

3460202 PORTLAND CEMENT CONCRETE
INTERNAL/INDUSTRY REVIEW COMMENTS

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Comments: (12-1-16)

346-2.3: It is our understanding that the restriction of fly ash in concrete with a coloring agent is due to concerns about discoloration from unburned carbon. This phenomenon can be successfully mitigated by adjusting the mix design and chemical admixture dosing. In addition, the amount of unburned carbon can vary widely depending on the fly ash and some fly ashes may have negligible risk for this issue. Concrete suppliers have limited silo storage capacity and cannot switch easily between fly ash and slag mix designs for non-color vs. color projects. Therefore, the proposed approach is not the most economical means of dealing with discoloration. Instead, concrete producers should be given the ability to demonstrate through a mock-up or other means that the proposed fly ash mix designs can meet color requirements.

Response: Comment is non-persuasive, no change made.

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Comments: (12-1-16)

346-2.3 it appears that the first sentence in the first paragraph was revised from “Fly ash or slag materials are required in all classes of concrete, except for Class II 3400 Class I 3000 used in slightly aggressive environments” to “Fly ash or slag materials are required in all classes of concrete, except for Class II 3400, and Class I 3000 and concrete requiring a coloring agent used in slightly aggressive environments”. The way I read the first Class II 3400 and Class I are exceptions when used in slightly aggressive environments. The way I read the second sentence based on the revisions is that Class II 3400 and Class I 3000 are always exceptions and concrete with a coloring agent is an exception when used in a slightly aggressive environment. If the intent is to have all three as exceptions I would recommend using language to clarify the condition for all three.

Response: Text was modified as highlighted below.

<p>→ 346-2.3 Pozzolans and Slag: Fly ash or slag materials are required in all classes of concrete, except for <u>the following when used in slightly aggressive environments:</u> Class II 3400, and Class I 3000, <u>and concrete requiring a coloring agent used in slightly aggressive environments.</u> <u>When a concrete requiring a coloring agent is used in a moderately or extremely aggressive environment, slag, must be used.</u> Use fly ash or slag materials as a cement replacement, on an equal weight replacement basis with the following limitations:¶</p>

Change made.

Ron Holcomb
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Comments: (12-8-16)

In 346-2.3, it states slag must be used for concrete containing a coloring agent in moderately or extremely aggressive environments. Shouldn't this state "slag or fly ash"? Fly ash has been used with coloring agents on past FDOT projects, and the resulting color will vary as much with slag and with fly ash.

Response: Comment is non-persuasive, no change made.
