



Construction, Survey and Utilities Division Updates

- **Construction**
 - Plan Reviews
 - Construction Contract Administration
 - Project Warranty and Closeout
- **Survey**
 - Performs initial topographical survey for design
 - Plat maps
 - Construction layout (includes utility relocations)
- **Utilities**
 - Utility Coordination (Planning and Design)
 - Utility Relocation

CSU Lessons Learned

Geotechnical studies, pavement designs, and soft digs are critical to project success

Once construction starts, design modifications and time are not free

An ounce of prevention during planning and design is worth a pound of cure during construction... and one less meeting with Jennifer before she retires!

When to have Soft Digs done?

- Whenever the proposed design crosses existing utility facilities.



- Soft digs = about \$500 each. Exploratory digging during construction = \$500+/ hr.



When to have a geotechnical study done ?



5. New Roadway



Relocate Utilities Before or During Construction?

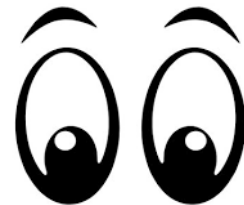


Relocate Utilities Before or During Construction?



Common Issues During Plan Reviews

- **Response Comments**
- **Age & Condition of Existing Water, Sewer, & Storm**
- **Failure to identify conflicts**
- **100% Plans should include everything (Ex: Signals and Lighting)**
- **Do not Trust GOOGLE Maps**





Hierarchy of Specifications, NCDOT Section 105-4

- 1. Project Special Provisions**
- 2. Standard Special Provisions**
- 3. Plans**
- 4. Standard Specifications**
- 5. Supplemental Specifications**

**Calculated Dimensions over Scaled Dimensions*

Estimating... It's an ART!



- **Hidden Costs and Lump Sum Items**
- **Nothing is Free - incidental does not mean no cost**
- **General Conditions**
- **Risk = \$\$\$\$**





Common Issues with Estimates & SP's

- **Project Special Provisions – Unique to each project**
- **State Spec or Special Provision?**
- **Pay Items – MUST MATCH SP EXACTLY**
- **A price is not always consistent from one project to the other.**
- **Contractors and Engineers Estimate Differently**

Locally Funded

- **Lump sum grading**
- **Lump sum traffic control**
- **Lump sum erosion control**
- **Local and State requirements apply**

- **CBI Inclusion applies (MWSBE)**
- **Contingency allowed**
- **5% Retainage allowed per NC- GS**
- **Limited BABA to structural and steel items.**
- **Internal Audits**

VS

Federally Funded

- **Itemized grading items**
- **Itemized traffic control items**
- **Itemized erosion control items**
- **Federal, State, & Local regulations apply (Most Restrictive)**
- **DBE goals applies**
- **No contingency allowed**
- **No retainage allowed**
- **Certified payrolls, Davis Bacon, BABA, etc.**
- **Federal Audits**