

## **COST ESTIMATE**

### **GENERAL INSTRUCTIONS**

Apply the Unit Costs to ordinary structures. Unit Costs should be increased 10-15% for culvert extensions and stage construction jobs, and 50% for complex modification jobs.

Unit Costs should generally be increased for jobs that are small or at remote sites.

Do not show Item 629 - Mobilization - on the bridge drawings, but show it on the Cost Estimate.

Plan Quantity items should **not** be denoted on the Cost Estimate or Plans. If you desire to pay "Plan Quantity" for an item not listed in the Standard Specifications, then the Specifications must be modified.

Cost Estimates for all projects (In-house and Consultant) shall be entered into the PC Cost Estimate database program.

### **Commentary**

The unit prices are based upon trend lines of the weighted average of the 3 low bidders for each year and trend lines of all the unit costs of all the bidders based upon the bid opening date. The data is taken from the abstract of bids from January 2005 through June 2009.

**AVERAGE UNIT PRICES FOR STANDARD BID ITEMS**

(Based Upon 3 Low Bids from Jan 2005 thru June 2009)

**SECTION 203 - REMOVAL OF OBSTRUCTIONS**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
203-020A	Removal of Single Span Bridges	SF	\$17
203-020A	Removal of Multi-span Bridges	SF	\$20
203-020A	Removal of Truss Bridges	SF	\$15
203-035A	Removal of Culverts	SF	\$15

NOTE : Use square foot cost for estimating purposes but show as cost per EACH on the Cost Estimate.

**SECTION 205 - EXCAVATION & EMBANKMENT**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
205-040A	Granular Borrow	CY	\$15

**SECTION 210 - STR. EXC. & COMP. BACKFILL**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
210-005A	Structure Excavation Sch. No. 1	CY	\$15
210-015A	Compacting Backfill	CY	\$11

NOTE : Multiply Str. Exc. unit cost by 2.0 if underwater excavation involved, and by 2.5 if rock excavation involved.

**SECTION 301 – GRANULAR SUBBASE**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
301-010A	Granular Subbase	CY	\$20

**SECTION 502 - CONCRETE**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
502-005A	Concrete Class 15	CY	\$320
502-025A	Concrete Class 40A	CY	\$640
502-030A	Concrete Class 40B	CY	\$580
502-140A	Concrete Class 40B Sch. No. 1	CY	\$520
502-250A	Concrete Class 40A Sch. No. 2	CY	\$580
502-345A	Seal Concrete	CY	\$350
502-400A	AASHTO Type 2 Girder	FT	\$200
502-400A	AASHTO Type 3 Girder	FT	\$215
502-400A	AASHTO Type 4 Girder	FT	\$225
502-415A	Bulb Tee Girders	LF/in <sup>2</sup> of area	\$0.35
502-430A	Concrete Parapet	FT	\$105
502-435A	Approach Slab	SY	\$215
502-445A	Voided Slabs	LF/in <sup>2</sup> of area	\$0.36
502-470A	Prestr. T-beam & DeckTee	LF/in <sup>2</sup> of area	\$0.40
502-500A	Prestr. Box Beam	LF/in <sup>2</sup> of area	\$0.35

NOTE : Reduce deck concrete costs by \$20/CY when girder type makes slab forms unnecessary.

Use LF/in<sup>2</sup> of area for estimating, but show as FT on Cost Estimate.

**AVERAGE UNIT PRICES FOR STANDARD BID ITEMS**

(Based Upon 3 Low Bids from Jan 2005 thru June 2009)

**SECTION 503 - METAL REINFORCEMENT**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
503-005A	Metal Reinforcement	LB	\$1.15
503-010A	Metal Reinforcement Sch. No. 1	LB	\$1.05
503-015A	Metal Reinforcement Sch. No. 2	LB	\$0.90
503-020A	Epoxy Coated Metal Reinforcement	LB	\$1.15

**SECTION 504 - STRUCTURAL METALS**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
504-005A	Steel Bridge	LB	\$1.70
504-015A	Structural Steel	LB	\$1.60
504-030A	2 Tube Curb Mount Rail	FT	\$175
504-035A	Pedestrian/Bicycle Rail	FT	\$200
504-040A	Combination Pedestrian/Bicycle & Traffic Rail	FT	\$170
504-040A	Combination Rail w/Ped Screen	FT	\$200

NOTE : Steel Bridge - Use Cost/lb for estimating purposes but show as lump sum on the Cost Estimate. Reduce costs by \$0.10/lb for rolled girders. Increase costs by \$0.05/lb for haunched girders. Increase costs by \$0.10/lb for curved girders.

**SECTION 505 - PILING**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
505-025A	Furnish & Drive HP 12X53 Piling	FT	\$105
505-030A	Furnish & Drive HP 12X74 Piling	FT	\$115
505-045A	Furnish & Drive HP 14X117 Piling	FT	\$105
505-100A	Furnish & Drive Shell Piling, 12" Diam	FT	\$70
505-110A	Furnish & Drive Shell Piling, 16" Diam	FT	\$120
505-205A	Furnish & Install 12" $\phi$ Shell Pile Shoes or Tips	EA	\$320
505-205A	Furnish & Install 16" $\phi$ Shell Pile Shoes or Tips	EA	\$350
505-205A	Furnish & Install HP 12x53 Pile Shoes or Tips	EA	\$130
505-205A	Furnish & Install HP 12x74 Pile Shoes or Tips	EA	\$145
505-205A	Furnish & Install HP 14x117 Pile Shoes or Tips	EA	\$160

NOTE : For HP12 Test Piles add \$0 to the cost of the Furnish & Drive item. For HP14 Test Piles add \$25 to the cost of the Furnish & Drive item. For 12"  $\phi$  Shell Test Piles add \$5 to the cost of the Furnish & Drive item. For 16"  $\phi$  Shell Test Piles add \$60 to the cost of the Furnish & Drive item

**SECTION 506 - PRESTRESSING CONCRETE**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
506-005A	Prestressing Cast-In-Place Concrete	LB	\$1.80

NOTE : Use Cost/lb for estimating purposes but show as lump sum on the Cost Estimate.

**AVERAGE UNIT PRICES FOR STANDARD BID ITEMS**

(Based Upon 3 Low Bids from Jan 2005 thru June 2009)

**SECTION 510 - CONCRETE OVERLAY**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
510-005A	Concrete Overlay	CY	\$1100

**SECTION 511 - CONCRETE WATERPROOFING SYSTEM**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
511-005A	Conc Waterproofing System, Type A or D	SY	\$15
511-005A	Conc Waterproofing System, Type C	SY	\$10

**SECTION 623 - CONCRETE SLOPE PAVING**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
623-005A	Concrete Slope Paving	SY	\$45

**SECTION 624 - RIPRAP**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
624-005A	Loose Riprap	CY	\$50

**SECTION 629 - MOBILIZATION**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
Z629-05A	Mobilization	LS	

NOTE : Use 10% of total of all other bid items for small projects and 7.5% for large projects for estimating purposes but show as lump sum on Cost Estimate.

**SECTION 632 - REMOVAL OF BRIDGE DECK CONCRETE**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
632-005A	Concrete Bridge Deck Removal Class A	SY	\$95
632-010A	Concrete Bridge Deck Removal Class B	SY	\$65

**SECTION 640 – CONSTRUCTION GEOTEXTILES**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
640-010A	Riprap/Erosion Control Geotextile	SY	\$2.00
640-015A	Subgrade Separation Geotextile	SY	\$1.50

**AVERAGE UNIT PRICES FOR SPECIAL PROVISION BID ITEMS**

(Based Upon 3 Low Bids from Jan 2005 thru June 2009)

**EXPANSION JOINTS**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-06A	Compression Seal Joints w/armor angles	LF/inch	\$65
S501-06A	Compression Seal only	LF/inch	\$20
S501-06A	Strip Seal Joints	LF/inch	\$60
S501-06A	Modular Joints	LF/inch	\$110
S501-05A	Asphaltic Plug Joints	CF	\$700
S501-06A	Silicone Sealant	FT	\$30
S501-40A	Elastomeric Concrete Header	CY	\$14,000

NOTE: Use LF/inch for estimating, but show as FT on Cost Estimate.

**SURFACE TREATMENT**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-60A	Textured Concrete Surface	SY	\$50
S501-51A	Anti-Graffiti Coating	SF	\$0.80

**PRE-DRILLING FOR PILES**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S505-05A	Predrilling For Piling in Soil	LF/inch of diam	\$3.50
S505-05A	Predrilling For Piling in Rock	LF/inch of diam	\$11.00

NOTE: Use LF/inch of diameter for estimating, but show as FT on Cost Estimate.

**DEWATER FOUNDATION**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S500-11A	Cofferdam	SF	\$40
S500-11A	Other	LS	\$35,000

NOTE : Use Cost/sf of cofferdam form area for estimating purposes but show as lump sum on the Cost Estimate.  
Cofferdam form area is equal to the perimeter of the seal concrete times the difference in elevation of the bottom of the seal concrete and the cofferdam vent elevation.

**RAIL RETROFIT**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-30A	Std Drawing G-2-F Type 1	FT	\$120
S501-30A	Std Drawing G-2-F Type 2	FT	\$130
S501-30A	Delaware Thrie Beam	FT	\$130
S501-20A	Remove End Block	EA	\$1600

**RETAINING WALL**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-17A	MSE Wall	SF	\$45
S501-18A	Coping	FT	\$95
S501-17A	Segmental Block Wall	SF	\$30
S501-17A	Welded Wire Wall	SF	\$40
S501-17A	Welded Wire Wall w/Concrete facing	SF	\$45

**AVERAGE UNIT PRICES FOR SPECIAL PROVISION BID ITEMS**

(Based Upon 3 Low Bids from Jan 2005 thru June 2009)

**TEMPORARY SHORING**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-90A	Bridge	LS	\$70,000
S501-90A	Culvert	LS	\$45,000

**PATCH & REPAIR CONCRETE SURFACE**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-51A	Substructure	SF	\$230
S501-51A	Deck	SF	\$100

**CRACK REPAIR**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-30A	Preparation	FT	\$75
S501-50A	Injection	GAL	\$2000

**REMOVE ASPHALT OVERLAY**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-35A	Remove Asphalt Overlay	SY	\$12

**PAINT STRUCTURAL STEEL**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-70A	At Expansion Joints in Field	SF of girder	\$40

**UTILITY CONDUITS**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-30A	Complete across bridge	FT/conduit	\$20
S501-30A	At Abutments with diaph sleeves & deck inserts	FT/conduit	\$10

**HMWM DECK SEAL**

<u>ITEM NO.</u>	<u>ITEM</u>	<u>UNIT</u>	<u>ALL DISTRICTS</u>
S501-35A	Preparation	SY	\$15
S501-50A	Sealer	GAL	\$135