



## Memorandum

TO: All Design Section Staff  
FROM: Bijan Khaleghi  
DATE: December 2, 2009  
SUBJECT: Use of SCC in Structural Applications

This design memorandum prohibits the use of self consolidating concrete (SCC) in primary flexural members. SCC may be used for all other applications such as walls, barriers, etc.

The structural properties and long-term performance of SCC for structural applications are still unknown to bridge designers and owners. The bridge design specifications do not provide any guidance for use of SCC in structural applications.

### **Background:**

Proposals from Contractors to use SCC in place of conventional concrete as specified in the contract plans for permanent applications have raised major concerns among designers in the Bridge and Structures Office. These proposals are often driven by lower initial cost of SCC when compared to conventional concrete. These proposals generally fail to consider long term concerns on durability and lack of consistent structural properties of SCC in areas such as such as modulus of elasticity, creep, and shrinkage. The test results reported in NCHRP 18-12 (Report 628) clearly indicate lower modulus of elasticity, higher creep coefficient, and most importantly no recommendation on the structural design parameters such as bond transfer and development lengths of strands, flexural and shear design.

If you have any questions regarding these issues, please contact Bijan Khaleghi at 705-7181.

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