

### **Design – Hydraulics**

A draft Hydraulic and Hydrologic Analysis (H&HA) report is required for culverts and bridges that have a combined 100 year discharge in excess of 500 cfs. The report shall provide evidence that proposed construction shall not increase the existing 100-year flood level beyond established limits described below. It is the Department's policy not to allow any increase in the level of the 1 percent (100-year) flood for delineated floodplains established under the NFIP or other officially delineated Floodplains. An increase is permitted in FEMA Zones determined by Approximate Methods of up to 1.0 foot provided that coordination with the community shows that the cumulative impact requirements have been addressed and the increase doesn't impact upstream development. For areas not covered by an existing mapped flood zone the increases are not to exceed one foot during the passage of the 1 percent flood and the increase does not impact upstream development. The draft H&HA report and model analysis shall be completed prior to the RFP advertisement.

### **Design – Stormwater Management**

The development of a preliminary stormwater management plan is necessary to establish right-of-way and easement requirements and demonstrate that stormwater management needs can be provided within the existing and proposed right of way and project area limits. A preliminary stormwater management plan shall be developed by VDOT and potential locations for stormwater management facilities shall be identified during preliminary plan development. The preliminary storm water management plan shall be developed in accordance with VDOT's erosion and sediment control and stormwater management standards and specifications. The Design-Builder shall be responsible for developing the final stormwater management plan and obtaining the requisite approvals from VDOT.

### **Design – Erosion and Sediment Control**

VDOT is not responsible for developing the erosion and sediment control phased plans; this responsibility is assigned to the Design-Builder. However, VDOT should carefully consider the conceptual Transportation Management Plan (TMP) and Construction Phasing to assess easements along the project in order to provide sufficient space for the Design-Builder to design, construct, and maintain erosion and sediment control measures. Careful consideration should be taken to evaluate space in urban areas, where right of way costs are typically higher. The Design-Builder is responsible for developing the detailed erosion and sediment control plan and obtaining the required approvals from VDOT.