

Maintenance Memorandum

Date: February 27, 1987

Subject: **Bridge Spot Painting Standards and Guidelines (152.01)**

This memorandum combines and updates the information sent to you in 1985 and 1986. The following Bridge Spot Painting Priority Standards and Guidelines are based upon recommendations of the Structure Maintenance Unit, Bridge Paint Committee and the Department's agreements with the FHWA.

- I. Repairs on newly painted zinc-rich bridges to insure a 25 to 30 year paint life. (Fix-up what the contractor messed-up).
- II. Repairs to older zinc-rich painted bridges most of which are blue in color. The goal is to extend the system's paint life for 20 to 25 years.
- III. Spot paint alkyd bridges identified by the Structure Inspection Engineer usually with a 7/1 to 7/0 paint rating. This should extend the total paint system life for + 10 more years.
- IV. Spot/partial paint only under joints and fascia beam bottom flanges on alkyd painted bridges over water (or low volume county roads) where the life of the paint systems can be extended +8 years before a complete painting contract is required.
- V. Totally paint small single span bridges (20' to 30') which are too small for efficient contract painting. By converting to zinc-rich paint the paint system should last for 25 to 30 more years.
- VI. Spot/partial paint under joints and fascia beam bottom flanges on alkyd painted bridges carrying local roads/streets over an expressway only after completing all of the above other structure categories. Most of these structures are subjected to winter salt spray from high speed vehicles and are usually in the poorest condition. Spot painting will only extend the paint system life for +5 years.
- VII. District Special Crews Superintendents should contact Lansing Central Maintenance, Bridge Superintendent for any assistance with methods, equipment or procedures.

If this office can be of any other assistance or answer any questions about this program, please contact the Structure Maintenance Engineer.

Maurice E. Witteveen
Engineer of Maintenance
(Signature on file)

Attachment
"Guidelines"; 1 pg.

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GUIDELINES

- I. We need to preserve by spot painting as many bridges as possible each summer. (We have only painted 1% of our steel bridges annually by contract for many years.) Up to 20 hours of overtime per pay period is thus authorized to increase production during good weather.
- II. The blast cleaning operation is the key to increased productivity. In one (1) hour a crew can paint the steel requiring four (4) to five (5) hours to blast clean. The most efficient blasting equipment is also required due to our new "stauroelite" blasting aggregate which cost \$180 per ton. Nozzle pressure must be above 100 P.S.I. to efficiently utilize this new blasting aggregate.
- III. Spot painting should have a minimum of two permanent employees, plus two or three seasonal employees. The two permanent employees are needed for training, safety and quality painting as explained at our paint schools. Each district will receive four or five seasonals to expand the bridge crew. (The allocation is based upon the size of the district's painting crew.)
- IV. Crews should be organized, trained and operational in May each year.
- V. Pin and hanger areas on a bridge should not be spot painted. The pin and hanger assembly needs to be removed so that all steel at/around the joint can be painted. Rusted areas behind the hanger plates would become the anode with the larger newly painted beam surface acting as the cathode and destroy the unpainted steel behind the hangers.
- VI. Normally complete bridges should not be painted by a spot painting crew with exception of short single span structures too small for a painting contract. Northern districts might consider painting larger structures after they run out of Priority I thru V type work.
- VII. All paint cans containing paint should be dated by the District Bridge Crews. Each foreman should have received a current year rubber stamp.
- VIII. Date stencil each bridge with the year spot painted, using a black epoxy spray can of paint. Spray stencil the year and spot paint system type, letter "A" or "Z" on the inside of each approach fascia beam. Example: "Spot - 1987 A." Do not date minor repairs to high load damage or straightened beams.