



## Section 4 Narrative

### **Crowder Boiling Spring Lakes Dams Construction/Reconstruction Project Schedule Approach**

Crowder's approach to the Boiling Spring Lakes Dams Construction/Reconstruction Project will be to establish initial contact with all stakeholders and seek to fully understand all expectations to create the foundation for managing time, budget, organization, and documentation. Crowder will roll that information internally and create our storyboard. This planning session is completed by gathering the leaders and managers best suited for the project at one location where each step of construction activities in a project is planned to assure safety and quality, to definitely establish the critical path, and to incorporate materials acquisitions and subcontractor options while strategizing for resolution of potential problems. We complete this session with all major projects and utilize the skills and expertise of upper management and the project management and superintendents assigned to a project. We have found that this planning allows us to execute a project more efficiently within our time and budget constraints, fosters open communication as well as an in-depth understanding of all facets of the project upfront.

Crowder will mobilize and set up a substantial laydown area at the Sanford Dam site, as it has the most room and has the longest critical path. Laydown to include contractor and engineering office and testing facilities, associated utilities, and parking. Crowder will submit and install all required erosion control and best management practices. To optimize resources, we endeavor to work on North Lake Dam simultaneously as we begin working on the Sanford Dam site. First by installing traffic control at both sites, recognizing that traffic control is particularly critical at North Lake Dam. Once traffic control is in place, and Control of Water established, Crowder will begin excavation at both sites, making North Lake Dam a priority to keep the detour duration to a minimum. While excavating, Crowder understands we are to deconstruct the existing metal culverts as neatly as possible to return them to the City/NCDOT for reuse.

Once down to subgrade, Crowder's specialty subcontractor will install ground modifications and cutoff walls as required and coordinate the ground modification at Sanford Dam to immediately follow, reducing the geotechnical subcontractor's mobilizations. Once ground modifications are complete, Crowder will begin constructing the 500 CY concrete riser and culvert structure at North Lake Dam which will take approximately 3 to 4 months and will be followed by earth and drain fill. Once up to grade Crowder will install asphalt, required guardrail, and pavement marking and put traffic back on East Boiling Springs Rd. over North Lake Dam.

Crowder understands that North Lake and Pine Lake cannot be completed simultaneously and will need to be constructed sequentially as they both affect an NCDOT maintained highway. Therefore, while we are still working on geotechnical modifications and/or cast-in-place concrete riser and box culvert spillway at the Sanford Dam, Crowder will begin installing erosion control, traffic control, approved control of water, and begin subgrade excavation at Pine Lake Dam. To manage our geotechnical specialty subcontractors' mobilizations, Crowder will endeavor to have prepared Upper Lake Dam once they complete Pine Lake. Pine Lake Dam will be the priority because of the required detour of a state-maintained highway.

