Arizona Department of Transportation
Intermodal Transportation Division
206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

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State Engineer

June 2, 2011

TO: **ALL ADOT Consultants Performing Drainage Design**

THRU: **ADOT Engineering Consultants Services**

RE: **CLARIFICATION OF APPROACH TO CALCULATING VELOCITY OF FLOW IN STORM DRAINS**

I am announcing to all engineering consultants performing drainage designs for ADOT a required change in approach to calculating flow velocities in storm drains, to improve the current state of practice. I discovered a discrepancy between our Hydraulics and Drainage Policy manuals; the former calling for the use of design flow condition to calculate velocity and the latter, the use of full flow. The use of full flow condition has been resulting in sewer main designs with extremely flat slopes; near zero percent at times, with possible consequence of inability to move sediment when anything but full flow conditions occur. To avert siltation and the frequent maintenance from common storm events, it is only logical to design with the actual design storm flow to obtain the required self-cleansing velocity. Slopes and subsequent velocities should be based on Design Flow from here forward, NOT full flow. This change should apply to all on-going and future ADOT projects.

Please feel free to contact the Drainage Office with any questions you may have.

Sincerely

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