NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

BRIDGE PAINT: LEAD PAINT REMOVAL, CONTAINMENT, AND NEW PAINT

Project # 1-999(037) – PCN 22614

DESCRIPTION
This work consists of furnishing all paints and paint materials; providing a containment system, preparing surfaces to be painted; removing paint from the structure, applying, protecting, and drying paint materials.

The steel's surface will be prepared and repainted with a three-coat paint system according to the requirements of this Special Provision.

The existing steel is painted with a lead-based. The lead may be in concentrations high enough to produce hazardous waste after removal. During removal operations, high concentrations of airborne particulate will occur. Refer to OSHA regulations to determine the degree of worker protection required.

Contractor Qualifications.
The painting Contractor shall possess current SSPC QP1 and SSPC QP2 certification at the time of the bid and shall maintain certified status throughout the duration of the paint removal and painting work under the contract. The Contractor shall be familiar with and comply with all applicable state and federal regulations pertaining to the handling of lead-based materials.

Submit the Contractor's SSPC QP1 and SSPC QP2 certification to the Construction Services Division of NDDOT within 10 business days of the Bid Opening.

MATERIALS

Item	Section
Three Coat Organic Zinc Rich Paint System	852.02

CONSTRUCTION REQUIREMENTS

A. Lead Paint Removal.

1. **Submittals.**
   Submit the following to the Engineer:
   - A written Containment Plan detailing the methods to contain and collect debris generated during the paint removal;
   - A sampling and testing plan describing the methods to determine if the waste generated is classified as hazardous or non-hazardous. (Guidelines for this plan can be found in SSPC Guide 7);
   - A 3" x 5" Color Chip card with a declaration of conformity; and
   - A Quality Control Plan identifying the following:
     - The instrumentation that will be used;
     - A schedule of required measurements and observations;

- Identifies the Quality Control Personnel that is separate from the production supervisor;
- Procedures for correcting unacceptable work; and
- Procedure for improving surface preparation and painting as a result of quality control findings.

The Engineer's review of the submittals does not relieve the Contractor from the responsibility for the plans' accuracy or feasibility. Such review does not expressly or impliedly warrant, acknowledge or admit the reasonableness of the logic, manpower, or equipment of the plans.

2. Containment System.

a. General.
Contain all debris from the paint removal and surface preparation process.

Construct entryways with doorways capable of being repeatedly sealed or overlapping door tarpaulins to minimize dust escaping.

b. Containment Material.
Provide a containment system that is impervious to water, dust, and air. Enclose the work area by draping all sides, top, and floor with tarpaulins. Use tarpaulins that are free of holes or openings, suitable for suppressing blast residue without rupturing, and that are impervious to blast residue.

c. Treatment of Joints.
Seal all mating joints between the containment walls, top and floor. Sealing methods include:
- Overlapping seams and stitching seams when using flexible material;
- Taping;
- Caulking; or
- Other approved sealing measures.

d. Ventilation.
Feasible engineering controls must be used as necessary to reduce airborne lead exposures according to OSHA regulations for lead in construction (29 CFR 1926.62). Consult SSPC Guide 6 for minimum specified air movement velocities.

e. Support.
Provide a containment structure capable of supporting the blast debris, wind load, and personnel. Design the containment connection to the structure to fail in high winds before structural members experience failure. For the purpose of calculating wind-design loads, consider all containment materials as air impenetrable.

3. Inspection.
Provide the Engineer with appropriate protective clothing and breathing apparatus during the inspection of the project. The protective clothing and breathing apparatus shall meet the current OSHA regulations and be new-in-package equipment. The protective clothing and breathing apparatus will remain the property of the Contractor.

Provide onsite training for the Engineer on respirator use, decontamination procedures and the hazards of overexposure to lead.

Provide reasonable access to clean-up facilities and all areas of construction with ladders, scaffolding, hoists, or work platforms.

Coordinate with the Engineer to provide hold points that will allow for safe inspection of the work completed.

4. Treatment of Lead Waste.

Remove the debris from the containment system daily. Place debris in leak-proof containers at a temporary storage area. Secure and sign the temporary storage area in accordance with federal guidelines.

Collect a 500-gram sample from each storage container, in the presence of the Engineer. Select an independent certified laboratory to test samples in accordance with EPA requirements for determining hazardous waste. The Contractor will send the samples to the selected laboratory and will have the results sent to the Engineer and the Contractor.

Haul debris to an approved disposal facility within 7 days after the following conditions have been met:

- All required EPA tests have been completed;
- All tests results have been received by the Engineer and Contractor; and
- The transportation paperwork has been completed.

Provide the Engineer with documentation of proper disposal of the waste material.

B. Surface Preparation.

Clean the metal to a commercial condition as specified in SSPC SP-10, “Near-white Blast Cleaning.” Compare the surface in accordance with SSPC-VIS 1.

Use a thoroughly mixed abrasive blasting media with Blastox (or other approved product) added at a rate that yields non-hazardous waste by-products.

Before the application of the prime coat, prepare the bare steel to a surface profile in compliance with the paint manufacturer’s recommendations. The prepared surface will be verified by ASTM D4417 Method A, B, or C.

Do not apply the paint system until the Engineer has reviewed the surface preparation.

Do not clean a larger area than can be prepared and primed within a 24-hour period. If the prepared area is not primed within 24 hours, the area will be blasted and cleaned again.

C. Painting.

1. General.

Submit the paint manufacturer’s Material Safety Data Sheets before usage.

2. Quality Control Records.

Submit weekly quality control records that include the following for each coating layer:

- Paint material certification;
- Batch numbers used;
- Date and Time of Application;
- Ambient Air Temperature;

- Humidity;
- Dew Point;
- Surface Temperature of the Steel;
- Surface Profile Measurements; and
- DFT Readings.

3. Mixing and Thinning Paint

Thoroughly mix all paint system components so the pigment is completely in suspension and the consistency is uniform. Strain the zinc primer over a sieve having openings no larger than a No. 50 sieve and continuously agitate until application is completed.

Thinners may be used if they are part of the paint manufacturer's instructions. Follow the manufacturer's instructions regarding the quantity and type of thinner used.

4. Paint System Application.

Apply paint according to SSPC PA 1 and the manufacturer's recommendations.

Apply a stripe coat of the Organic Zinc Rich Primer, Epoxy Intermediate Coat, and Polyurethane Finish Coat.

Apply coating in a uniform, even manner working into all corners and crevices. On surfaces inaccessible to spray, the coating may be applied with a brush.

Do not apply subsequent layers of the paint system until the Engineer has reviewed the previous application.

Apply each layer of the paint system with a DFT that meets the manufacturer's recommendations. Follow the procedure described in SSPC PA 2, including all appendixes, for full DFT determination. If a layer of the system does not meet the manufacturer's recommendations, obtain written instructions from the manufacturer to perform corrective action.

METHOD OF MEASUREMENT

The Engineer will measure as specified in Section 109.01, "Measurement of Quantities."

BASIS OF PAYMENT

Spec	Code	Pay Item	Pay Unit
630	0100	Sand Blasting and Painting	Lump Sum
630	9000	Containment System	Lump Sum

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.