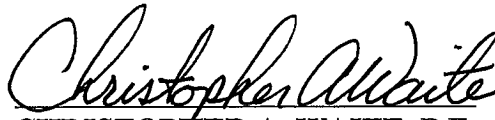


**NEW YORK STATE THRUWAY AUTHORITY
CONSULTANT INSTRUCTION**

SUBJECT: PLANS, SPECIFICATIONS & ESTIMATES (PS&E)

DATE: January 4, 2007 CODE: 07-1 SUPERSEDES: NA

APPROVED:


CHRISTOPHER A. WAITE, P.E.
Chief Engineer

CONTACT: Director, Office of Contracts Management PHONE: (518) 436-2907

DISTRIBUTION: All

The primary deliverable for many Consultant Agreements is the Plans, Specifications and Estimate (PS&E).

The PS&E submission must be received by the Authority at least six weeks before the project is advertised. The PS&E submission is typically required two to three months prior to the anticipated letting date.

The PS&E submission must include all items (deliverables) called for in the Agreement. Typical items, depending on the type of work and scope of services, may include:

- Original stamped and signed mylar plans
- Half-size copies of the final plans
- All design computations
- Estimate of Quantities (quantity workups)
- Special Specifications
- Engineer's Estimate (EE)
- Load ratings and NYSDOT Bridge Inventory update forms for any structures
- CD's containing all electronic files
- Environmental documentation and permit applications
- Utility, Railroad and/or any project specific notes
- Roadway cross-sections
- Survey control report

The EE must be finalized well in advance of advertising the contract in order to allow sufficient time to make adjustments to the plans (to reduce cost) or to obtain approval for additional funds (if necessary).

The format and requirements for quantity workups, as well as an explanation of their importance, are included in the attached section from the Authority's Design Reference Manual. Authority designers and construction staff must be able to follow the logic used in developing the contract quantities.

6.2.1 Quantities

Accurate calculation of final quantities is necessary to establish an accurate, credible EE. Quantity errors can result in an unreliable estimate of the actual construction costs and can lead to unbalanced bidding.

Accurate quantities are achieved through the development of clear, concise quantity workups. Final quantity workups should be on computation paper (form TA-44104) or computer generated. When computation paper is used, the information requested at the top of the page shall be complete on every page. Similar information shall be included at the top of every page for computer generated computations. In addition, the item number and item description shall be included on the top of every page. It is also useful to note at the top of the page what the item is used for. This is especially useful where there are several different items for similar types of work such as excavation items.

Every item in the EE should be included in the quantity workups. A minimum of 1 page is required for each item.

In addition to developing accurate quantities, quantity workups have several purposes and are used by people other than the designer, so it is important that they are clear and descriptive. If a quantity is bid 25% over the EE or 75% below the EE, the quantity workup must be reviewed for accuracy. Construction Inspection staff use the quantity workups to justify overruns and underruns and to understand the intent of the designer. Quantity workups can be used as a guide for developing quantities and cost estimates for similar jobs.

Details and references to plan and proposal details should be used to supplement the calculations. However, referring to a table or placing the table in the workup is generally not sufficient by itself. These methods do not show the thought process used to develop the quantity.

Quantities subject to change in the field (i.e., asphalt, embankment) should be bumped and/or rounded up. Due to the variety of rounding and bumping preferences, no procedures will be specified here.

~~Items that have a definite quantity (i.e., end sections, light standards) should not be rounded. If an item appears in a table in the plans, the quantity in the table should match the contract quantity. If a contingency amount is desired, it should be included or noted in the table. If the item is used in locations not covered by the table, this should be noted.~~

The designer should be familiar with the method of measurement for an item before calculating the quantity. The method of measurement provides guidance on payment lines, additions, deductions, multipliers, and precision. (Special note while BIDLET is used. Some NYSDOT items are entered to the nearest 10th of a unit. Authority items must be entered to the nearest 10th of a unit or bidding errors may result.)

All quantity workups shall be checked prior to advertising. In addition to verifying the quantities, it's a good way to determine if your logic is clear.

For projects with fiscal shares, it is imperative that the pay limits for each share within an item are well defined. Pay limits may be based on a physical location or a percentage.

A copy of the quantity workups is required as part of the PS&E Submission. A copy of the quantity workups must also be forwarded to the Division Construction Engineer prior to contract letting.