

***BRIDGE CONSTRUCTION***

# Bridge Construction

**SECTION 551 - DRIVEN PILES (Contract Item)** - No metric conversion for Bridge Construction Items.

<b>Treated Timber</b>	<b>Steel</b>
Furnish - \$30/LF	\$27/LF(HP10x42), \$30/LF(HP12x53)
Drive - \$25-30 (Depending on qnty)	\$35-45 (Depending on qnty)
Shoes - \$75./ea	\$150/ea.

When applicable, make a subsidiary allowance to this pay item for contractor quality control.

## **SECTION 552 - STRUCTURAL CONCRETE (Contract Item)**

\$400 to \$700 per cubic yard - Depending on haul and quantity. When applicable, make a subsidiary allowance to this pay item for contractor quality control.

## **SECTION 553 - PRESTRESSED CONCRETE (Contract Item)** **(Includes Installation)**

### **Multi-Beams**

Rib Deck - \$225/L
Tri Deck - \$225/LF
Bulb Tee - 3' to 4'6" \$250/LF
5' to 5'6" \$300/LF

(Add \$25/LF for concrete curb)

When applicable, make a subsidiary allowance to this pay item for contractor quality control.

## **SECTION 554 REINFORCING STEEL (Contract Item)**

\$1.00/lb Large jobs, \$1.25/lb Small jobs (under 1000 lbs)

## **SECTION 555 - STEEL STRUCTURES (Contract Item)**

## **SECTION 556 - BRIDGE RAILING (Contract Item)**

Timber Glue Lams	\$120/LF
Double layer flexbeam	\$ 35/LF
Single layer flexbeam w/timber	\$ 30/LF
Double box tube (Concrete Deck)	\$ 50/LF
Double box tube (Timber Deck)	\$ 65/LF
Single box tube	\$ 40/LF
Approach Rail	\$ 35/LF
Breakaway Cable End Anchorage	\$500/Ea
Buried End Anchorage	\$500/Ea
Terminal Section	\$300/Ea

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## SECTION 557 - TIMBER STRUCTURES (Contract Item)

(R-1 Treated Timber Standards) (Labor 45 percent of installation cost only)

SUBSTRUCTURE COSTS (Per Bridge)						
Clear Height	0° Skew			15° Skew		
	Material	Installation	Total	Material	Installation	Total
5'	\$11,400.00	\$7,150.00	\$18,500.00	\$11,400.00	\$7,150.00	\$18,500.00
7'	17,650.00	8,950.00	26,600.00	17,650.00	8,950.00	26,600.00
9'	26,000.00	9,700.00	35,700.00	26,000.00	9,700.00	35,700.00
11'	31,000.00	11,050.00	42,050.00	31,000.00	11,050.00	42,050.00

  

Clear Height	0° Skew			15° Skew		
	Material	Installation	Total	Material	Installation	Total
5'	\$11,650.00	\$7,300.00	\$19,000.00	\$14,400.00	\$7,150.00	\$21,500.00
7'	18,700.00	9,150.00	27,850.00	21,200.00	9,300.00	30,550.00
9'	30,900.00	10,000.00	40,900.00	32,700.00	10,100.00	42,850.00
11'	35,750.00	11,450.00	47,200.00	37,900.00	11,550.00	49,450.00

SUPERSTRUCTURE COSTS (Per Bridge) (Standard glued laminated beams and deck)			
Span	Materials	Installation	Total
13'	\$8,500.00	\$4,150.00	\$12,650.00
15'	9,800.00	4,300.00	14,100.00
19'	12,900.00	4,550.00	17,400.00
23'	15,850.00	4,950.00	20,800.00
27'	19,100.00	5,400.00	24,500.00
31'	23,050.00	5,700.00	28,750.00
35'	27,000.00	6,250.00	33,300.00

SUPERSTRUCTURE COSTS (Per Bridge) (Longitudinal glued laminated slabs & Stressed decks)			
Span	Materials	Installation	Total
13'	\$8,750.00	\$4,300.00	\$13,050.00
15'	9,600.00	4,550.00	14,150.00
19'	14,400.00	4,850.00	19,200.00
23'	17,500.00	5,600.00	23,000.00
27'	23,050.00	6,250.00	29,300.00

When applicable, make a subsidiary allowance to this pay item for contractor quality control.

## *OPEN TOP BOX CULVERTS*

Designer and estimator are reminded that extreme caution is warranted for designing and/or use of open-top culverts due to relatively high initial costs and potential maintenance problems. Open-tops are not recommended for surfaced roads, particularly TSL A through TSL C roads. Use on low-standard roads where nothing else is practical on a short-term basis may be warranted. Costs nearly equal conventional PE or metal culverts including catch basin construction over the long-term. Average cost range on recent contracts is \$20 to \$30/LF.

Drainage deflectors with rubber belting have usually proven to be better than open-tops for diverting water off the road surface on steeper grades. They generally require less maintenance, except on heavily traveled roads where the belting needs replacement on a periodic basis. The in-place cost of these deflectors is about \$18/LF, plus riprap for slope protection if required.

End of Bridge Construction