



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
NASHVILLE, TENNESSEE 37243-0360

**INSTRUCTIONAL BULLETIN NO. 03-15**

Regarding Addition of Utility Sheets to Construction Plans

Effective for the September 5, 2003 bid letting, the Commissioner is authorized to reimburse utilities for the cost of relocation as established by Tennessee Code Annotated, Title 54, Chapter 5, Part 8. As a result of this legislation, utilities will have the option of including their relocations in the Department's plans for certain projects. Construction plans for local controlled projects may include utility relocation plans if requested by the local government.

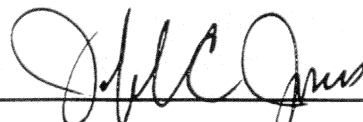
The Regional Utilities Office will submit the Utility Sheets, Utility Relocation Plans, and a Utilities Index Sheet directly to the Program Operations Office for letting just as roadway and structure plans are submitted. If utilities are to be included in the construction contract, the Utilities Office will also submit estimated utility quantities to the Design Manager. The roadway designer will be responsible for developing the "Estimated Utility Quantities Sheet" to be included in the roadway plans.

In order to establish a uniform procedure for adding utility estimated quantities and sheets to the plans the following guidelines will be used:

1. The Design Manager shall contact the Regional Utilities Office approximately fourteen (14) weeks prior to the letting date to determine if utilities will be included as part of the construction contract. (Responsible Office: Design)
2. The Utilities Office will submit estimated utility quantities (in excel .xls format) with **assigned item numbers, descriptions, estimated unit prices, and required footnotes** to the Design Manager a minimum of twelve (12) weeks prior to the letting. (Responsible Office: Utilities)
3. Sheet No. 2B will be used for the "Estimated Utilities Quantities" sheet. If additional sheets are needed, sheet numbers 2B1, 2B2, etc. should to be used. (Responsible Office: Design)
4. **Estimated utility quantities and unit prices** shall be included in the Construction Quantities Estimate Data File. Utility items will be included with roadway items in numerical order. Refer to Section 4-140.05 of the Design Guidelines. (Responsible Office: Design)
5. Sheet No. U1-1, "Utilities Index, Utility Owners, and Utility Sheets" will be shown in the "Roadway Index" after the Cross Sections. (Responsible Office: Design)

6. All utility sheets (including utility relocation sheets) and utility owners shall be listed on Sheet U1-1, "Utilities Index, Utility Owners, and Utility Sheets". This sheet may include the first utility sheet or it may follow as Sheet U1-2. See Attachment A. (Responsible Office: Utilities)
7. All utility sheets (including utility relocation sheets) will use the standard TDOT box in the upper right corner to identify the sheet. See Attachment B. (Responsible Office: Utilities)
8. All sheets shall be 36" X 22" (914mm X 559mm) and plotted on 4 mil mylar. (Responsible Office: Utilities)
9. An engineer licensed in the State of Tennessee shall seal utility relocation sheets. (Responsible Office: Utilities)
10. Revisions to utility sheets will be forwarded to the Design Manager to insure the "Estimated Utility Quantities" are updated and included in the revision distribution. (Responsible Office: Design and Utilities)
11. Utility quantities and item numbers will be consistent with the units of measurement used for the roadway plans. (Responsible Office: Utilities)

Effective for the September 5, 2003 Letting, Section 4-133.00 on pages 4-3 and 4-4 and Section 4-140.05 on pages 4-11 and 4-12 of the English and Metric Design Guidelines shall be modified.



---

Jeff C. Jones, O. E. Director  
Design Division

June 16, 2003

MA.ma  
Attachments

## UTILITIES INDEX (Example)

### SHEET NAME

### SHEET NUMBER

|   |              |
|---|--------------|
| Utilities Index, Utility Owners, and Utility Sheets | U1-1 - U1-xx |
| Electrical Relocation Sheets                        | U2-1 - U2-xx |
| Water Relocation Sheets                             | U3-1 - U3-xx |
| Sewer Relocation Sheets                             | U4-1 - U4-xx |
| Gas Relocation Sheets                               | U5-1 - U5-xx |
| Cable TV Relocation Sheets                          | U6-1 - U6-xx |
| TVA Relocation Sheets                               | U7-1 - U7-xx |

### UTILITY OWNERS AND CONTACTS

#### Water:

Metro Water and Sewer  
P.O. Box 123  
Nashville, TN 37243  
Contact: John Smith  
Telephone: 615-555-1212  
Fax: (if available)  
E-mail: (if available)

#### Electrical:

Nashville Electric  
1000 Church Street  
Nashville, TN 37219  
Contact: Mike Jones  
Telephone: 615-555-1234  
Fax: (if available)  
E-mail: (if available)

#### Sewer:

Metro Water and Sewer  
P.O. Box 123  
Nashville, TN 37243  
Contact: Bill Williams  
Telephone: 615-555-1213  
Fax: (if available)  
E-mail: (if available)

Instructional Bulletin 03-15  
Attachment B

UPPER RIGHT HAND CORNER BOX (EXAMPLE)

| TYPE   | YEAR | PROJECT NO.       | SHEET NO. |
|--------|------|-------------------|-----------|
| CONST. | 2003 | NH-I-40-7(157)359 | U1-1      |
|        |      |                   |           |
|        |      |                   |           |
|        |      |                   |           |

1. USE "CONST." FOR THE TYPE PROJECT. THE DESIGNATION "ROW" SHOULD NOT BE ADDED SINCE UTILITY SHEETS ARE NOT INCLUDED IN THE RIGHT-OF-WAY PLANS.
2. USE YEAR PROJECT IS LET.
3. INSERT FEDERAL CONSTRUCTION PROJECT NUMBER. IF NOT A FEDERAL PROJECT, USE THE STATE CONSTRUCTION PROJECT NUMBER.

**4-125.00 BRIDGE CLEARANCES ON PAVING PROJECTS**

The designer shall furnish the Structures Division with a list of all bridges under which the roadway passes. The Structures Division will check the vertical clearance records and furnish the designer with the maximum permissible thickness of overlay under the structure.

**4-130.00 SALVAGE CREDITS ON FEDERALLY-FUNDED PROJECTS**

Salvage credit (credit to Federal funds) is to be considered when there is a need to dispose of expendable and nonexpendable tangible personal property previously acquired with Federal funds. Such property may be unused construction materials, salvaged highway appurtenances or other equipment and/or material for which the useful life extends beyond the construction contract.

Salvage, for credit to Federal funds, need not be a consideration under the following circumstances:

1. The value of the item(s) is less than \$5,000.
2. Salvageable item(s) become the contractor's property by virtue of the contract provisions. (See last paragraphs Subsection 104.10 of the Standard Specifications.)
3. The item(s) will be reused on a future project eligible under Title 23 U.S.C.
4. The cost of salvaging an item(s) would exceed the value of the item(s) salvaged.

If salvage credits are to be applied, the FHWA shall be made aware so that a fair market value may be determined.

If items are to be considered under No. 3 above, maintenance personnel need to be made aware, because certain record keeping will be involved.

**4-133.00 CONSTRUCTION INDEX**

The format used in the following construction index is to be adhered to on all construction projects.

The sheet names and sheet numbers shown in the following construction index are intended to establish a general order for placement of the sheets in the plans. Actual sheet numbers will be determined based on the sheets used on a specific construction project.

**TDOT - ROADWAY DESIGN GUIDELINES**

**English**

**Revised: 6/16/03**

**INDEX OF SHEETS (EXAMPLE)**

| <b>SHEET NAME</b>                                     | <b>SHEET NO.</b> |
|---|------------------|
| Title Sheet   | 1                |
| Roadway Index and Standard Drawings Index             | 1A               |
| Estimated Bridge Quantities and Bridge Index          | 2                |
| Estimated Roadway Quantities                          | ★ 2A             |
| Estimated Utilities Quantities                        | ★★ 2B            |
| Typical Sections and Paving Quantities                | 2C - 2F          |
| General Notes and Special Notes                       | 2G               |
| Tabulated Quantities                                  | 2H - 2J          |
| Detail Sheets   | ★★★ 2K - 2Z      |
| Property Maps and Right-of-Way Acquisition Tables     | 3, 3A - 3B       |
| Present Layouts                                       | 4 - 14           |
| Proposed Layouts                                      | 4A - 14A         |
| Proposed Profiles (if needed)                         | 4B - 14B         |
| Public Side Roads and Ramp Profiles                   | 16 - 17          |
| Private Drive and Field Ramp Profiles                 | 18 - 21          |
| Interchange Grading Plans                             | 22 - 24          |
| Drainage Maps   | 25 - 27          |
| Culvert Sections                                      | 28 - 30          |
| Erosion and Sediment Control Plans                    | 31 - 33          |
| Wetland Mitigation Plans                              | 34 - 35          |
| Traffic Control Plans with Construction Phasing Notes | 36, 36A - 36Z    |
| Signing and Pavement Marking Plans                    | 37, 37A - 37Z    |
| Sign Schedule Sheets                                  | 38, 38A - 38Z    |
| Miscellaneous Signing Details ( * see next sheet)     | 39, 39A - 39Z    |
| Signal Layouts  | 40, 40A - 40Z    |
| Lighting Layouts                                      | 41, 41A - 41Z    |

## TDOT - ROADWAY DESIGN GUIDELINES

**English**

**Revised: 6/16/03**

|   |               |
|---|---------------|
| Soils Sheets  | 42, 42A - 42Z |
| Roadway Cross Sections                              | 43 - 191      |
| Side Road Cross Sections                            | 192 - 200     |
| Utilities Index, Utility Owners, and Utility Sheets | U1-1          |

- \* Unless otherwise contacted by the Design Traffic Engineering Section, Signing Office.
- ★ Additional sheets should be identified as 2A1, 2A2, etc.
- ★★ Additional sheets should be identified as 2B1, 2B2, etc.
- ★★★ If additional sheets beyond 2Z are needed, designer should use 2AA, 2AB, 2AC, etc.

## TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 6/16/03

### 4-140.05 CONSTRUCTION QUANTITIES ESTIMATE DATA FILE

The construction quantities estimate is an Excel file in the format as designated by the TDOT Excel templates.

For TDOT employees, the templates are available in the self-extracting archive, 2ndSheets.exe at

<http://home.tdot.state.tn.us/asstchiefengrdesign/Design/DesignFiles/default.htm#MSOffice>

For consultants, the templates are available in the self-extracting archive, 2ndSheets.exe at

[http://www.tdot.state.tn.us/Chief\\_Engineer/assistant\\_engineer\\_design/design/design.htm#MSOffice](http://www.tdot.state.tn.us/Chief_Engineer/assistant_engineer_design/design/design.htm#MSOffice)

Instructions for use of these templates are in **Cadd.doc**, also at the same site.

There are Excel templates for projects with one, two or three state project numbers. For jobs with more than three state project numbers, see **Cadd.doc** for instructions.

Only prices for Right-of-way removal items and utility items shall be entered in the estimate. The Estimates Section will set all other prices. Prices and quantities cannot contain commas.

All items shall be listed in numerical order, regardless of the order they are listed in the plans.

SUBTOTAL CODES: (See **Cadd.doc** for detailed instructions)

- a) Roadway items shall be listed on a sheet separate from the Box-Bridge items. The sheet name for Roadway items must start with **Col**.
- b) Box-Bridge items shall be listed on a sheet separate from the Roadway items. The sheet name for Box-Bridge items must start with **Box**.
- c) Alternate Roadway items shall be listed after all of the other roadway items. The alternates will be designated in column C as Alternate AA1, Alternate AA2, Alternate AA3, Alternate AB1, Alternate AB2, etc. Alternates AA1 would alternate with AA2 and AA3. AB1 would alternate with AB2, etc.
- d) Non-participating items are listed by column as designated on the **Proj Data** sheet.



**SUBMITTAL OF CONSTRUCTION QUANTITIES ESTIMATES**

For in-house design projects, the designer shall forward the completed construction estimate Excel file via e-mail at the time final plans are submitted to the following Groupwise e-mail address:

Name: **Estimates, TDOT Construction** (User Id: JJCONST).

For consultant design projects, the completed Excel file is to be forwarded with the final construction plans to the Civil Engineering Manager 1 or Transportation Manager 1 for submittal. Submittal may be on either 3 ½" disk, CD, or via e-mail. The manager will forward the file via e-mail to:

Name: **Estimates, TDOT Construction** (User Id: JJCONST).

**SUBMITTAL OF PRELIMINARY CONSTRUCTION QUANTITIES ESTIMATES (See 3-400.15)**

For in-house design projects, the designer shall forward the completed construction estimate Excel file via e-mail to the following Groupwise e-mail address: Name: **Estimates, TDOT Preliminary** (User Id: JJPRELIM).

For consultant design projects, the completed excel file is to be forwarded to the Civil Engineering Manager 1 or Transportation Manager 1 for submittal. Submittal may be on either 3 ½" disk, CD, or via e-mail. The manager will forward the file via e-mail to: Name: **Estimates, TDOT Preliminary** (User Id: JJPRELIM).

**4-125.00 BRIDGE CLEARANCES ON PAVING PROJECTS**

The designer shall furnish the Structures Division with a list of all bridges under which the roadway passes. The Structures Division will check the vertical clearance records and furnish the designer with the maximum permissible thickness of overlay under the structure.

**4-130.00 SALVAGE CREDITS ON FEDERALLY-FUNDED PROJECTS**

Salvage credit (credit to Federal funds) is to be considered when there is a need to dispose of expendable and nonexpendable tangible personal property previously acquired with Federal funds. Such property may be unused construction materials, salvaged highway appurtenances or other equipment and/or material for which the useful life extends beyond the construction contract.

Salvage, for credit to Federal funds, need not be a consideration under the following circumstances:

1. The value of the item(s) is less than \$5,000.
2. Salvageable item(s) become the contractor's property by virtue of the contract provisions. (See last paragraphs Subsection 104.10 of the Standard Specifications.)
3. The item(s) will be reused on a future project eligible under Title 23 U.S.C.
4. The cost of salvaging an item(s) would exceed the value of the item(s) salvaged.

If salvage credits are to be applied, the FHWA shall be made aware so that a fair market value may be determined.

If items are to be considered under No. 3 above, maintenance personnel need to be made aware, because certain record keeping will be involved.

**4-133.00 CONSTRUCTION INDEX**

The format used in the following construction index is to be adhered to on all construction projects.

The sheet names and sheet numbers shown in the following construction index are intended to establish a general order for placement of the sheets in the plans. Actual sheet numbers will be determined based on the sheets used on a specific construction project.

**TDOT - ROADWAY DESIGN GUIDELINES**

**Metric**

**Revised: 6/16/03**

**INDEX OF SHEETS (EXAMPLE)**

| <b>SHEET NAME</b>                                     | <b>SHEET NO.</b> |
|---|------------------|
| Title Sheet   | 1                |
| Roadway Index and Standard Drawings Index             | 1A               |
| Estimated Bridge Quantities and Bridge Index          | 2                |
| Estimated Roadway Quantities                          | ★ 2A             |
| Estimated Utilities Quantities                        | ★★ 2B            |
| Typical Sections and Paving Quantities                | 2C - 2F          |
| General Notes and Special Notes                       | 2G               |
| Tabulated Quantities                                  | 2H - 2J          |
| Detail Sheets   | ★★★ 2K - 2Z      |
| Property Maps and Right-of-Way Acquisition Tables     | 3, 3A - 3B       |
| Present Layouts                                       | 4 - 14           |
| Proposed Layouts                                      | 4A - 14A         |
| Proposed Profiles (if needed)                         | 4B - 14B         |
| Public Side Roads and Ramp Profiles                   | 16 - 17          |
| Private Drive and Field Ramp Profiles                 | 18 - 21          |
| Interchange Grading Plans                             | 22 - 24          |
| Drainage Maps   | 25 - 27          |
| Culvert Sections                                      | 28 - 30          |
| Erosion and Sediment Control Plans                    | 31 - 33          |
| Wetland Mitigation Plans                              | 34 - 35          |
| Traffic Control Plans with Construction Phasing Notes | 36, 36A - 36Z    |
| Signing and Pavement Marking Plans                    | 37, 37A - 37Z    |
| Sign Schedule Sheets                                  | 38, 38A - 38Z    |
| Miscellaneous Signing Details ( * see next sheet)     | 39, 39A - 39Z    |
| Signal Layouts  | 40, 40A - 40Z    |
| Lighting Layouts                                      | 41, 41A - 41Z    |

## TDOT - ROADWAY DESIGN GUIDELINES

**Metric**

**Revised: 6/16/03**

|   |               |
|---|---------------|
| Soils Sheets  | 42, 42A - 42Z |
| Roadway Cross Sections                              | 43 - 191      |
| Side Road Cross Sections                            | 192 - 200     |
| Utilities Index, Utility Owners, and Utility Sheets | U1-1          |

- \* Unless otherwise contacted by the Design Traffic Engineering Section, Signing Office.
- ★ Additional sheets should be identified as 2A1, 2A2, etc.
- ★★ Additional sheets should be identified as 2B1, 2B2, etc.
- ★★★ If additional sheets beyond 2Z are needed, designer should use 2AA, 2AB, 2AC, etc.

## TDOT - ROADWAY DESIGN GUIDELINES

**Metric**

**Revised: 6/16/03**

### 4-140.05 CONSTRUCTION QUANTITIES ESTIMATE DATA FILE

The construction quantities estimate is an Excel file in the format as designated by the TDOT Excel templates.

For TDOT employees, the templates are available in the self-extracting archive, 2ndSheets.exe at

<http://home.tdot.state.tn.us/asstchiefengrdesign/Design/DesignFiles/default.htm#MSOffice>

For consultants, the templates are available in the self-extracting archive, 2ndSheets.exe at

[http://www.tdot.state.tn.us/Chief\\_Engineer/assistant\\_engineer\\_design/design/design.htm#MSOffice](http://www.tdot.state.tn.us/Chief_Engineer/assistant_engineer_design/design/design.htm#MSOffice)

Instructions for use of these templates are in **Cadd.doc**, also at the same site.

There are Excel templates for projects with one, two or three state project numbers. For jobs with more than three state project numbers, see **Cadd.doc** for instructions.

Only prices for Right-of-way removal items and utility items shall be entered in the estimate. The Estimates Section will set all other prices. Prices and quantities cannot contain commas.

All items shall be listed in numerical order, regardless of the order they are listed in the plans.

SUBTOTAL CODES: (See **Cadd.doc** for detailed instructions)

- a) Roadway items shall be listed on a sheet separate from the Box-Bridge items. The sheet name for Roadway items must start with **Col**.
- b) Box-Bridge items shall be listed on a sheet separate from the Roadway items. The sheet name for Box-Bridge items must start with **Box**.
- c) Alternate Roadway items shall be listed after all of the other roadway items. The alternates will be designated in column C as Alternate AA1, Alternate AA2, Alternate AA3, Alternate AB1, Alternate AB2, etc. Alternates AA1 would alternate with AA2 and AA3. AB1 would alternate with AB2, etc.
- d) Non-participating items are listed by column as designated on the **Proj Data** sheet.

## TDOT - ROADWAY DESIGN GUIDELINES

**Metric**

**Revised: 6/16/03**

### SUBMITTAL OF CONSTRUCTION QUANTITIES ESTIMATES

For in-house design projects, the designer shall forward the completed construction estimate Excel file via e-mail at the time final plans are submitted to the following Groupwise e-mail address:

Name: **Estimates, TDOT Construction** (User Id: JJCONST).

For consultant design projects, the completed Excel file is to be forwarded with the final construction plans to the Civil Engineering Manager 1 or Transportation Manager 1 for submittal. Submittal may be on either 3 ½" disk, CD, or via e-mail. The manager will forward the file via e-mail to:

Name: **Estimates, TDOT Construction** (User Id: JJCONST).

### SUBMITTAL OF PRELIMINARY CONSTRUCTION QUANTITIES ESTIMATES (See 3-400.15)

For in-house design projects, the designer shall forward the completed construction estimate Excel file via e-mail to the following Groupwise e-mail address: Name: **Estimates, TDOT Preliminary** (User Id: JJPRELIM).

For consultant design projects, the completed excel file is to be forwarded to the Civil Engineering Manager 1 or Transportation Manager 1 for submittal. Submittal may be on either 3 ½" disk, CD, or via e-mail. The manager will forward the file via e-mail to: Name: **Estimates, TDOT Preliminary** (User Id: JJPRELIM).