



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

March 20, 2019

Memorandum

To: Division Offices, Project Management Unit, Structures Management Unit

From: Carl Barclay, PE *Carl H. Barclay*
State Utilities Manager

Subject: **Avoid, Minimize, Accommodate**- An Initiative to Reduce Utility Delays

Over the past several years, the Utilities Unit has received significant input from various sources regarding project delays due to utility relocations. This input has come from; internal sources (both preconstruction and construction perspectives), utility owners, other State DOTs, and national transportation organizations. The attached, "Avoid, Minimize, Accommodate" (AMA) initiative was drafted in response to the input received.

The AMA initiative is not intended to be a prescriptive directive, rather it is offered to stimulate thought, promote conversation, and provide a framework for reducing utility delays. As this is targeting a change in our planning/preconstruction activities, please ensure this is forwarded to appropriate personnel, whether internal or consultant. Finally, AMA advocates a significant change from past practices, therefore, its success requires support from all levels of management.

If you have any questions or comments regarding this, please do not hesitate to contact me at cbarclay@ncdot.gov or 919-707-6982.

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Article- Avoid, Minimize, Accommodate

A. Topic/Objective

The objective of, “Avoid, Minimize, Accommodate” (AMA), is to promote early coordination between utility owners, utility coordinators, and project designers with the goal of reducing project delays by reducing impacts to existing utilities.

B. Background/Overview

Historically, avoiding utility conflicts has not been a focused priority for project designers and coordination occurs after roadway design is complete. In recent years, numerous projects have been delayed because of utility relocations, some resulting in significant construction claims. The purpose of this initiative is to reduce these risks on future highway projects. The approach in order of priority is to; Avoid the utility conflict if possible, Minimize the impact on the utility, and lastly, Accommodate by relocating the utility.

C. Considerations/Guidance/Discussion

Early consideration of utility issues will give all parties time to work out the details of avoiding, protecting, or relocating during project design. Success is the result of cooperation and collaboration among the numerous stakeholders including the Departmental project manager, prime consultant, utility owners, and utility coordinator. The key steps are shown at a project level in the attached flowchart and outlined as follows:

1. Before meeting on a specific project, “awareness” meetings are held with utility owners (not their consultants) to present and discuss the upcoming STIP (3-5 year outlook). Key topics to include are; the method of communication for utility owners to receive STIP updates, utility owners’ points of contact, escalation procedures, project flowchart, etc.
2. Project manager/prime consultant, utility owners, and utility coordinators collect existing utility record and survey information during the planning activities, including SUE data that will be required to avoid conflicts and incorporated into planning and design considerations. Value engineering judgment should be used when determining necessary SUE.
3. Utility owners attend the project kickoff meeting, and based on “early involvement” plans (timeframe is project specific), provide the following information:
 - a. Significant facilities (e.g., large size, high cost, long duration for relocation, homeland security concerns, etc.) and those not shown on the plans. This includes high value lines and individual appurtenances (vaults, metering stations, etc.).
 - b. Facilities, not impacted by earthwork, they wish to retain.
 - c. Facilities not in conflict, to be replaced because of age, size, obsolescence, condition, unacceptable material, etc.

3. The utility coordinator, project manager/prime consultant, and designers (drainage, noise/retaining walls, guardrail, structures, sign/signal poles, etc.) collaborate with the utility owners for a value engineered resolution that minimizes impacts on all stakeholders.

Examples include:

- a. Identification of utility facilities that may be protected in place, such as by use of; protective concrete slabs, retaining walls, or specific construction methods.
 - b. Identify areas in which a minor design change can avoid a utility relocation such as a grade change in a drainage ditch, location of a drainage structure, or minor change in a roadway profile. Whether the cost of relocation is borne by the Department or the utility owner, ultimately it is the citizens of North Carolina who pay, whether through taxes or utility bills. When evaluating the economic practicality of designing around an existing utility, the designer should consider the cost of the utility relocation.
 - c. For utility conflicts which cannot be avoided or protected, the utility coordinator and utility designers collaborate in the development of the relocation plans for the utility facility.
 - d. Determine additional R/W needs for required utility relocations, if any. The utility coordinator facilitates communication between the entire design team and utilities during the development of the R/W plans. Instead of waiting for complete designs, share preliminary designs/concepts with utilities to facilitate the design of their relocating facilities and identification of their PUE needs. Treating drainage as a utility and including drainage designers at utility coordination meetings will facilitate this communication.
4. Utility coordinators and utility owners coordinate to prepare appropriate utility agreements for relocated utility facilities.

D. Summary/Conclusion

The project manager/prime consultant is the champion of AMA. While challenging, this effort proves its worth by delivering transportation projects on schedule and within budget. Early coordination also minimizes unwelcomed surprises in the field during construction. As utility relocations are reduced, so is the potential for costly utility delays, which are paid by those we serve, the taxpayers. Therefore, to protect transportation project schedules and better serve the public, it is in the Department's best interest to Avoid, Minimize, or Accommodate the utility impacts in the roadway design process.

E. For Additional Information

Please direct questions, comments, and recommendations for improving this article to Carl Barclay cbarclay@ncdot.gov or 919-707-6982.

NCDOT UTILITY COORDINATION PROCESS

