

F. NATURAL GAS / PROPANE

Distribution

	Computed or User	RW or Const	Diameter of Gas Line (in)	No Entry Required	Total * Length(ft)	Percent VDOT	Total Cost	\$ to RW Project	\$ to Const 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

Transmission

	Computed or User	RW or Const	Diameter of Gas Line (in)	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				100%	\$0	\$0	\$0
G	Computed	RW				100%	\$0	\$0	\$0
H	Computed	RW				100%	\$0	\$0	\$0
							\$0	\$0	\$0

Misc. Natural Gas / Propane Costs

I	Misc. Gas / Pro Costs Charged to RW Project:	<input type="text"/>	TOTAL GAS / PROPANE	Total to RW Proj	Total to Const Proj
J	Misc. Gas / Pro Costs Charged to Const. Project:	<input type="text"/>			
			\$0	\$0	\$0

G. PETROLEUM

Transmission

	Computed or User	RW or Const	Diameter of Gas Line (in)	No Entry Required	Total Length(ft)	Percent VDOT	Total Cost	\$ to RW Project	\$ to Const 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

Misc. Petroleum Costs

E	Misc. Petroleum Costs Charged to RW Project:	<input type="text"/>	TOTAL PETROLEUM	Total to RW Proj	Total to Const Proj
F	Misc. Petroleum Costs Charged to Const. Project:	<input type="text"/>			
			\$0	\$0	\$0

H. CELLULAR

Cellular Telephone Costs

A	Total Cellular Costs Charged to RW Project:	<input type="text"/>	TOTAL CELLULAR	Total to RW Proj	Total to Const Proj
B	Total Cellular Costs Charged to Const. Project:	<input type="text"/>			
			\$0	\$0	\$0

I. ADDITIONAL COSTS

	Additional Utility Costs to <u>Right-of-Way</u> Project :	<input type="text"/>	\$0
Comments:	<input type="text"/>		
	Additional Utility Costs to <u>Construction</u> Project :	<input type="text"/>	\$0
Comments:	<input type="text"/>		
	Additional Utility Costs to <u>Utility Owners/Others</u> :	<input type="text"/>	\$0
Comments:	<input type="text"/>		

TOTAL UTILITY COST - <u>RIGHT-OF-WAY</u> PROJECT	<input type="text"/>	\$137,000
TOTAL UTILITY COST - <u>CONSTRUCTION</u> PROJECT	<input type="text"/>	\$36,000
TOTAL UTILITY COST - <u>UTILITY OWNER / OTHERS</u>	<input type="text"/>	\$130,650
GRAND TOTAL UTILITY COSTS	<input type="text"/>	\$303,650



Project Cost Estimating System
COMMENTS



**General / Miscellaneous Comments from
CONST, RW, & UTILITY Worksheets:**

**Team Member
and Section:**

**Date
Entered:**

1	Spreadsheet used for I-81 NEPA Document per lane mile	VHB/Gannett Fleming	07/04/04
2	Reconstruction of Existing Roadway provided within estimate.	VHB/Gannett Fleming	03/15/05
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			



**SEPARATED LANE
CONCEPT 3**

**ADD 2 NON-EXCLUSIVE
TRUCK LANES + 1
GENERAL PURPOSE
LANE IN EACH
DIRECTION**

Project Cost Estimating System SUMMARY PAGE

DISTRICT

Bristol, Salem & Staunton

PROJECT NUMBER

I-81 Study(2.1non excl)

PPMS NUMBER

n/a

AD DATE

2005

PROJECT MANAGER / DESIGNER

Chris Collins/VHB

Data Source for Construction Estimate:

CES

Data Source for Right-of-Way Estimate:

CES

Data Source for Utilities Estimate:

CES

DATE

11/17/2005

THE FOLLOWING DATA WILL BE PROVIDED UPON COMPLETION OF THE REMAINDER OF THE
WORKBOOK, WHICH IS ACCESSED BY SELECTING THE CONST, RW, & UTIL TABS BELOW

CONSTRUCTION ESTIMATE

\$16,393,000

PRELIMINARY ENGINEERING ESTIMATE

\$2,038,000

RIGHT-OF-WAY & UTILITIES ESTIMATE

\$3,086,200

TOTAL PROJECT ESTIMATE

\$21,517,200

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Revised 12/08/03 RDW

Estimate Class: PFI

Version 2.0



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 Additional Lanes:	Length of Add'l. Lanes (mi.):
--------------------------------	----------------------------------

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 (\$)

\$10,000

Preliminary
Engineering Cost

\$2,038,000

Select % of PE to be performed by Consultants

100%

Note: Do Not Include Bridge P. E. Costs Here

Roadway P. E. \$ / Roadway Const. \$ = 12.4%

BRIDGE TOTALS

BRIDGE COUNT: 0

Bridge Estimate (Today)

\$0

Total Bridge Estimate in
Mid- 2005

\$0

Total Bridge P. E. Costs

\$0

CONSTRUCTION & PE TOTALS

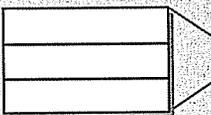
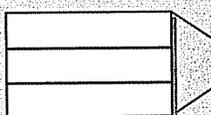
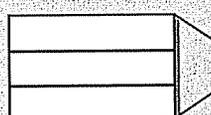
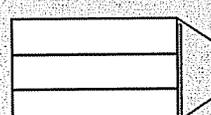
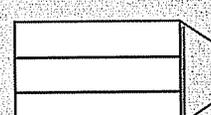
Total Construction Estimate
(Roadway plus Bridge)

\$16,393,000

Total Preliminary Engineering Estimate
(Roadway plus Bridge)

\$2,038,000

BRIDGE CONSTRUCTION AND PRELIMINARY ENGINEERING COSTS

		BRIDGE CONSTRUCTION	BRIDGE P. E.	
Proposed BRIDGE # 1 Length (ft.) Width (ft.) Complexity / Type of New Bridge (C, M, S, WEB, or SRO)	<input style="width: 100%;" type="text"/>		% by Consultants: <input style="width: 100%;" type="text"/>	
	<input style="width: 100%;" type="text"/>		\$0	Constr. Engr. Br. # 1
	<input style="width: 100%;" type="text"/>		0.0%	P.E. Bridge # 1
Removal of Existing Structure # 1: Length of Existing Structure (ft.) Width of Existing Structure (ft.)	<input style="width: 100%;" type="text"/>	\$0	\$0	
	<input style="width: 100%;" type="text"/>	0.0%	Misc. Cost Bridge # 1	
	<input style="width: 100%;" type="text"/>	\$0	<input style="width: 100%;" type="text"/>	
Proposed BRIDGE # 2 Length (ft.) Width (ft.) Complexity / Type of New Bridge (C, M, S, WEB, or SRO)	<input style="width: 100%;" type="text"/>		% by Consultants: <input style="width: 100%;" type="text"/>	
	<input style="width: 100%;" type="text"/>		\$0	Constr. Engr. Br. # 2
	<input style="width: 100%;" type="text"/>		0.0%	P.E. Bridge # 2
Removal of Existing Structure # 2: Length of Existing Structure (ft.) Width of Existing Structure (ft.)	<input style="width: 100%;" type="text"/>	\$0	\$0	
	<input style="width: 100%;" type="text"/>	0.0%	Misc. Cost Bridge # 2	
	<input style="width: 100%;" type="text"/>	\$0	<input style="width: 100%;" type="text"/>	
Proposed BRIDGE # 3 Length (ft.) Width (ft.) Complexity / Type of New Bridge (C, M, S, WEB, or SRO)	<input style="width: 100%;" type="text"/>		% by Consultants: <input style="width: 100%;" type="text"/>	
	<input style="width: 100%;" type="text"/>		\$0	Constr. Engr. Br. # 3
	<input style="width: 100%;" type="text"/>		0.0%	P.E. Bridge # 3
Removal of Existing Structure # 3: Length of Existing Structure (ft.) Width of Existing Structure (ft.)	<input style="width: 100%;" type="text"/>	\$0	\$0	
	<input style="width: 100%;" type="text"/>	0.0%	Misc. Cost Bridge # 3	
	<input style="width: 100%;" type="text"/>	\$0	<input style="width: 100%;" type="text"/>	
Proposed BRIDGE # 4 Length (ft.) Width (ft.) Complexity / Type of New Bridge (C, M, S, WEB, or SRO)	<input style="width: 100%;" type="text"/>		% by Consultants: <input style="width: 100%;" type="text"/>	
	<input style="width: 100%;" type="text"/>		\$0	Constr. Engr. Br. # 4
	<input style="width: 100%;" type="text"/>		0.0%	P.E. Bridge # 4
Removal of Existing Structure # 4: Length of Existing Structure (ft.) Width of Existing Structure (ft.)	<input style="width: 100%;" type="text"/>	\$0	\$0	
	<input style="width: 100%;" type="text"/>	0.0%	Misc. Cost Bridge # 4	
	<input style="width: 100%;" type="text"/>	\$0	<input style="width: 100%;" type="text"/>	
Proposed BRIDGE # 5 Length (ft.) Width (ft.) Complexity / Type of New Bridge (C, M, S, WEB, or SRO)	<input style="width: 100%;" type="text"/>		% by Consultants: <input style="width: 100%;" type="text"/>	
	<input style="width: 100%;" type="text"/>		\$0	Constr. Engr. Br. # 5
	<input style="width: 100%;" type="text"/>		0.0%	P.E. Bridge # 5
Removal of Existing Structure # 5: Length of Existing Structure (ft.) Width of Existing Structure (ft.)	<input style="width: 100%;" type="text"/>	\$0	\$0	
	<input style="width: 100%;" type="text"/>	0.0%	Misc. Cost Bridge # 5	
	<input style="width: 100%;" type="text"/>	\$0	<input style="width: 100%;" type="text"/>	

BRIDGE CONSTRUCTION AND PE COSTS (continued)

	BRIDGE CONSTRUCTION	BRIDGE P. E.
Proposed BRIDGE # 6 Length (ft.)	<input style="width: 100%;" type="text"/>	% by Consultants:
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"/>
	Constr. Engr. Br. # 6	P.E. Bridge # 6
Removal of Existing Structure # 6:	<input style="width: 100%;" type="text" value="\$0"/>	<input style="width: 100%;" type="text" value="\$0"/>
Length of Existing Structure (ft.)	0.0%	Misc. Cost Bridge # 6
Width of Existing Structure (ft.)	<input style="width: 100%;" type="text" value="\$0"/>	<input style="width: 100%;" type="text"/>
Proposed BRIDGE # 7 Length (ft.)	<input style="width: 100%;" type="text"/>	% by Consultants:
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"/>
	Constr. Engr. Br. # 7	P.E. Bridge # 7
Removal of Existing Structure # 7:	<input style="width: 100%;" type="text" value="\$0"/>	<input style="width: 100%;" type="text" value="\$0"/>
Length of Existing Structure (ft.)	0.0%	Misc. Cost Bridge # 7
Width of Existing Structure (ft.)	<input style="width: 100%;" type="text" value="\$0"/>	<input style="width: 100%;" type="text"/>
Proposed BRIDGE # 8 Length (ft.)	<input style="width: 100%;" type="text"/>	% by Consultants:
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"/>
	Constr. Engr. Br. # 8	P.E. Bridge # 8
Removal of Existing Structure # 8:	<input style="width: 100%;" type="text" value="\$0"/>	<input style="width: 100%;" type="text" value="\$0"/>
Length of Existing Structure (ft.)	0.0%	Misc. Cost Bridge # 8
Width of Existing Structure (ft.)	<input style="width: 100%;" type="text" value="\$0"/>	<input style="width: 100%;" type="text"/>
Proposed BRIDGE # 9 Length (ft.)	<input style="width: 100%;" type="text"/>	% by Consultants:
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"/>
	Constr. Engr. Br. # 9	P.E. Bridge # 9
Removal of Existing Structure # 9:	<input style="width: 100%;" type="text" value="\$0"/>	<input style="width: 100%;" type="text" value="\$0"/>
Length of Existing Structure (ft.)	0.0%	Misc. Cost Bridge # 9
Width of Existing Structure (ft.)	<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)	<input style="width: 100%;" type="text" value="\$0"/>
Total Bridge Estimate in Mid- 2005	<input style="width: 100%;" type="text" value="\$0"/>
Total Bridge P. E. Costs	<input style="width: 100%;" type="text" value="\$0"/>



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. Util. Ease.

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	200,640	sf	939,840 sq ft =	21.576 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
This Box Must Be Empty >	0	ea	132,000 sq ft =	3.030 Ac.
This Box Must Be Empty >			Comp. Perm. Ease. Cost / sq ft =	\$0.46
Total area of All Permanent Easements	132,000	sf	RW Est's. Perm. Ease. Cost per sq ft :	
			132,000 sq ft =	3.030 Ac.

COST OF LAND (Item # 1) \$625,300 (Computed Costs)

2. BUILDING VALUE

Based upon comparison to similar, occupied Residential Dwellings in the Project Area , 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
Computed Total Residential Dwelling Costs :			\$900,000
Estimator's Total Residential Dwelling Costs :			\$900,000

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:

Computed Total Other Improvements Costs : \$107,500

Estimator's Total Other Improvements Costs : \$107,500

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
Computed Cost of Damages to Remainder :	\$0
Estimator's Total Cost of Damages to Remainder :	\$58,500

TOTAL ACQUISITIONS (Items # 1 - 4) \$1,632,800 (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
Computed Cost of Administrative Settlements :	\$0
Estimator's Total Cost of Administrative Settlements :	\$251,850

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
Computed Cost of Condemnation Increases :	\$0
Estimator's Total Cost of Condemnation Increases :	\$141,750

7. ADMINISTRATIVE COSTS & INCIDENTAL EXPENSES

Anticipated Relative Cost Impact of Admin. Costs & Incidental Expenses :	Moderate
Computed Administrative Costs & Incidental Expenses :	\$0
Estimator's Total Administrative Costs & Incidental Expenses :	\$39,675

8. DEMOLITION CONTRACTS

Anticipated Relative Cost Impact of Demolition Contracts :	Moderate
Computed Costs of Demolition Contracts :	\$45,000
Estimator's Total Cost of Demolition Contracts :	\$45,000

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 :	
Computed Cost of Hazardous Materials Removal :	\$15,800
Estimator's Total Costs of Hazardous Materials Removal :	\$15,800

10. PROPERTY MANAGEMENT

Anticipated Relative Cost Impact of Property Management :	
Computed Costs of Property Management :	\$0
Estimator's Total Cost of Property Management :	

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
Computed Residential Relocation Costs :	\$334,000
Estimator's Total Residential Relocation Costs :	\$334,000

Commercial Relocation Costs:

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

Estimator's Total Comm/Indust Relocation Costs :	\$0
---	------------

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

SUB-TOTAL RIGHT-OF-WAY COSTS	(Computed Costs)	\$2,890,900	Totals
UTILITY COSTS TO RIGHT-OF-WAY PROJECT *		\$195,300	Include
TOTAL RIGHT-OF-WAY COSTS		\$3,086,200	Inflation

* 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 :

11/17/05