9750000, Structural Coating Systems

Response to Comments from Industry Review

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Comment:

In order to help insure compliance with this specification, Section 975-4 (Painting Strain Poles, Mast Arms and Monotube Assemblies), we recommend adding a Value Added Guarantee at Final Acceptance, or a written warranty. Also, in order to detect rust or other defects within the mast arm, we recommend requiring a video inspection just prior to Final Acceptance.

Response: Thank you for taking the time to comment. Your assistance is appreciated. There is already a bond requirement and 5 year warranty required for both color retention and coating adhesion per Section 649 of the std specs. Requiring the contractor to perform a video inspection of all these structures prior to acceptance would be both expensive and time consuming. Also, as of Jan 2009, the department will be requiring local maintaining agencies take on the responsibility of maintaining any new painted mast arms.

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Charles E. Boyd, P.E.

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Comment:

I suggest changing the proposed name of 975-5 from "**Post Tensioning Anchorage Coatings**" back to the more generic name used in the current comparable Section 975-8 "**Elastomeric Coatings**".

Also, Sections 462-4 and 462-13 refer to "elastomeric coatings", not "Post Tensioning Anchorage Coatings".

Response: Thank you for taking the time to review this document. This change has been made.

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Debbie Simmons

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Comments:

Section 975-1.4 packaging & labeling – section indicates that materials shall be shipped in containers marked with a number of items including the department QPL number. Carboline requests clarification if this number is required on each can of paint including all accompanying mixing components.

Response: Thank you for taking the time to review this document.

This is intended to mean every can. FDOT is in the process of moving away from requiring certification of these materials and therefore clear identification is needed for construction personnel.

Section 975-202 performance requirements – section indicates that all coatings regardless of color shall meet the color and gloss requirements defined designated in the table under the cyclic weathering resistance testing. Per NTPEP testing, current testing by the coating suppliers for bridge projects for the various DOT's referencing NTPEP testing has been done in accordance with federal color number 14062 (dark green). If coating suppliers are to meet this requirement, Carboline requests a listing of the federal color standard numbers that will be referenced for upcoming bridge projects as certain colors and/or dark colors could be an issue.

Response: This language is intended to provide quality in whatever color is chosen by the designer for the structure. FDOT will be maintaining coupons painted by the contractor and using these coupons as controls to assess weathering of the structure. Std Fed Color numbers are not available until the contract is put out for bids and therefore cannot be communicated prior to project conception.

Section 975-2.3.1.3 finish coat – Reference is made that the clear coat shall contain a dissipating colorant that shall be visible for a minimum of 12 hours after application and shall completely dissipate within 96 hours after application. Carboline recommends the use of a dye additive that generally dissipates within 24-72 hours. Extra thick application of the clearcoat, low light, low temperatures or high humidities will slow the rate of dissipation. Bright sun, hot and dry conditions may cause the color to dissipate much faster than normal. These factors can have an influence on the timeframe defined within this section. Carboline requests FDOT to consider these factors and alter the minimum/maximum timeframe, include a statement to allow for certain key factors or eliminate the minimum/maximum timeframes.

Response: The dissipation rate defined is less stringent than those proposed by Carboline.

Section 975-2.3.3.2 and 975-2.4.3 finish coats is noted to be one coat of white polyamide epoxy coating. Carboline requests this statement be changed to also include the use of a cycloaliphatic amine epoxy.

Response: I find this argument persuasive and will make the appropriate change.

Section 975-3 galvanized steel coating system – this section does not specify the coats for the system (e.g. primer, intermediate, finish). Carboline requests clarification on this issue.
Response: The coating system for this application is entirely up to the manufacturer. It must only pass the test criteria provided.

Carboline recommends that the implementation date for the proposed changes to FDOT section 975 be moved to 1 year from the date that the proposed changes are officially incorporated by FDOT to allow sufficient time for the coating suppliers to address panel preparation and lab testing of the proposed coatings by an independent lab (e.g. the salt fog testing requires 5000 hrs or ~ 7 months).

Response: There are paint systems tested to these requirements with results tabulated on the NTPEP website. For galvanized systems you are correct and there will be a delay in developing a QPL. The benefits of providing a QPL for standard structural steel far outweigh those of having to wait for miscellaneous galvanized steel structures such as handrails.

- Carboline recommends that the implementation date for the proposed changes to FDOT section 560 be moved to 6 months from the date that the proposed changes are officially incorporated by FDOT to allow sufficient time for product applicators/fabricators to incorporate these proposed changes into their programs.
  Response: The intent is to utilize NTPEP testing to facilitate qualification of coating systems.

- Carboline recommends that the section 975 spec indicates the manner in which outdoor testing will be addressed as it relates to coating approvals. Historically, a coating company would receive a conditional approval of their coating systems if the systems meet the requirements of the lab testing matrix. If the conditional approval concept applies, Carboline is requesting that FDOT define the terms of the conditional approval within the scope of the section 975 specification document.
  Response: This item is currently being discussed in Tallahassee and any implementation schedule will have to pertinent to the decision made regarding conditional approval criteria and responsibilities.

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Comments:

975-6 Class 5 Applied Finish Coatings

A) Under Accelerated Weathering you are recommending ASTM G 153 but for the Anti Graffiti Coating Spec (975-7 you are requiring AASHTO R-31, should these tests be consistent?

Response: Thank you for taking the time to review this document. Yes I agree and have made the appropriate change.

B) I feel that Impact Resistance and Elongation criteria should be included in the Class 5 Finish Coating Specification. 975-7 Anti-Graffiti Coating

Response: I will revisit elongation and make a decision, but I do not see impact resistance as a big need for concrete coatings.

C) This new Spec does not state if the requirements in 975-7.2 are for all types of anti graffiti coatings to be used or for permanent urethane based, or for sacrificial wax based.

Response: I will investigate whether sacrificial coatings should be removed from the spec altogether.

B) If the requirements are only for permanent type then they are fine as they are. If they are going to be required for wax based sacrificial types some testing requirements may be harsh or unattainable.

Response: I agree. I did not write the current specification but from the test regimen it appears that it was meant for only the permanent coatings. As with the above comment, I will research whether sacrificial coatings are needed in this section at all.

C) Why state ASTM G 153 for Class 5 Coatings and AASHTO R 31 for Anti Graffiti Coatings.

Response: Yes, I agree and have made this consistent.

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Karen Byram
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Comment:

The Product Evaluation has concerns as to how soon products will be available for the QPl for this specification. It is unreasonable to expect manufacturers to have product testing complete, reported and on the test deck by July 2009 unless the SMO has conducted the laboratory and field testing and has a list of products that can meet this modified specification. We suggest the specification change be delayed for implementation until January 2010 or later.

Response: Thanks for taking the time to review this document. All but 2 of the lab tests are standard to the AASHTO R-31 test regimen. Mfgr's already have coating systems tested to this standard. The 2 additional tests that are required are industry standard tests and can be completed (from spraying panels to test results) in a matter of two months. Two manufacturers have indicated that they have these additional two tests already completed for some of their coating systems. For this reason, I find your argument non-persuasive.

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Rudy Powell

Comment:

975-1.3. Should lab test results, test panels for outdoor testing, and wet samples be added to the list of items to be submitted for QPL approval?

Response: Yes, I have made the appropriate change. I left off the lab tests, since that is already mentioned in Section 6. Thanks for reviewing this document.

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Jonathan Van Hook
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Comment:

Text: Section 975-2.3.3.2 states that the finish coat for the interior of a box shall be one coat of polyamide epoxy coating. There are many shades of white. Suggest providing a Federal Standard No. for the White Color.

Response: We really only need the white to facilitate inspection by providing better visibility and reflection of light. A shade or 2 off will not be detrimental to this cause and by mandating a single color from the fed. std., we would increase the cost. It is prudent to see if this is problem before incurring this cost. Thanks for taking the time to review this document.

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Barry E. Smith

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Comments:

AASHTO R-31 references appear to be from the 2004 edition. The 2008 edition has changes that make the references in the proposed spec incorrect.

Response: Yes, I have made the appropriate change. Thanks for taking the time to review this document.

Will conditional approval be used in the 2-5 year testing period?

Response: The requirements for conditional QPL status are being discussed and will have to be answered by top management prior to implementation.

The Outdoor Exposure Testing Requirements in Section 975-2.2, ASTM D 714 and ASTM D3719, are evaluation methods, not test methods as ASTM D 3273 is. Should they all not be test methods?

Response: I am still not sure that I have understood what you are pointing out, but here is the resolution to what I believe is in question. Thanks for being patient with me.

ASTM D 714 = Standard Test Method for Evaluating Degree of Blistering of Paints

ASTM D 3273 = Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber

ASTM D 3719 = Standard Test Method for Quantifying Dirt Collection on Coated Exterior Panels

As the titles of these documents indicate, they are all test methods and should be categorized as such.

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