

FINAL RFP - ROUND 4

Question No.	Category	Section	Page / Doc No.	Question/Comment	SCDOT	
					Response	Explanation
1	Attach_A	Exhibit 4e	3	<p>Response to Question 2 dated 10/10/23 states: <i>"SCDOT has requested FEMA models for both Bear and Cane Creeks to provide to teams. A 2D model is required for the Bear Creek Design but a 1D model should be used to determine the differences in backwater between FIS and SCDOT flowrates on Canes Creek."</i></p> <p>When are the requested FEMA models for Cane and Bear Creeks expected to be provided to DB teams? If not received in advance of the Monday, November 13 deadline for initial Formal ATC submittal for the S-292 bridge, would DB teams need to build their own 1D model for Cane Creek using LiDAR and available bridge plans to establish the appropriate boundary condition for the Bear Creek 1D model for backwater comparison between FIS and SCDOT flowrates? Or, would SCDOT consider an extension of the initial Formal ATC submittal date for the S-292 bridge to allow DB teams sufficient time to utilize the FEMA models once received?</p>	Revision	Yes.
2	Attach_A	Exhibit 4e	3	<p>Response to Question 2 dated 10/10/23 states: <i>"SCDOT has requested FEMA models for both Bear and Cane Creeks to provide to teams. A 2D model is required for the Bear Creek Design but a 1D model should be used to determine the differences in backwater between FIS and SCDOT flowrates on Canes Creek. The design criteria for S-292 as it relates to backwater from Cane Creek will be based on one of the following scenarios.</i></p> <p><i>1)If the backwater in the model developed for Cane Creek using SCDOT flowrates is the same as FEMA FIS backwater from Cane Creek, S-292 shall be designed for Bear Creek flow with downstream boundary condition set to normal depth for all required analyses except for overtopping, where the downstream boundary condition shall be set to the base flood elevation of Cane Creek at the downstream analysis point.</i></p> <p><i>2)If the backwater in the model developed for Cane Creek using SCDOT flowrates is less than the FEMA FIS backwater from Cane Creek, S-292 shall be designed with the base flood elevation for Cane Creek used as the downstream boundary condition for all required analyses (freeboard, backwater and overtopping) needed to satisfy the SCDOT Hydraulic Design Manual and associated Hydraulic Design Bulletins."</i></p> <p>Please clarify "SCDOT flowrates." If "SCDOT flowrates" are intended to mean "USGS / StreamStats" flowrates, then it should be noted that USGS / StreamStats flowrates are much higher than FIS flowrates for Cane Creek. Specifically, the FIS lists the 100-year flowrate for Cane Creek at State Highway 9 Bypass as 6,000 cfs (just upstream of the Cane/Bear Creek confluence). However, USGS / StreamStats reports a 100-year flowrate of 10,200 cfs for a similar drainage area at the State Highway 9 Bypass bridge at Cane Creek, which is 1.7 times the FIS flowrate. Also, using the 2006 Rural Regression Equations, the 100-year flowrate for Cane Creek at State Highway 9 Bypass is 10,400 cfs, which is 1.73 times the FIS flowrate. Since the FIS lists the hydrologic method for Cane Creek as "HEC-1" within the reach of the confluence with Bear Creek, the FIS flowrates likely considered storage and routing losses in the Cane Creek watershed. Therefore, the backwater imposed by Cane Creek using USGS / StreamStats flowrates on Cane Creek will inherently be higher than the FIS backwater. Since the effective FEMA models are being provided to DB teams, it is recommended to use the flowrates in the effective FEMA model for Cane Creek for the backwater comparison.</p>	Revision	SCDOT flowrates are intended to mean USGS/Streamstats flowrates. If backwater is equal to or greater than FIS then design for the appropriate scenario.
3	Attach_A	Exhibit 4e	3	<p>It is understood that SCDOT will provide the effective FEMA models for Cane and Bear Creeks to DB teams once received. It is noted that the flowrates used in the preliminary model for Bear Creek provided by SCDOT utilized the USGS Regression flowrates. The 100-year USGS flowrate is ~4,000 cfs lower than the FIS 100-year flowrate for Bear Creek. The new language in the Final RFP with Addendum 1 is still unclear with respect to which flowrates are to be used in the Bear Creek 1D model or 2D design model. Typically, when designing bridge replacements within FEMA Special Flood Hazard Areas, it is required by FEMA or the local community to use the flowrates in FEMA's effective model. Using flowrates that are less than the effective model flowrates could pose a risk to DB teams in terms of gaining approval with respect to SCDOT and local/NFIP No-Impact requirements for Zone AE with Floodway.</p>	Revision	Use FEMA flowrates to analyze for "No Impact", use USGS "SCDOT" flows for bridge design.
4	Attach_A	Exhibit 4e	3	<p>In the RFP/Addendum 1 language in Section 2.2.1.1 and in the answer to Question 6 in the 10/10/23 response document regarding the two scenarios for Cane Creek backwater comparison, scenario 1 states <i>"If the backwater...is the same as FEMA FIS backwater..."</i> Scenario 2 states <i>"If the backwater...is less than the FEMA FIS backwater..."</i></p> <p>Should language for Scenario 1 instead say <i>"If the backwater...is the same or greater than FEMA FIS backwater..."</i> to cover the possibility that computed backwater may be higher than FEMA's backwater?</p>	Revision	Language will be revised.

