathering Agents.**

Apply weathering agent to all placed boulders, riprap, and as directed by the CO. Apply using the manufacturer’s recommendation and the following:

**(1) Desert Application.** Prepare a minimum of three test sections, each 10 foot by 10 foot (3.0 m by 3.0 m), before applying weathering agent. Leave test sections in place for the duration of the project. Use different dilutions and application methods on the test sections, to determine mix and method to be used to best match the surrounding terrain. Mark each section and record mixture and application used on each section. The CO will determine the application rates and mixtures to be applied to the slopes.

**(2) Boulder Application.** Apply weathering agent at the rate necessary to achieve the desired color. Remove all litter before the weathering agent is applied. Use the approved application rates to apply the weathering agent over the CO designated areas. Exercise care to avoid any splashing or spray drift onto plants or other surfaces that might be damaged or stained by the weathering agent.