Chad/John:

John asked me to provide him vis-à-vis Chad with what I remember of the design process for the Smith's Ferry project. It seems the time has come for the finger pointing to begin. The initial design work started before Keith left the District to work for American Geotechnics (AG). Keith bled heavily on the first draft Phase II and IV provided by AG. After going to work for AG he began to temper a lot of his comments (influence from the dark side) but basically his review was pretty thorough.

Jim Hoffecker (Goose Creek) and I (still at D3) discussed the project and we both agreed that it was not going to be pretty. I heard a rumor that this project accelerated Bryan Breen's retirement because he didn't want to deal with the anticipated problems. Trying to design rockfall mitigation on what you think might be there is near impossible.

So the first oversight the District made in my opinion, was hiring Forsgren/American Geotechnical to do the rockfall mitigation without knowing what the exposed rock faces were going to look like (no drilling and relying on seismic refraction). Neither of these Consultants has extensive rockfall mitigation experience to draw on either. I also argued early on to let two contracts, one for the MSE wall, road, and mass excavation construction, and a second for the rockfall mitigation as a Design/Build. Naturally this didn't fly. The second thing I argued was widening the catch ditches along the new road alignment so that rock could fall and collect without shutting down the road, and to rely less on the pinned mesh. I also suggested moving the road away from the rock faces by pushing out and adding MSE walls. We had to do this on the Goose Creek grade project because the pin mesh wasn't going to work because of incompetent rock. (So this is my CYA and my I told you so statement).

The second oversight in my opinion was changing the road alignment because Bill Capaul decided the geology on Cut 8 was going to be a problem. Cut 8 had a large amount of rock excavation which in hindsight may have pushed the cut face far enough back so that we intersected competent rock. So Forsgren redesigned the road so that Cut 8 had less rock excavation and Cut 9 had the bulk of the rock excavation. They have experienced problems on both cuts but I think that the original road alignment would have had far fewer problems. I don't fault Forsgren here because they were relying on AG for recommendations an it still wouldn't have helped the problems being experienced on the other cuts, ie: Cut 5.

The third oversight was relying too heavily on the pinned mesh to mitigate all the problems. Pinned mesh is a great product in certain situations but it shouldn't have been used as a Swiss Army Knife for all the rock faces. Keith Nottingham was a big fan of Tecco pinned mesh and wanted to use it for everything.
Bear in mind that this project started with D/C Group 2 and was switched to D/C Group 4 sometime in the design review process. I left D3 in 2017 so my involvement with the project was limited after that. The project design started in 2016 I believe and stretched out over three years (I may be wrong about these times because I'm old and my memory doesn't work as well as it used too).
I don't think there is any one thing you can really point at as being the reason for all the slope failures because this project was going to be a monster regardless of who designed the rockfall mitigation which is why I suggested they Design/Build it. There is a lot of the history of this project that I wasn't privy to so please keep my comments between us non-combatants (I will deny everything).

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