

JACOBS

PROJECT: MassDOT Sudbury BFRT
SUBJECT: Pantry Brook Bridge Quantity
COMPUTED BY: TQ

CHECKED BY: MT

FILE NO. E2X81800
SHEET No.
DATE: Mar-20

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
BRIDGE SECTION

BRIDGE NO.
S-31-013 (BF2)

< ESTIMATE OF QUANTITIES AND COST OF BRIDGE >

ITEM NO.	QUANTITY	UNITS	ITEM	UNIT PRICE	AMOUNT
115.1	1	LS	DEMOLITION OF BRIDGE NO. S-31-013	\$16,800	\$16,800
140.	436	CY	BRIDGE EXCAVATION	\$86	\$37,509
151.1	72	CY	GRAVEL BORROW FOR BRIDGE FOUNDATION	\$95	\$6,826
151.2	404	CY	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	\$85	\$34,378
690.91	25	SY	MASONRY REPOINTING	\$155	\$3,875
690.92	114	SY	MASONRY REMOVED AND STOCKPILED	\$515	\$58,710
983.1	117	TON	RIPRAP	\$140	\$16,333
991	1	LS	CONTROL OF WATER	\$20,000	\$20,000
995.01	1	LS	BRIDGE STRUCTURE BRIDGE NO. S-31-013	\$282,720	\$282,720

Sub Total: \$477,151
25% Contingency: \$119,288
Total: \$596,439
Say: **\$596,850**

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115.1

DEMOLITION OF BRIDGE NO. S-31-013

LS

Note: Information from VHB 25% design is used because it remains the same.

Quantity	=	1	LS
Unit Price	=	\$16,800.0	
Total Cost	=	\$16,800.0	

596,850

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<u>Item</u>	<u>151.1</u>	<u>GRAVEL BORROW FOR BRIDGE FOUNDATION</u>	<u>CY</u>
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Note: 5' under bridge foundation per MassDOT BM

South Abut.	Plan Area	=	194.0	sf	
	Depth	=	5.0	ft	
	Volumn	=	35.9	cy	
North Abut	Volumn	=	35.9	cy	(Assume the same with South Abut.)
	Total Volumn	=	71.9	cy	
	Unit Price	=	\$95.0		
	Total Cost	=	\$6,825.9		

596,850

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<u>Item</u>	<u>151.2</u>	<u>GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES</u>	<u>CY</u>
Elevation Area	=	780.0	sf
Width	=	14.0	ft
Volumn	=	404.4	cy
Unit Price	=	\$85.0	
Total Cost	=	\$34,377.78	

596,850

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Item

690.91

MASONRY REPOINTING

SY

Note: Information from VHB 25% design is used because it remains the same.

Quantity	=	25	SY
Unit Price	=	\$155.0	
Total Cost	=	\$3,875.0	

596,850

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Item **690.92** **MASONRY REMOVED AND STOCKPILED** **SY**

Note: Information from VHB 25% design is used because it remains the same.

Quantity	=	114	SY
Unit Price	=	\$515.0	
Total Cost	=	\$58,710.0	

596,850

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<u>Item</u>	<u>983.1</u>			<u>RIPRAP</u>	<u>TON</u>
South Abut.	Section Area	=	27.8	sf	
	Length	=	35.0	ft	
	Volumn	=	972.2	cf	
North Abut	Volumn	=	972.2	cf	(Assume the same with South Abut.)
<hr/>					
	Total Volumn	=	1944.4	cf	
	Add 20% for corner	=	2333.3	cf	
	Unit Weight	=	100.0	pcf	
	Total Weight	=	116.7	ton	
	Unit Price	=	\$140.0		
	Total Cost	=	\$16,333.3		

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991

CONTROL OF WATER

LS

Note: Information from VHB 25% design is used because it remains the same.

For protect waterway

Quantity = 1 LS

Unit Price = \$20,000.0

Total Cost = \$20,000.0

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<u>Item</u>	995.01	<u>BRIDGE STRUCTURE BRIDGE NO. S-31-013</u>	<u>LS</u>
<u>Sub Item</u>	<u>655.3</u>	<u>TREATED TIMBER PEDESTRIAN RAILING</u>	FT
Total Length	=	120 ft	
Unit Price	=	\$155.0	
Total Cost	=	\$18,600.0	
<u>Sub Item</u>	<u>904.4</u>	<u>4000 PSI, 3/4 INCH, 685 HP CEMENT CONCRETE</u>	CY
Section Area	=	13.9 sf	
Length	=	60 ft	
Volumn	=	30.9 CY	
Unit Price	=	\$3,100.0	
Total Cost	=	\$43,055.6	
<u>Sub Item</u>	<u>910.1</u>	<u>STEEL REINFORCEMENT FOR STRUCTURES - EPOXY COATED</u>	LB
Assume 175 pound per cubic yard			596,850
Quantity	=	5401.2 lb	
Unit Price	=	\$3.9	
Total Cost	=	\$21,064.8	
<u>Sub Item</u>	<u>XXX</u>	<u>PRECAST CONCRETE CULVERT INSTALLED</u>	LS
Quantity	=	1 ea	
Unit Price	=	\$200,000.0	
Total Cost	=	\$200,000.0	
<u>Total of 995.01</u>	=	\$282,720.4	