



## Project Cost Estimating System CONSTRUCTION / BRIDGE / PE



Project / PPMS #

Interstate Project ?

Route Number

Interstate Highway

Geometric Standard  \* Principal Arterial - Freeway

Ad Date

Design Year =

Design Year ADT

\* Project Terrain

Box Must Be Empty

Approx. DHV = 4,500

Minimum

Enter Design Speed (MPH) (Enter 60 or 70)

\* Design Speed = 70 MPH

Box Must Be Empty

Box Must Be Empty

Project Length (mi.)

\* 

|                                |                                   |
|--------------------------------|-----------------------------------|
| Number of<br>Additional Lanes: | Length of Add'l.<br>Lanes (mi.):  |
| <input type="text"/>           | <input type="text" value="0.00"/> |

Total Length - Adding or Building Two Lanes (mi.)

\*

Total Length - Adding or Building Four Lanes (mi.)

\*

Total Length - Building Ramps and Loops (mi.)

\*

Box Must Be Empty

Normal Lane Width (ft.)

Total Alignment Miles Computed  
(Required for LD-430 Scoping Report)

Number of Right Turn Lanes - Left PLUS Right Side

\*

Box Must Be Empty

Project Location:  
**SALEM**  
95% of Statewide Avg.

Number of New Traffic Signals Required

\*

Number of Traffic Signals Requiring Adjustment

\*

Base Estimate

Cost of Large Drainage Structures (\$)

\*

Constr. Engr.

In-Plan Utility Costs

\*

Const. Est. (Today)

Adjustment for Unusual Construction Costs (\$)

\*

Examples - Add \$'s for: Bicycle Facilities, Landscaping,  
Retaining Walls, Lighting, Wetlands Mitigation Sites, etc.

**Construction Estimate in  
Mid- 2005**

Continued on Next Page

Continued from Previous Page

Additional (or Unusual) P. E. Costs (\$)

Preliminary Engineering Cost

Select % of PE to be performed by Consultants

Note: Do Not Include Bridge P. E. Costs Here Roadway P. E. \$ / Roadway Const. \$ = 12.1%

### BRIDGE TOTALS

BRIDGE COUNT: 0

Bridge Estimate (Today)

Total Bridge Estimate in Mid- 2005

Total Bridge P. E. Costs

### CONSTRUCTION & PE TOTALS

Total Construction Estimate  
(Roadway plus Bridge)

Total Preliminary Engineering Estimate  
(Roadway plus Bridge)

# BRIDGE CONSTRUCTION AND PRELIMINARY ENGINEERING COSTS

**BRIDGE  
CONSTRUCTION**

**BRIDGE  
P. E.**

|  |  |                       |  |
|--|--|-----------------------|--|
| <b>Proposed BRIDGE # 1</b> Length (ft.)                | <input style="width: 95%;" type="text"/> |                       | % by Consultants:                        |
| Width (ft.)  | <input style="width: 95%;" type="text"/> | <b>\$0</b>            | <input style="width: 95%;" type="text"/> |
| Complexity / Type of New Bridge (C, M, S, WEB, or SRO) | <input style="width: 95%;" type="text"/> |                       |  |
| <b>Removal of Existing Structure # 1:</b>              |  | Constr. Engr. Br. # 1 | P.E. Bridge # 1                          |
| Length of Existing Structure (ft.)                     | <input style="width: 95%;" type="text"/> | <b>\$0</b>            | <b>\$0</b>                               |
| Width of Existing Structure (ft.)                      | <input style="width: 95%;" type="text"/> | 0.0%                  | Misc. Cost Bridge # 1                    |
|  |  | <b>\$0</b>            | <input style="width: 95%;" type="text"/> |
| <b>Proposed BRIDGE # 2</b> Length (ft.)                | <input style="width: 95%;" type="text"/> |                       | % by Consultants:                        |
| Width (ft.)  | <input style="width: 95%;" type="text"/> | <b>\$0</b>            | <input style="width: 95%;" type="text"/> |
| Complexity / Type of New Bridge (C, M, S, WEB, or SRO) | <input style="width: 95%;" type="text"/> |                       |  |
| <b>Removal of Existing Structure # 2:</b>              |  | Constr. Engr. Br. # 2 | P.E. Bridge # 2                          |
| Length of Existing Structure (ft.)                     | <input style="width: 95%;" type="text"/> | <b>\$0</b>            | <b>\$0</b>                               |
| Width of Existing Structure (ft.)                      | <input style="width: 95%;" type="text"/> | 0.0%                  | Misc. Cost Bridge # 2                    |
|  |  | <b>\$0</b>            | <input style="width: 95%;" type="text"/> |
| <b>Proposed BRIDGE # 3</b> Length (ft.)                | <input style="width: 95%;" type="text"/> |                       | % by Consultants:                        |
| Width (ft.)  | <input style="width: 95%;" type="text"/> | <b>\$0</b>            | <input style="width: 95%;" type="text"/> |
| Complexity / Type of New Bridge (C, M, S, WEB, or SRO) | <input style="width: 95%;" type="text"/> |                       |  |
| <b>Removal of Existing Structure # 3:</b>              |  | Constr. Engr. Br. # 3 | P.E. Bridge # 3                          |
| Length of Existing Structure (ft.)                     | <input style="width: 95%;" type="text"/> | <b>\$0</b>            | <b>\$0</b>                               |
| Width of Existing Structure (ft.)                      | <input style="width: 95%;" type="text"/> | 0.0%                  | Misc. Cost Bridge # 3                    |
|  |  | <b>\$0</b>            | <input style="width: 95%;" type="text"/> |
| <b>Proposed BRIDGE # 4</b> Length (ft.)                | <input style="width: 95%;" type="text"/> |                       | % by Consultants:                        |
| Width (ft.)  | <input style="width: 95%;" type="text"/> | <b>\$0</b>            | <input style="width: 95%;" type="text"/> |
| Complexity / Type of New Bridge (C, M, S, WEB, or SRO) | <input style="width: 95%;" type="text"/> |                       |  |
| <b>Removal of Existing Structure # 4:</b>              |  | Constr. Engr. Br. # 4 | P.E. Bridge # 4                          |
| Length of Existing Structure (ft.)                     | <input style="width: 95%;" type="text"/> | <b>\$0</b>            | <b>\$0</b>                               |
| Width of Existing Structure (ft.)                      | <input style="width: 95%;" type="text"/> | 0.0%                  | Misc. Cost Bridge # 4                    |
|  |  | <b>\$0</b>            | <input style="width: 95%;" type="text"/> |
| <b>Proposed BRIDGE # 5</b> Length (ft.)                | <input style="width: 95%;" type="text"/> |                       | % by Consultants:                        |
| Width (ft.)  | <input style="width: 95%;" type="text"/> | <b>\$0</b>            | <input style="width: 95%;" type="text"/> |
| Complexity / Type of New Bridge (C, M, S, WEB, or SRO) | <input style="width: 95%;" type="text"/> |                       |  |
| <b>Removal of Existing Structure # 5:</b>              |  | Constr. Engr. Br. # 5 | P.E. Bridge # 5                          |
| Length of Existing Structure (ft.)                     | <input style="width: 95%;" type="text"/> | <b>\$0</b>            | <b>\$0</b>                               |
| Width of Existing Structure (ft.)                      | <input style="width: 95%;" type="text"/> | 0.0%                  | Misc. Cost Bridge # 5                    |
|  |  | <b>\$0</b>            | <input style="width: 95%;" type="text"/> |

## BRIDGE CONSTRUCTION AND PE COSTS (continued)

|  | BRIDGE<br>CONSTRUCTION                                | BRIDGE<br>P. E.   |
|--|---|---|
| <b>Proposed BRIDGE # 6</b> Length (ft.)                | <input style="width: 100%;" type="text" value="\$0"/> | % by Consultants: <input style="width: 100%;" type="text"/> |
| Width (ft.)  | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text"/>                   |
| Complexity / Type of New Bridge (C, M, S, WEB, or SRO) | <input style="width: 100%;" type="text"/>             | <input style="width: 100%;" type="text"/>                   |
| Removal of Existing Structure # 6:                     | Constr. Engr. Br. # 6                                 | P.E. Bridge # 6   |
| Length of Existing Structure (ft.)                     | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text" value="\$0"/>       |
| Width of Existing Structure (ft.)                      | 0.0%  | Misc. Cost Bridge # 6                                       |
|  | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text"/>                   |
| <b>Proposed BRIDGE # 7</b> Length (ft.)                | <input style="width: 100%;" type="text" value="\$0"/> | % by Consultants: <input style="width: 100%;" type="text"/> |
| Width (ft.)  | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text"/>                   |
| Complexity / Type of New Bridge (C, M, S, WEB, or SRO) | <input style="width: 100%;" type="text"/>             | <input style="width: 100%;" type="text"/>                   |
| Removal of Existing Structure # 7:                     | Constr. Engr. Br. # 7                                 | P.E. Bridge # 7   |
| Length of Existing Structure (ft.)                     | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text" value="\$0"/>       |
| Width of Existing Structure (ft.)                      | 0.0%  | Misc. Cost Bridge # 7                                       |
|  | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text"/>                   |
| <b>Proposed BRIDGE # 8</b> Length (ft.)                | <input style="width: 100%;" type="text" value="\$0"/> | % by Consultants: <input style="width: 100%;" type="text"/> |
| Width (ft.)  | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text"/>                   |
| Complexity / Type of New Bridge (C, M, S, WEB, or SRO) | <input style="width: 100%;" type="text"/>             | <input style="width: 100%;" type="text"/>                   |
| Removal of Existing Structure # 8:                     | Constr. Engr. Br. # 8                                 | P.E. Bridge # 8   |
| Length of Existing Structure (ft.)                     | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text" value="\$0"/>       |
| Width of Existing Structure (ft.)                      | 0.0%  | Misc. Cost Bridge # 8                                       |
|  | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text"/>                   |
| <b>Proposed BRIDGE # 9</b> Length (ft.)                | <input style="width: 100%;" type="text" value="\$0"/> | % by Consultants: <input style="width: 100%;" type="text"/> |
| Width (ft.)  | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text"/>                   |
| Complexity / Type of New Bridge (C, M, S, WEB, or SRO) | <input style="width: 100%;" type="text"/>             | <input style="width: 100%;" type="text"/>                   |
| Removal of Existing Structure # 9:                     | Constr. Engr. Br. # 9                                 | P.E. Bridge # 9   |
| Length of Existing Structure (ft.)                     | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text" value="\$0"/>       |
| Width of Existing Structure (ft.)                      | 0.0%  | Misc. Cost Bridge # 9                                       |
|  | <input style="width: 100%;" type="text" value="\$0"/> | <input style="width: 100%;" type="text"/>                   |

**NOTE:** Structure Complexity is based upon Height, Difficulty of Construction, and other Factors

**NOTE:** Projected Estimate Requires Route Number, Ad Date (Year), and other applicable data to be Entered / Selected previously on This Worksheet

|                                    |            |
|------------------------------------|------------|
| Bridge Estimate (Today)            | <b>\$0</b> |
| Total Bridge Estimate in Mid- 2005 | <b>\$0</b> |
| Total Bridge P. E. Costs           | <b>\$0</b> |



# Project Cost Estimating System RIGHT-OF-WAY ESTIMATE



Project & PPMS Numbers :

I-81 Study

VDOT Construction District :

Bristol, Salem & Staunton

Select Project Area Real Estate Costs :

Average

Define Project Land Use Characteristics :

|                |      |
|----------------|------|
| Agricultural : | 50%  |
| Residential :  | 40%  |
| Industrial :   | 0%   |
| Commercial :   | 10%  |
|                | 100% |

Instructions: Please fill-in all applicable White Boxes  
or make a choice from the Drop-down Lists

Enter the Approximate Number  
of Parcels on the Project :

Select Computed or User Defined Costs :

Computed Costs

## 1. LAND VALUE

Prop. Right-of-Way  
Temp. Ease.  
Perm. Eas.

|  |         |                          |  |            |
|--|---------|--------------------------|--|------------|
| Total Right-of-Way Project Length (ML + Connections) | 5,280   | ft                       | Computed RW Cost per sq ft =             | \$0.57     |
| Average width of Existing RW                         | 160     | ft                       | Enter Right-of-Way Estimator's Right-of- |            |
| Average width of Proposed RW                         | 300     | ft                       | Way Cost per sq ft :                     |            |
| Total area of all additional Prop. Right-of-Way      | 327,360 | sf                       | 1,066,560 sq ft =                        | 24.485 Ac. |
| Approx. % of Prop. CL within                         | 70      | ft of Exist. CL          |  | 100%       |
| Approx. % of Prop. CL between                        | 70      | ft & 230 ft of Exist. CL |  | 0%         |
| Approx. % of Prop. CL greater than                   | 230     | ft from Exist. CL        |  | 0%         |

|   |  |    |                                      |           |
|---|--|----|--------------------------------------|-----------|
| Average Width of parallel Temporary Easements Left  |  | ft | Comp. Temp. Ease. Cost / sq ft =     | \$0.14    |
| Total Length of parallel Temporary Easements Left   |  | ft | Enter Right-of-Way Estimator's Temp. |           |
| Average Width of parallel Temporary Easements Right |  | ft | Ease. Cost per sq ft :               |           |
| Total Length of parallel Temporary Easements Right  |  | ft | 0 sq ft =                            | 0.000 Ac. |

|                                       |         |    |  |           |
|---------------------------------------|---------|----|--|-----------|
| This Box Must Be Empty >              | 132,000 | sf | Comp. Utility Ease. Cost / sq ft =       | \$0.00    |
| This Box Must Be Empty >              |         |    | RW Est's. Utility Ease. Cost per sq ft : | \$0.22    |
|                                       |         |    | 132,000 sq ft =                          | 3.030 Ac. |
| This Box Must Be Empty >              | 0       | ea | Comp. Perm. Ease. Cost / sq ft =         | \$0.46    |
|                                       |         |    | RW Est's. Perm. Ease. Cost per sq ft :   |           |
| Total area of All Permanent Easements | 132,000 | sf | 132,000 sq ft =                          | 3.030 Ac. |

**COST OF LAND (Item # 1)      \$697,600      (Computed Costs)**

## 2. BUILDING VALUE

|  |   |  |                  |
|--|---|--|------------------|
| Based upon comparison to similar, occupied <b>Residential Dwellings</b><br><b>in the Project Area</b> , enter the Number of: |   |  | Computed:        |
| A. Low Cost Residential Dwellings :  |   |  | \$0              |
| B. Moderately Low Cost Dwellings :   |   |  | \$0              |
| C. Average Cost Residential Dwellings :  | 8 |  | \$900,000        |
| D. Moderately High Cost Dwellings :  |   |  | \$0              |
| E. High Cost Residential Dwellings :   |   |  | \$0              |
| <b>Computed Total Residential Dwelling Costs :</b>   |   |  | <b>\$900,000</b> |
| <b>Estimator's Total Residential Dwelling Costs :</b>  |   |  | <b>\$900,000</b> |

Enter the total estimated cost of ALL **COMMERCIAL & INDUSTRIAL BUILDINGS** to be taken:

**Note: No Computed Costs Available. Use User Defined Costs Below:**

Estimator's Total Commercial / Industrial Buildings Costs :

## 3. OTHER IMPROVEMENTS

Enter the estimated cost of ALL **OTHER IMPROVEMENTS** on the Project:

|   |                  |
|---|------------------|
| <b>Computed Total Other Improvements Costs :</b>    | <b>\$114,800</b> |
| <b>Estimator's Total Other Improvements Costs :</b> | <b>\$114,800</b> |

## 4. DAMAGES

|   |                 |
|---|-----------------|
| Anticipated % of Parcels Affected by Damages to Remainder : | 50%             |
| Anticipated Relative Cost Impact of Damages to Remainder :  | Moderate        |
| Approximate Number of Parcels Affected :                    | 0               |
| <b>Computed Cost of Damages to Remainder :</b>              | <b>\$0</b>      |
| <b>Estimator's Total Cost of Damages to Remainder :</b>     | <b>\$58,500</b> |

**TOTAL ACQUISITIONS (Items # 1 - 4)      \$1,712,400      (Computed Costs)**

**5. ADMINISTRATIVE SETTLEMENTS**

|   |                  |
|---|------------------|
| Anticipated % of Parcels Affected by Administrative Settlements : | 100%             |
| Anticipated Relative Cost Impact of Administrative Settlements :  | Moderate         |
| Approximate Number of Parcels Affected :                          | 0                |
| <i>Computed Cost of Administrative Settlements :</i>              | \$0              |
| <b>Estimator's Total Cost of Administrative Settlements :</b>     | <b>\$251,850</b> |

**6. CONDEMNATION INCREASES**

|   |                  |
|---|------------------|
| Anticipated % of Parcels Affected by Condemnation Increases : | 30%              |
| Anticipated Relative Cost Impact of Condemnation Increases :  | Moderate         |
| Approximate Number of Parcels Affected :                      | 0                |
| <i>Computed Cost of Condemnation Increases :</i>              | \$0              |
| <b>Estimator's Total Cost of Condemnation Increases :</b>     | <b>\$141,750</b> |

**7. ADMINISTRATIVE COSTS & INCIDENTAL EXPENSES**

|   |                 |
|---|-----------------|
| Anticipated Relative Cost Impact of Admin. Costs & Incidental Expenses :  | Moderate        |
| <i>Computed Administrative Costs &amp; Incidental Expenses :</i>          | \$0             |
| <b>Estimator's Total Administrative Costs &amp; Incidental Expenses :</b> | <b>\$39,675</b> |

**8. DEMOLITION CONTRACTS**

|  |                 |
|--|-----------------|
| Anticipated Relative Cost Impact of Demolition Contracts : | Moderate        |
| <i>Computed Costs of Demolition Contracts :</i>            | \$45,000        |
| <b>Estimator's Total Cost of Demolition Contracts :</b>    | <b>\$45,000</b> |

**9. HAZARDOUS MATERIALS REMOVAL**

|   |                 |
|---|-----------------|
| Anticipated Number of Demolished Buildings Requiring Asbestos Removal :   | 2               |
| Anticipated Relative Cost of Asbestos Removal from Demolished Buildings : | Moderate        |
| Anticipated Number of Other Hazardous Materials Removal Sites :           | 0               |
| Anticipated Relative Cost Impact of Other Hazardous Materials Removal :   |                 |
| <i>Computed Cost of Hazardous Materials Removal :</i>                     | \$15,800        |
| <b>Estimator's Total Costs of Hazardous Materials Removal :</b>           | <b>\$15,800</b> |

**10. PROPERTY MANAGEMENT**

|   |     |
|---|-----|
| Anticipated Relative Cost Impact of Property Management : |     |
| <i>Computed Costs of Property Management :</i>            | \$0 |
| <b>Estimator's Total Cost of Property Management :</b>    |     |

**TOTAL OTHER ITEMS (Items # 5 - 10)      \$60,800      (Computed Costs)**

**11. RELOCATION ASSISTANCE****Residential Relocation Costs:**

|   |                  |
|---|------------------|
| Anticipated Relative Cost Impact of Residential Relocation Expenses : | Moderately High  |
| <i>Computed Residential Relocation Costs :</i>                        | \$334,000        |
| <b>Estimator's Total Residential Relocation Costs :</b>               | <b>\$334,000</b> |

**Commercial Relocation Costs:**

*Note: No Computed Costs Available. Use User Defined Costs Below:*

|   |            |
|---|------------|
| <b>Estimator's Total Comm/Indust Relocation Costs :</b> | <b>\$0</b> |
|---|------------|

Total Displacements:

Farms:

Families:

Non-Profit:

Businesses:

Personal Property Only:

**TOTAL RELOCATION ASSISTANCE (Item # 11)      \$334,000      (Computed Costs)**

**12. YEAR OF RIGHT-OF-WAY AUTHORIZATION**

2015

|  |                         |                    |                  |
|--|-------------------------|--------------------|------------------|
| <b>SUB-TOTAL RIGHT-OF-WAY COSTS</b>            | <i>(Computed Costs)</i> | <b>\$3,004,400</b> | <i>Totals</i>    |
| <b>UTILITY COSTS TO RIGHT-OF-WAY PROJECT *</b> |                         | <b>\$195,300</b>   | <i>Include</i>   |
| <b>TOTAL RIGHT-OF-WAY COSTS</b>                |                         | <b>\$3,199,700</b> | <i>Inflation</i> |

\* Utility Data display requires completion of Utilities Estimate Worksheet (tab below)

**COMMENTS:****RW-238 Data :**

Right-of-Way Estimate Date:

07/28/04

Based on Approved / Unapproved Plans ?

Unapproved Plans

Participating Cost / Non-Participating Cost ?

Today's Date:

11/16/05



## Project Cost Estimating System UTILITIES ESTIMATE



### A. ELECTRICAL

#### Transmission

|   | Computed<br>or User | RW or<br>Const | Type<br>of Pole | No Entry<br>Required | Number<br>of Poles | Rural<br>or Urban | Percent<br>VDOT | Total<br>Cost | \$ to RW<br>Project | \$ to Const<br>Project |
|---|---------------------|----------------|-----------------|----------------------|--------------------|-------------------|-----------------|---------------|---------------------|------------------------|
| A | Computed            | RW             |                 |                      |                    |                   | 100%            | \$0           | \$0                 | \$0                    |
| B | Computed            | RW             |                 |                      |                    |                   | 100%            | \$0           | \$0                 | \$0                    |
| C | Computed            | RW             |                 |                      |                    |                   | 100%            | \$0           | \$0                 | \$0                    |
| D | Computed            | RW             |                 |                      |                    |                   | 100%            | \$0           | \$0                 | \$0                    |
|   |                     |                |                 |                      |                    |                   |                 | \$0           | \$0                 | \$0                    |

#### Distribution - Aerial

|   | Computed<br>or User | RW or<br>Const | Type<br>of Pole | No Entry<br>Required | Number<br>of Poles | Rural<br>or Urban | Percent<br>VDOT | Total<br>Cost | \$ to RW<br>Project | \$ to Const<br>Project |
|---|---------------------|----------------|-----------------|----------------------|--------------------|-------------------|-----------------|---------------|---------------------|------------------------|
| E | Computed            | RW             |                 |                      |                    |                   | 100%            | \$0           | \$0                 | \$0                    |
| F | Computed            | RW             | Three Phase     |                      | 6                  | Rural             | 50%             | \$48,000      | \$24,000            | \$0                    |
| G | Computed            | RW             |                 |                      |                    |                   | 100%            | \$0           | \$0                 | \$0                    |
| H | Computed            | RW             | Three Phase     |                      | 2                  | Urban             | 100%            | \$20,000      | \$20,000            | \$0                    |
| I | Computed            | RW             |                 |                      |                    |                   | 100%            | \$0           | \$0                 | \$0                    |
| J | Computed            | RW             |                 |                      |                    |                   | 100%            | \$0           | \$0                 | \$0                    |
|   |                     |                |                 |                      |                    |                   |                 | \$68,000      | \$44,000            | \$0                    |

#### Distribution - Underground - by Linear Foot

|   | Computed<br>or User | RW or<br>Const | Type<br>of Service | No Entry<br>Required | Total<br>Length(ft) | Percent<br>VDOT | Total<br>Cost | \$ to RW<br>Project | \$ to Const<br>Project |     |
|---|---------------------|----------------|--------------------|----------------------|---------------------|-----------------|---------------|---------------------|------------------------|-----|
| K | Computed            | RW             |                    |                      |                     | 100%            | \$0           | \$0                 | \$0                    |     |
| L | Computed            | RW             | Three Phase        |                      | 800                 | 50%             | \$136,000     | \$68,000            | \$0                    |     |
| M | Computed            | RW             |                    |                      |                     | 100%            | \$0           | \$0                 | \$0                    |     |
| N | Computed            | RW             |                    |                      |                     | 100%            | \$0           | \$0                 | \$0                    |     |
|   |                     |                |                    |                      |                     |                 |               | \$136,000           | \$68,000               | \$0 |

#### Distribution - Underground - by Pole Equivalent

|   | Computed<br>or User | RW or<br>Const | Equivalent Type<br>of Pole | No Entry<br>Required | Equiv. #<br>of Poles | Percent<br>VDOT | Total<br>Cost | \$ to RW<br>Project | \$ to Const<br>Project |     |
|---|---------------------|----------------|----------------------------|----------------------|----------------------|-----------------|---------------|---------------------|------------------------|-----|
| O | Computed            | RW             |                            |                      |                      | 100%            | \$0           | \$0                 | \$0                    |     |
| P | Computed            | RW             |                            |                      |                      | 100%            | \$0           | \$0                 | \$0                    |     |
| Q | Computed            | RW             |                            |                      |                      | 100%            | \$0           | \$0                 | \$0                    |     |
| R | Computed            | RW             |                            |                      |                      | 100%            | \$0           | \$0                 | \$0                    |     |
|   |                     |                |                            |                      |                      |                 |               | \$0                 | \$0                    | \$0 |

#### Distribution - Conduit for Underground Electrical

|   | Computed<br>or User | RW or<br>Const | Type<br>of Service | No Entry<br>Required | Total<br>Length(ft) | Percent<br>VDOT | Total<br>Cost | \$ to RW<br>Project | \$ to Const<br>Project |     |
|---|---------------------|----------------|--------------------|----------------------|---------------------|-----------------|---------------|---------------------|------------------------|-----|
| S | Computed            | RW             |                    |                      |                     | 0%              | \$0           | \$0                 | \$0                    |     |
| T | Computed            | RW             |                    |                      |                     | 100%            | \$0           | \$0                 | \$0                    |     |
|   |                     |                |                    |                      |                     |                 |               | \$0                 | \$0                    | \$0 |

#### Distribution - Underground - Manholes

|   | Computed<br>or User | RW or<br>Const | Size / Price Range<br>of Manhole | No Entry<br>Required | Number<br>of MH's | Percent<br>VDOT | Total<br>Cost | \$ to RW<br>Project | \$ to Const<br>Project |     |
|---|---------------------|----------------|----------------------------------|----------------------|-------------------|-----------------|---------------|---------------------|------------------------|-----|
| U | Computed            | RW             |                                  |                      |                   | 100%            | \$0           | \$0                 | \$0                    |     |
| V | Computed            | RW             |                                  |                      |                   | 100%            | \$0           | \$0                 | \$0                    |     |
| W | Computed            | RW             |                                  |                      |                   | 100%            | \$0           | \$0                 | \$0                    |     |
| X | Computed            | RW             |                                  |                      |                   | 100%            | \$0           | \$0                 | \$0                    |     |
|   |                     |                |                                  |                      |                   |                 |               | \$0                 | \$0                    | \$0 |

#### Misc. Electrical Costs

|                  |   |                     |         |   |                  |                  |                     |           |           |         |
|------------------|---|---------------------|---------|---|------------------|------------------|---------------------|-----------|-----------|---------|
| Y                | Misc. Electrical Costs Charged to RW Project:     |                     | \$5,000 | <table border="1" style="width: 100%;"> <tr> <td style="width: 33%;">TOTAL ELECTRICAL</td> <td style="width: 33%;">Total to RW Proj</td> <td style="width: 33%;">Total to Const Proj</td> </tr> <tr> <td style="text-align: right;">\$214,000</td> <td style="text-align: right;">\$117,000</td> <td style="text-align: right;">\$5,000</td> </tr> </table> | TOTAL ELECTRICAL | Total to RW Proj | Total to Const Proj | \$214,000 | \$117,000 | \$5,000 |
| TOTAL ELECTRICAL | Total to RW Proj                                  | Total to Const Proj |         |   |                  |                  |                     |           |           |         |
| \$214,000        | \$117,000   | \$5,000             |         |   |                  |                  |                     |           |           |         |
| Z                | Misc. Electrical Costs Charged to Const. Project: |                     | \$5,000 |   |                  |                  |                     |           |           |         |

# B. TELEPHONE

## Aerial - Copper Wire

|   | Computed or User | RW or Const | Type of Cable (Pair Cable) | No Entry Required | Number of Poles | Percent VDOT | Total Cost      | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|----------------------------|-------------------|-----------------|--------------|-----------------|------------------|---------------------|
| A | Computed         | RW          |                            |                   |                 | 100%         | \$0             | \$0              | \$0                 |
| B | Computed         | RW          | 400                        |                   | 4               | 50%          | \$14,800        | \$7,400          | \$0                 |
| C | Computed         | RW          |                            |                   |                 | 100%         | \$0             | \$0              | \$0                 |
| D | Computed         | RW          |                            |                   |                 | 100%         | \$0             | \$0              | \$0                 |
|   |                  |             |                            |                   |                 |              | <b>\$14,800</b> | <b>\$7,400</b>   | <b>\$0</b>          |

## Aerial - Fiber Optic

|   | Computed or User | RW or Const | Type of Cable (Optical Fiber) | No Entry Required | Number of Poles | Percent VDOT | Total Cost | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|-------------------------------|-------------------|-----------------|--------------|------------|------------------|---------------------|
| E | Computed         | RW          |                               |                   |                 | 100%         | \$0        | \$0              | \$0                 |
| F | Computed         | RW          |                               |                   |                 | 100%         | \$0        | \$0              | \$0                 |
| G | Computed         | RW          |                               |                   |                 | 100%         | \$0        | \$0              | \$0                 |
| H | Computed         | RW          |                               |                   |                 | 100%         | \$0        | \$0              | \$0                 |
|   |                  |             |                               |                   |                 |              | <b>\$0</b> | <b>\$0</b>       | <b>\$0</b>          |

## Underground - Copper Wire

|   | Computed or User | RW or Const | Type of Cable (Pair Cable) | No Entry Required | Total Length(ft) | Percent VDOT | Total Cost | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|----------------------------|-------------------|------------------|--------------|------------|------------------|---------------------|
| I | Computed         | RW          |                            |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| J | Computed         | RW          |                            |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| K | Computed         | RW          |                            |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| L | Computed         | RW          |                            |                   |                  | 100%         | \$0        | \$0              | \$0                 |
|   |                  |             |                            |                   |                  |              | <b>\$0</b> | <b>\$0</b>       | <b>\$0</b>          |

## Underground - Fiber Optic

|   | Computed or User | RW or Const | Type of Cable (Optical Fiber) | No Entry Required | Total Length(ft) | Percent VDOT | Total Cost | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|-------------------------------|-------------------|------------------|--------------|------------|------------------|---------------------|
| M | Computed         | RW          |                               |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| N | Computed         | RW          |                               |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| O | Computed         | RW          |                               |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| P | Computed         | RW          |                               |                   |                  | 100%         | \$0        | \$0              | \$0                 |
|   |                  |             |                               |                   |                  |              | <b>\$0</b> | <b>\$0</b>       | <b>\$0</b>          |

## Underground - Copper Wire - In Conduit

|   | Computed or User | RW or Const | Type of Cable (Pair Cable) | No Entry Required | Total Length(ft) | Percent VDOT | Total Cost | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|----------------------------|-------------------|------------------|--------------|------------|------------------|---------------------|
| Q | Computed         | RW          |                            |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| R | Computed         | RW          |                            |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| S | Computed         | RW          |                            |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| T | Computed         | RW          |                            |                   |                  | 100%         | \$0        | \$0              | \$0                 |
|   |                  |             |                            |                   |                  |              | <b>\$0</b> | <b>\$0</b>       | <b>\$0</b>          |

## Underground - Fiber Optic - In Conduit

|   | Computed or User | RW or Const | Type of Cable (Optical Fiber) | No Entry Required | Total Length(ft) | Percent VDOT | Total Cost | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|-------------------------------|-------------------|------------------|--------------|------------|------------------|---------------------|
| U | Computed         | RW          |                               |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| V | Computed         | RW          |                               |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| W | Computed         | RW          |                               |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| X | Computed         | RW          |                               |                   |                  | 100%         | \$0        | \$0              | \$0                 |
|   |                  |             |                               |                   |                  |              | <b>\$0</b> | <b>\$0</b>       | <b>\$0</b>          |

## Manholes for UG Telephone Service

|   | Computed or User | RW or Const | Item              | No Entry Required | Quantity | Percent VDOT | Total Cost | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|-------------------|-------------------|----------|--------------|------------|------------------|---------------------|
| Y | Computed         | RW          | Telephone Manhole |                   |          | 100%         | \$0        | \$0              | \$0                 |
| Z | Computed         | RW          | Telephone Manhole |                   |          | 100%         | \$0        | \$0              | \$0                 |

## Misc. Telephone Costs

|    |  |                      |
|----|--|----------------------|
| AA | Misc. Telephone Costs Charged to RW Project:     | <input type="text"/> |
| BB | Misc. Telephone Costs Charged to Const. Project: | <input type="text"/> |

| TOTAL TELEPHONE | Total to RW Proj | Total to Const Proj |
|-----------------|------------------|---------------------|
| \$14,800        | \$7,400          | \$0                 |

### C. CATV

#### Aerial CATV

|   | Computed or User | RW or Const | Type of Service | No Entry Required | Number of Pole Att'mnts | Percent VDOT | Total Cost     | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|-----------------|-------------------|-------------------------|--------------|----------------|------------------|---------------------|
| A | Computed         | RW          |                 |                   |                         | 100%         | \$0            | \$0              | \$0                 |
| B | Computed         | RW          | 1.00 Coax       |                   | 6                       | 100%         | \$4,200        | \$4,200          | \$0                 |
| C | Computed         | RW          |                 |                   |                         | 100%         | \$0            | \$0              | \$0                 |
| D | Computed         | RW          |                 |                   |                         | 100%         | \$0            | \$0              | \$0                 |
|   |                  |             |                 |                   |                         |              | <b>\$4,200</b> | <b>\$4,200</b>   | <b>\$0</b>          |

#### Underground CATV

|   | Computed or User | RW or Const | Type of Service | No Entry Required | Total Length(ft) | Percent VDOT | Total Cost     | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|-----------------|-------------------|------------------|--------------|----------------|------------------|---------------------|
| E | Computed         | RW          |                 |                   |                  | 100%         | \$0            | \$0              | \$0                 |
| F | Computed         | RW          | 1.00 Coax       |                   | 500              | 100%         | \$8,000        | \$8,000          | \$0                 |
| G | Computed         | RW          |                 |                   |                  | 100%         | \$0            | \$0              | \$0                 |
| H | Computed         | RW          |                 |                   |                  | 100%         | \$0            | \$0              | \$0                 |
|   |                  |             |                 |                   |                  |              | <b>\$8,000</b> | <b>\$8,000</b>   | <b>\$0</b>          |

#### Power Units

|   | Computed or User | RW or Const | Item              | No Entry Required | Quantity | Percent VDOT | Total Cost | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|-------------------|-------------------|----------|--------------|------------|------------------|---------------------|
| I | Computed         | RW          | CATV Power Supply |                   |          | 100%         | \$0        | \$0              | \$0                 |
| J | Computed         | RW          | CATV Power Supply |                   |          | 100%         | \$0        | \$0              | \$0                 |

#### Misc. CATV Costs

Misc. CATV Costs Charged to RW Project:

Misc. CATV Costs Charged to Const. Project:

| TOTAL CATV | Total to RW Proj | Total to Const Proj |
|------------|------------------|---------------------|
| \$12,200   | \$12,200         | \$0                 |

### D. WATER

#### Water Line

|   | Computed or User | RW or Const | Diameter of Water Pipe (in) | Loaded \$ per foot | Total Length(ft) | Percent VDOT | Total Cost      | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|-----------------------------|--------------------|------------------|--------------|-----------------|------------------|---------------------|
| A | User             | RW          |                             |                    |                  | 50%          | \$0             | \$0              | \$0                 |
| B | Computed         | Const       | 8                           |                    | 500              | 50%          | \$62,500        | \$0              | \$31,250            |
| C | Computed         | Const       |                             |                    |                  | 100%         | \$0             | \$0              | \$0                 |
| D | Computed         | Const       |                             |                    |                  | 100%         | \$0             | \$0              | \$0                 |
|   |                  |             |                             |                    |                  |              | <b>\$62,500</b> | <b>\$0</b>       | <b>\$31,250</b>     |

#### Misc. Water Costs

E Misc. Water Costs Charged to Const. Project:

F Misc. Water Costs Charged to RW Project:

| TOTAL WATER | Total to RW Proj | Total to Const Proj |
|-------------|------------------|---------------------|
| \$62,500    | \$0              | \$31,250            |

### E. SANITARY SEWER

#### Sewer Line

|   | Computed or User | RW or Const | Diameter of Sewer Pipe (in) | No Entry Required | Total Length(ft) | Percent VDOT | Total Cost | \$ to RW Project | \$ to Const Project |
|---|------------------|-------------|-----------------------------|-------------------|------------------|--------------|------------|------------------|---------------------|
| A | Computed         | Const       |                             |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| B | Computed         | Const       |                             |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| C | Computed         | Const       |                             |                   |                  | 100%         | \$0        | \$0              | \$0                 |
| D | Computed         | Const       |                             |                   |                  | 100%         | \$0        | \$0              | \$0                 |
|   |                  |             |                             |                   |                  |              | <b>\$0</b> | <b>\$0</b>       | <b>\$0</b>          |

#### Misc. Sewer Costs

E Misc. Sewer Costs Charged to Const. Project:

F Misc. Sewer Costs Charged to RW Project:

| TOTAL SEWER | Total to RW Proj | Total to Const Proj |
|-------------|------------------|---------------------|
| \$0         | \$0              | \$0                 |