

Structures Design Bulletin 20-04 / Roadway Design Bulletin 20-07  
Class 5 Coating Approval Process  
Comments from Industry Review

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David B. Thompson & Patrick Mulhearn  
Kissinger Campo & Associates  
(813) 871-5331

Comments 04/26/2020 and 04/27/2020 made in reference to the sentence “Allowable textures for the front face of perimeter walls are limited to those used for commercially and readily available masonry blocks”: The highlighted verbiage is unchanged from the original SDG version but does not seem to provide much enforceable restriction. Revise sentence to, “...those used for commercially and readily available, in stock, masonry blocks.” That would help define “readily available”.

Response: Please note that this language is unchanged from the previous version. The scope of the bulletin is limited to changing the approval process. The comment has been noted and will be considered for future updates to this section.

Action: No change needed.

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David B. Thompson & Patrick Mulhearn  
Kissinger Campo & Associates  
(813) 871-5331

Comments 04/26/2020 and 04/27/2020 made in reference to the sentence “The back face of masonry blocks and precast wall panels used for perimeter walls shall be smooth”: “Smooth’ may need further definition. “...shall be smooth, having no textures or striations.”.

Response: Please note that this language is unchanged from the previous version. The scope of the bulletin is limited to changing the approval process. The comment has been noted and will be considered for future updates to this section.

Action: No change needed.

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Patrick Mulhearn  
Kissinger Campo & Associates  
(813) 871-5331

Comment 04/27/2020 made in reference to the sentence “Class 5 coatings, tints or stains may be considered for concrete elements as described in Paragraphs B and C below.”: This sentence should be removed as it is clear each paragraph pertains to specific coating topics.

Response: The sentence is included for clarity to distinguish Paragraphs B and C from Paragraphs D and E. Paragraphs B and C cover the approval processes whereas Paragraphs D and E address anti-graffiti coatings and reference to the SDM, respectively.

Action: No change needed.

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David B. Thompson & Patrick Mulhearn  
Kissinger Campo & Associates  
(813) 871-5331

Comments 04/26/2020 and 04/27/2020 made in reference to the sentence “The Department will cover the cost for coatings, tints or stains on bridges and noise, perimeter and retaining walls only as described above”: Is the omission of “Class 5” intentional in this section (it was used throughout the previous sections)? Does this section apply to other coatings besides Class 5 as well? Agree, not clear, especially if last sentence of Paragraph A is included. I read it as the Department will cover the cost of Class 2 surface finish on all concrete elements and Class 5 on all historical, tourism, commercial, recreational, or residential surfaces. Up to Local agencies to argue for and fund Class 5 on any other structures.

Response: Please note that this language is unchanged from the previous version. The scope of the bulletin is limited to changing the approval process. The comment has been noted and will be considered for future updates to this section.

Action: No change needed.

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David B. Thompson  
Kissinger Campo & Associates  
(813) 871-5331

Comment 04/26/2020 made in reference to the sentence “Replace the first paragraph of FDM 215.6 (Surface Finishes) with the following”: “,,including items (1) and (2)...”

Response: Agree.

Action: The change has been made as noted.

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David B. Thompson  
Kissinger Campo & Associates  
(813) 871-5331

Comment 04/26/2020 made in reference to Bulletin Requirement #2: No comments for the replacement paragraph.

Response: NA.

Action: NA.

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Dick Barnes  
Texcote National Transportation Sales Manager  
Texcote Transportation Consultant  
[D.barnes@texcote.com](mailto:D.barnes@texcote.com)

Comment 05/01/2020: I have been asked to share some history regarding the inception and development of Class 5 coatings by the Florida DOT.

In 1974 , I met with Tom Alberdi-State Design Engineer, Bill Church-State Construction Engineer and Jim Gammage-State Materials Engineer to review the use of a concrete coating on various Bridge and related concrete surfaces.

The Class 5 coating application was inserted as an alternative to the standard concrete finish procedure- not sure if it was called Class 2 finish at the time.

There was a major transition to the use of Class 5 as it became very apparent there was a substantial cost savings to the contractors ( also FDOT) and the finish appearance was much more appealing as compared to the conventional rubbed concrete finish. Subsequently, FDOT established a standard category called Class 5 coating finish.

In the years to follow, it became apparent that the concrete areas more exposed to dirt, dust and high traffic were collecting this debris which could lead to possible mildew and unacceptable appearance. These areas were primarily the barrier walls, bridge parapets, and traffic railing on the superstructure of the bridge and approaches.

The Class 5 texture being installed was either a sand/ fine/coarse texture and allowed for more of the dirt, dust buildup as it weathered. Moving forward, many FDOT projects statewide were inspected and pictures were taken. A predominant trend was found that the superstructure parapets, barrier walls etc. would typically show more dirt attraction as opposed to the substructure columns, caps, overhangs which looked like they were freshly coated 10-15 years later after the original application of the Class 5 coatings.

A meeting with Steve Plotkin, FDOT engineer, in Jacksonville, Fla took place and all this information and documentation was reviewed. A strong recommendation was considered to shift to a smooth texture on all the bridge parapets, barrier walls etc to help reduce the dirt and debris accumulation. The smooth texture had been used in other states on the roadway side concrete walls and had resulted in much less dirt accumulation. It was suggested to select several FDOT bridge projects and implement this application and document the findings.

The DOT contractors all advised that to go back to the standard rubbing procedure( Class 2 ? Finish ) would lead to much more costly labor costs to achieve an acceptable appearance. This \$\$\$ costs would become greater but would be incidental as there is no actual bid item for any of the concrete finish categories.

Hopefully this information may be of some value to consider the continued use of Class 5 coatings.

**Response:** The Class 2 Surface Finish requires more labor to achieve and thus has a higher initial cost; however, it typically requires no maintenance during the life of the structure and provides a consistent appearance for a long period of time. The Department's position is that the higher initial cost of the Class 2 Surface Finish is well worth the investment and is negligible in comparison to the maintenance required to keep the Class 5 looking good, especially on the surfaces indicated in the comment (superstructure parapets, barrier walls etc.). Please note that the overall issue of surface treatment policy is beyond the scope of this bulletin which is limited to changing the approval process for Class 5 coatings.

**Action:** No change needed.

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Ananth Prasad on behalf of FTBA  
[aprasad@ftba.com](mailto:aprasad@ftba.com)  
(850) 942-1405

Comment 5/4/2020: Not sure how or why the conclusion was reached that Class 2 is preferred finish. Uncoated concrete has an uneven finish, staining from curing compounds and does not age uniformly as areas most exposed to weather become black due to organic growth. At least in the initial 8 to 10 years the coating will resist the growth of mildew better than uncoated concrete as coating contains mildewcide. Furthermore the coating specs can be rewritten to advance the use of superior Class 5 coating products. This may cost a few pennies more per square foot but will extend the service life of the coating and aesthetic look. Not sure of the benefit in uncoated concrete as the added cost of rubbing and manually pointing and patching far exceeds the minimal cost to coating which is why coating was adopted in the 70's. The other benefit of coatings is when repairing graffiti or vandalized surfaces, coating is easily repaired to resemble existing and on uncoated concrete the patch is an eye sore.

**Response:** The scope of the bulletin is limited to changing the approval process. The comment has been noted and will be considered for future updates to this section.

**Action:** No change needed.

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Ananth Prasad on behalf of FTBA  
[aprasad@ftba.com](mailto:aprasad@ftba.com)  
(850) 942-1405

Comment 5/4/2020: Perhaps FDOT would consider allowing Contractor to substitute Class 2 for a Class 5 finish at their option. This substitution is allowed for Class I. Such a substitution will allow the most cost effective method to prevail.

**Response:** The scope of the bulletin is limited to changing the approval process. The comment has been noted and will be considered for future updates to this section.

**Action:** No change needed.

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Ananth Prasad on behalf of FTBA  
[aprasad@ftba.com](mailto:aprasad@ftba.com)  
(850) 942-1405

Comment 5/4/2020: With the exception of MDX, CFX and occasionally Hillsborough County structures are rarely if ever re-coated unless part of a new construction widening project. When maintenance elects to recoat it is part of yearly maintenance and primarily used to hide graffiti. Unfortunately those project have little oversight and non-APL products are used over unprepared surface with minimal or no MOT.

**Response:** Comment acknowledged and agree.

**Action:** The commentary language has been revised to remove reference to recoating operations.

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